Annual Report | 2016

NantHealth is a next-generation, evidence-based, personalized healthcare company enabling improved patient outcomes and more effective treatment decisions for critical illnesses. NantHealth‘s unique systems-based approach to personalized healthcare integrates novel diagnostics with large-scale, biometric and phenotypic data to track patient outcomes and deliver precision medicine. In addition, NantHealth’s adaptive learning system, continuously improves decision-making and further optimizes our clinical pathways and decision algorithms over time. For additional information, please visit **www.nanthealth.com.**

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended December 31, 2016
OR
☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
for the transition period from to

Commission File Number: 001-37792

NantHealth, Inc.
(Exact name of registrant as specified in its charter)

Delaware	**27-3019889**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
9920 Jefferson Blvd. Culver City, California	**90232**
(Address of principal executive offices)	**(Zip Code)**

(310) 883-1300
Registrant's telephone number, including area code

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	**Name of each exchange on which registered**
Common Stock, par value $0.0001 per share	**NASDAQ Global Select Market**

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. YES ☐ NO ☒

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. YES ☐ NO ☒

Indicate by check mark whether the Registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. YES ☒ NO ☐

Indicate by check mark whether the Registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit and post such files). YES ☒ NO ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer", "accelerated filer", and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒ (Do not check if a smaller reporting company)	Smaller reporting company	☐

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). YES NO

The aggregate market value of the voting and non-voting common stock held by non-affiliates of the Registrant on June 30, 2016, based on a closing price $12.50 per share of common stock on the NASDAQ Global Select Market on June 30, 2016, was approximately $446.6 million.

The number of shares of Registrant's common stock, $0.0001 par value per share, outstanding as of March 30, 2017 was 121,626,568.

DOCUMENTS INCORPORATED BY REFERENCE

As noted herein, the information called for by Part III is incorporated by reference to specified portions of the Registrant's definitive proxy statement to be filed in conjunction with the Registrant's 2017 Annual Meeting of Stockholders, which is expected to be filed not later than 120 days after the Registrant's fiscal year ended December 31, 2016.

NantHealth, Inc.

Form 10-K
For the year ended December 31, 2016
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We own or have rights to trademarks and service marks that we use in connection with the operation of our business. NantHealth, Inc. and our logo as well as other brands such as CareFx, our clinical operating system, cOS or NantOS, DeviceConX, FusionFX, GPS Cancer, HBox, Vitality, VitalsConX, NaviNet, eviti, eviti | Connect, eviti | IQ, and other marks relating to our eviti product line are used in this Annual Report on Form 10-K. Solely for convenience, the trademarks and service marks referred to in this Annual Report on Form 10-K are listed without the (sm) and (TM) symbols, but we will assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensors to these trademarks, service marks and trade names. Additionally, we do not intend for our use or display of other companies’ trade names, trademarks, or service marks to imply a relationship with, or endorsement or sponsorship of us by, these other companies.

SPECIAL NOTE REGARDING FORWARD LOOKING STATEMENTS

This Annual Report on Form 10-K, or this Annual Report, including, without limitation, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" and Item 1A, "Risk Factors," contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. In some cases you can identify these statements by forward-looking words such as "believe," "may," "will," "might," "estimate," "continue," "anticipate," "intend," "could," "should," "would," "project," "plan," "outlook," "target," "expect," or similar expressions, or the negative or plural of these words or expressions. These forward-looking statements include, but are not limited to, statements concerning the following:

- the structural change in the market for healthcare in the United States, including uncertainty in the healthcare regulatory framework and regulatory developments in the United States and foreign countries;
- the evolving treatment paradigm for cancer, including physicians' use of molecular information and targeted oncology therapeutics and the market size for molecular information products;
- physicians' need for precision medicine products and any perceived advantage of our solutions over those of our competitors, including the ability of our comprehensive platform to help physicians treat their patients' cancers;
- our ability to generate revenue from sales of products enabled by our molecular and biometric information platforms to physicians in clinical settings;
- our ability to increase the commercial success of our sequencing and molecular analysis solution;
- our plans or ability to obtain reimbursement for our sequencing and molecular analysis solution, including expectations as to our ability or the amount of time it will take to achieve successful reimbursement from third-party payors, such as commercial insurance companies and health maintenance organizations, and government insurance programs, such as Medicare and Medicaid;
- our ability to effectively manage our growth, including the rate and degree of market acceptance of our solutions;
- our ability to offer new and innovative products and services;
- our ability to attract new partners and clients;
- our ability to estimate the size of our target market;
- our ability to maintain and enhance our reputation and brand recognition;
- consolidation in the healthcare industry;
- competition which could limit our ability to maintain or expand market share within our industry;
- restrictions and penalties as a result of privacy and data protection laws;
- our use of "open source" software;
- our ability to use, disclose, de-identify or license data and to integrate third-party technologies;
- data loss or corruption due to failures or errors in our systems and service disruptions at our data centers;
- breaches or failures of our security measures;
- our reliance on Internet infrastructure, bandwidth providers, data center providers, other third parties and our own systems for providing services to our users;
- risks related to future acquisition opportunities;
- the requirements of being a public company;
- our ability to attract and retain key personnel;
- our expectations regarding the period during which we qualify as an emerging growth company under the JOBS Act;
- our ability to obtain and maintain intellectual property protection for our solutions and not infringe upon the intellectual property of others; and
- our financial performance expectations, including our expectations regarding our revenue, cost of revenue, gross profit or gross margin, operating expenses, including changes in research and development, sales and marketing and general and administrative expenses, and our ability to achieve and maintain future profitability.

We caution you that the foregoing list does not contain all of the forward-looking statements made in this Annual Report.

These forward-looking statements are based on current expectations and assumptions that are subject to risks and uncertainties, which could cause our actual results to differ materially from those reflected in the forward-looking statements. These statements are within the meaning of the “safe harbor” provisions of the Private Securities Litigation Reform Act of 1995. These statements appear throughout this Annual Report and are statements regarding our intent, belief, or current expectations, primarily with respect to our business and related industry developments. You should not place undue reliance on these forward-looking statements, which apply only as of the date of this Annual Report. Our actual results could differ materially from those anticipated in these forward-looking statements for many reasons, including the risks faced by us and described in Part I, Item 1A, “Risk Factors,” and in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in Part II, Item 7 of this Annual Report. We undertake no obligation to update any forward-looking statements for any reason to conform these statements to actual results or to changes in our expectations, except as required by law.

PART I

Item 1. Business

Overview

NantHealth is a leading next-generation, evidence-based, personalized healthcare company that is transforming the way critical diseases, such as cancer, are known and treated. Specifically, we combine new uses of molecular science and technology to give physicians, health systems, caregivers, pharma, payors and even patients more actionable knowledge than ever before about how to diagnose and treat complex diseases like cancer.

To accomplish this, we employ a unique systems-based approach to personalized healthcare applying novel diagnostics tailored to the specific molecular profiles of patient tissues and integrating this molecular data in a clinical setting with large-scale, real-time biometric signal and phenotypic data to track patient outcomes and deliver precision medicine. For nearly a decade, we have developed an adaptive learning system, NantHealth solutions (which was originally introduced to the market as CLINICS), that integrates our unique molecular profiling solution, software, middleware and hardware Systems Infrastructure and collects, indexes, analyzes and interprets billions of molecular, clinical, operational and financial data points derived from novel and traditional sources to continuously improve decision-making and optimize our clinical pathways and decision algorithms over time. As a pioneer in the era of big data and augmented intelligence, we believe we are uniquely positioned to benefit from multiple significant market opportunities as healthcare providers and payors transition from fee-for-service to value-based reimbursement models and accelerate their pursuit of evidence-based clinical practice.

Our mission is to show the world a better path to the cure and to empower:

- providers to seamlessly act on the best evidence-based information available to better fulfill their roles as caregivers rather than financial managers
- payors with the necessary tools to better fulfill their roles as stewards of an increasingly complex and rapidly evolving healthcare system
- biopharmaceutical companies to accelerate development of drugs for critical illnesses based upon the unique biology and specific health conditions of patients
- patients with the knowledge to enable active participation in the management of their own health, or self-care.

We derive revenue from sales of licensed software and maintenance, software-as-a-service, hardware, services, and GPS Cancer to healthcare providers, payors and self-insured employers.

We Are Uniquely Positioned to Address Transformative Shifts across the Healthcare Continuum

The efficiency and effectiveness of the current healthcare system is often hindered by the complex, dynamic interplay of three uncoordinated and segregated domains: the knowledge domain, the care delivery domain, and the payor domain. The disparate nature of these domains, and their often-inconsistent incentives and conflicting priorities, can inhibit interoperability and coordination. We believe two simultaneous, transformative shifts are highlighting these critical deficiencies of the current healthcare environment:

1. ***A rapid evolution from traditional fee-for-service to patient-centered and patient-empowered, value-based models driven by quantifiable measures of outcomes relative to cost***. Unsustainable escalating healthcare costs, which we believe is due to broken fee-for-service models, is driving many stakeholders and governments towards alternative delivery models. Despite significant investments in EHRs and other technologies designed to enable the transition to more value-based care, we believe that, in a fee-for-service model, the economic incentives generally discourage coordination amongst healthcare stakeholders and encourage volume-driven (rather than outcomes-driven) decision-making. This model results in healthcare and financial data that remains largely segregated into “walled gardens.” Thus, patient data often remains static and cannot be easily shared or interpreted due to siloed legacy proprietary platforms that lack interoperability.

2. ***A paradigm shift to molecularly precise and real-time biometric-driven medicine, with both massive volumes and rapidly expanding repositories of complex data from traditional and novel sources.*** Advances in molecular medicine require healthcare providers to promptly aggregate, evaluate and synthesize hundreds to thousands of relevant facts in real time to arrive at a single patient decision. Molecular profiling often generates hundreds of gigabytes of data per patient, which must then be transported, stored, analyzed and interpreted with supercomputing and/or high performance computing environments. We believe the rapid pace of medical advancements, the massive amount of molecular data and the frequency of biometric information is overwhelming many providers' ability to process that information at the point of care, thereby inhibiting the paradigm shift to individualized medicine.

We believe these shifts and the associated challenges require next-generation and advanced technology systems that deliver more information than ever available before, faster and with more relevance and accuracy than healthcare continuum has experienced. NantHealth has the unique ability to extract, normalize, assemble, analyze and interpret the increasingly overwhelming relevant data to implement molecularly precise, biometrically monitored medicine and effectively transition to value-based care. Given the magnitude of these shifts and the difficulty involved in addressing the associated challenges, we believe our solution platforms combined with NantOS are unmatched and put us best positioned to be at the forefront of multiple large and growing market opportunities. We estimate that the potential market size of our combined solution offerings exceeds $50 billion globally. We have invested significant capital and healthcare and biotechnology expertise over nearly a decade to develop, acquire and integrate the components that we believe address many of the challenges faced by stakeholders across the continuum of care.

Our Strategy

Our goal is to become the leading evidence-based, personalized healthcare company transforming the way critical diseases, such as cancer, are known and treated. We seek to enable clients to deliver improved patient outcomes and more effective treatment decisions for critical illnesses by applying novel diagnostics tailored to the specific molecular profiles of patient tissues and integrated clinically with large-scale, real-time biometric signal and phenotypical data. To accomplish this goal, we plan to deploy NantHealth solutions designed to address and accelerate the transformational shifts occurring in healthcare: rapid evolution from traditional fee-for-service to value-based models and the paradigm shift to molecularly precise and real-time biometric driven medicine. The key elements of our strategy include:

- **Driving global reimbursement, awareness, and adoption of GPS Cancer.** To drive the growth of GPS Cancer in the United States, we have deployed an integrated, multi-pronged strategy to (1) obtain reimbursement through large national and regional payors and self-insured employers and (2) drive oncologist awareness and adoption in those regions with reimbursement. Likewise, we are pursuing international growth through a combination of reseller agreements and other unique partnership models to yield predictable and recurring revenue. To date, we have announced agreements and agreements in principle for US insurance coverage for GPS Cancer with health plans, providers and self-insured employers, as well as reseller agreements in multiple countries outside of the US. Traction amongst commercial payors, employers, and partners continues to accelerate globally. We are also increasing recognition of GPS Cancer through engaging and educating oncologists, cancer patients, caregivers, patient advocacy groups and other key oncology stakeholders, and communicating patient outcomes through peer-reviewed journals and conference presentations. Finally, we are a founding member of the Cancer Breakthroughs 2020 Global Immunotherapy Coalition, which we believe will help accelerate the adoption and validation of GPS Cancer.

- **Increasing sales of NantHealth solutions, including, NantOS and NantOS applications, to healthcare providers, payors and self-insured employers.** We are marketing NantHealth solutions, including NantOS and NantOS applications, to healthcare providers transitioning from fee-for-service reimbursement models to value-based care models in pursuit of improved patient outcomes and lower costs. We believe we are positioning NantHealth as a next-generation payor intermediary and partner with healthcare payors and self-insured employers as they roll out value-based model partnerships and transition to value-based precision care.

- **Broadening usage of our solutions among existing clients.** Our broad portfolio of NantHealth solutions affords us a unique ability to expand our agreements with existing clients through cross-selling opportunities. We are actively focused on leveraging existing relationships to create these opportunities to drive additional revenue for our solutions including GPS Cancer, NantOS and NantOS applications. Many of our clients are already successfully using certain of our solutions, and we are working to demonstrate the full value of our integrated Systems Infrastructure and platforms.

- **Expanding our business in international markets.** We are executing our go-to-market strategies internationally, creating global awareness of our brand and taking steps towards our goal of broader adoption worldwide. We are expanding aggressively in Canada, the United Kingdom and Southeast Asia and opportunistically in other international markets where we or our strategic partners have established relationships and our clients have healthcare business interests.

- **Developing new features and functionality for NantHealth solutions.** We plan to continue to leverage NantHealth solutions, and our NantOS middleware solution to create new features and functionality that our clients can use to drive improved patient outcomes and lower the cost of care.

- **Complementing internal growth with strategic acquisitions.** We believe opportunities exist for us to enhance our competitive position by acquiring additional companies with complementary products and technologies and/or acquiring rights to proprietary products or technologies from third parties.

Our Industry

Today, the U.S. healthcare landscape is being redefined by the shift toward value-based reimbursement models and an explosion of the quantity, frequency and complexity of data. We believe there is a demand for platforms that utilize a molecularly precise and systems-based approach to addressing the following underlying transformative shifts and challenges.

A rapid evolution from traditional fee-for-service to patient-centered and patient-empowered, value-based models driven by quantifiable measures of outcomes relative to cost.

In response to the rising cost of healthcare, government and private payors and providers are introducing value-based care models. In value-based models, providers assume increased levels of clinical and financial responsibility for patient outcomes, instead of being reimbursed strictly based on the quantity of services provided. For example, the U.S. Department of Health and Human Services, or HHS, has set a goal of tying 30 percent of Medicare fee-for-service payments to quality or value through alternative payment models by 2016 and 50 percent by 2018. We believe that healthcare platforms that efficiently assist healthcare stakeholders to transition to these value-based models will be best positioned to capture this opportunity.

Challenges associated with the adoption of value-based models

The healthcare continuum can be viewed as an aggregation of three distinct domains:

- The knowledge domain, including academic centers, scientific institutions and companies that discover and commercialize medical and scientific knowledge;
- The care delivery domain, including hospitals, physicians and other constituents that deliver healthcare to patients; and
- The payor domain, including insurers, governments and self-insured employers that administer and provide funding to the healthcare system.

The disparate and fragmented nature of these domains and economic incentives under traditional fee-for-service models frequently result in overtreatment, high costs and suboptimal patient outcomes. Fee-for-service models are as a general matter inherently site-centric, volume driven, reactive in nature and uncoordinated. In contrast, value-based models are generally more patient-centric, outcomes-focused, proactive and coordinated across the care continuum.

Despite a clear need, the design and implementation of next-generation interoperable systems has been limited due to reliance on legacy, site-specific, fee-for-service technology systems and infrastructure. Since the passage of the HITECH Act in 2009, providers and payors have made significant investments in EHRs, and other technologies meant to enable the transition to value-based care. Despite extensive investment and coordination, the introduction of value-based models has been limited due to the shortcomings of legacy, proprietary systems and the reliance on unstructured data that hinders interoperability and cannot be sufficiently shared or manipulated to produce actionable findings. Value-based models require collection and analysis of longitudinal treatment, outcomes and financial data at the patient level, regardless of treatment site. Critically, these systems must also securely safeguard patient data in compliance with stringent HIPAA and other privacy regulations. We believe that there is a significant need for interoperability platforms that dynamically access, normalize, integrate and update information from disparate sources across the healthcare continuum in real time. Secure interoperability platforms can allow for more comprehensive solutions development that proactively connect, deliver business and clinical intelligence and enable enhanced provider and patient engagement.

A paradigm shift to molecularly precise and real-time biometric-driven medicine, with both massive volumes and rapidly expanding categories of complex data from traditional and novel sources.

The collection and interpretation of molecular profiles and real-time biometric monitoring has the potential to dramatically improve quality and outcomes.

Evolution to comprehensive molecular analysis

Advances in sequencing over the last 15 years and the associated cost efficiencies have led to the development of targeted therapeutics initiating the transformation from “one size fits all” treatments to personalized, molecularly precise medicine. Single marker and gene panel diagnostic tests have now advanced from the research to clinical care settings. Oncology is leading the rapid advances in molecular testing and the development of targeted therapeutics based on increasing understanding of the impact of molecular profile on disease progression. Recent publications, including The Cancer Genome Atlas Research Network genomic and molecular characterization studies, support selection of treatment regimens based on the underlying molecular pathways and related genomic alterations in the genetic profile of the tumor compared with the patient’s own germline, as opposed to the anatomical location of the cancer in the patient’s body. Cancer is increasingly understood to be a heterogeneous collection of rare diseases, with hundreds of patient-specific, cancer-promoting mutated proteins, some known and many more unknown, called neoepitopes. Identifying and targeting these mutated proteins is requiring more comprehensive genomic and proteomic analysis, which is increasingly becoming embedded in drug approvals. As a result, we believe comprehensive genomic and proteomic analysis is positioned to become the standard of clinical care, replacing single marker or gene panels in treating cancer patients.

Oncology has been an early adopter of precision medicine due to the cost as well as inconsistent and often poor clinical outcomes associated with many traditional “trial-and-error” treatment regimens. While oncology represents the most immediate opportunity, we believe other disease areas are beginning to experience a similar evolution, with immune-related diseases, central nervous system disorders and transplants having a high potential for adoption of personalized medicine. We believe technologies that enable the capture, aggregation and analysis of massive volumes of genomic data will further bolster the growth of precision medicine and its expansion from cancer to additional disease states. Over time, we believe this will lead to identification of drugs that target specific pathways by using a universal personalized companion diagnostics platform, ultimately resulting in improved clinical outcomes.

Limitations of the existing single marker and gene panel approach

The human genome is comprised of approximately 20,000 genes and 3 billion DNA base pairs. Until recently, scientists have focused on less than 2% of the genome that is responsible for coding proteins. As a result, most diagnostic tests today only analyze specific genes, or gene panels, exploring only a fraction of the human genome, while incorporating "a priori" assumptions that capture only a subset of the most common gene alterations. These alterations are calculated relative to a reference genome of a population instead of a patient's own healthy tissue, or germline. Gene panels that utilize a reference genome often fail to capture key, medically actionable mutations or incorrectly highlight mutations present in both the germline and cancer tissue. This is important because disease-specific insights are derived not only from DNA alterations, but also from protein expression and protein activity at the cellular level, known as proteomics. Analyses that exclude whole genome sequencing, RNA and quantitative proteomic analysis and comparisons to an individual's germline instead of a reference genome can lead to materially false positive and false negative results. A more comprehensive molecular analysis would allow providers to develop personalized treatment regimens, replacing existing costly "trial-and-error" approaches to treatment. A comprehensive molecular analysis, including both germline and cancer tissue, would make no assumptions as to the molecular driver of the patient's disease and would capture mutations that are commonly missed by gene panels.

Challenges associated with the adoption of comprehensive molecular analysis

Comprehensive molecular analysis combines whole genome-to-germline comparison and protein expression analysis. Comprehensive molecular analysis has been difficult to perform in a practical, timely and cost-effective manner because it has long run times to complete sequencing, creates hundreds of gigabytes of complex data per patient, which must be transported, stored and analyzed with supercomputing and/or high performance computing environments in a clinically relevant period of time, and requires large capital investments required to perform sequencing at scale. Furthermore, the absence of adaptive machine learning algorithms to enable efficient medical interpretation and effective protein expression analysis has inhibited the ability to derive value from the massive amount of data produced by comprehensive molecular analysis. Accordingly, comprehensive molecular analysis has primarily been utilized in the academic and research settings, and not in the clinical setting to inform treatment decisions. Finally, there have been insurance coverage and reimbursement challenges for comprehensive molecular analysis solutions, limiting their adoption.

Increasing proliferation and importance of real-time biometric data and its adoption in hospitals and other patient care settings

Several trends are contributing to the rising importance and availability of biometric data, including the increasing prevalence of connected devices in multiple care settings and the opportunity for proactive patient interventions to improve health outcomes. As hospital systems implement EHRs, they have installed hardware and software solutions to connect medical devices to collect periodic sampling of key patient metrics such as respiratory rate, blood pressure and heart rate. Providers have expanded these technologies into other care settings, including skilled nursing facilities, nursing homes, outpatient facilities and patients' homes. Concurrently, with the advent of connected devices, activity monitors and remote patient monitoring devices are achieving widespread adoption, allowing for the increased quantification of key biometric signals. Healthcare professionals have the potential to gain a more comprehensive view of an individual's health on a real-time basis across care settings through increased adoption of patient monitoring devices. The increased availability of quantifiable biometric data allows for the implementation of decision support tools and proactive treatment interventions, potentially utilizing care pathways and learning algorithms to improve care outcomes.

Challenges associated with leveraging quantifiable, real-time biometric analysis in multiple care settings

An increasing amount of biometric data is being generated by the proliferation of connected devices. However, complexities associated with synthesizing this data into actionable insights remain an obstacle. Aggregating and maintaining a longitudinal record across multiple care settings remains a significant challenge because of closed proprietary systems that prevent integration of disparate data sources. Although many hospital-based medical devices can continuously stream data to an EHR, frequently the EHR can only accept periodic data, potentially missing a critically relevant patient episode. There is also a lack of comprehensive solutions that support physician decision-making in real time. The absence of effective data interpretation supported by adaptive machine learning or other algorithms is evidenced by "alarm fatigue" among many healthcare providers (a condition that can occur when one is exposed to many frequent alarms or alters and consequently becomes desensitized to them) as they struggle to establish optimal event thresholds.

Growth in complexity and its promise for value-based models

Advances in molecular medicine and real-time biometrics require healthcare providers to promptly aggregate, evaluate and synthesize hundreds to thousands of relevant facts to arrive at a single patient decision. With the enormous complexity of genomics and expression analysis derived from comprehensive molecular analysis, the pace of medical advancements, and the significant amount of data being created every day by patient care, payment and regulatory compliance systems, it is nearly impossible for a practicing physician to interpret and synthesize the deluge of complex information required for patient treatment.

We believe there is a considerable need for advanced adaptive machine learning algorithms to collect, index and analyze rich biometric, phenotypic, genomic and proteomic data at scale to support physician decision-making. Although this complexity creates significant challenges, it also presents opportunities for developers of systems infrastructures, platforms and learning systems that can identify clinically meaningful correlations that can be employed to improve patient outcomes in a cost-effective manner.

Our Market Opportunity

We believe the increasing focus on value-based reimbursement models and evidence-based, personalized medicine will drive validation and adoption of NantHealth solutions. Recent statistics show that 41% of Americans will be diagnosed with cancer at some point in their lives, resulting in a potential $173 billion of medical costs by 2020. Additionally, we see the precision medicine market growing substantially as comprehensive diagnostics and evidence-based medicine become increasingly important across multiple disease areas and likely assuming greater share of the combined biopharmaceutical and diagnostics markets. We expect several factors to drive adoption of our universal diagnostics solution GPS Cancer, which enables an increased understanding of molecular pathways and their targets, such as:

- Improved pharmacoeconomics, including the use of more cost-effective drugs approved for other indications (such as asthma and diabetes) in cancer treatment regimens;
- A clearer understanding of critical drug resistance information;
- Increased adoption of bundled payments as providers and payors recognize the efficiency of optimized therapies; and
- Increased awareness and published clinical results demonstrating the benefits of evidence-based molecular medicine.

We believe the potential addressable market for NantHealth solutions to be in excess of $50 billion annually and will continue to grow in relation to the market-share gains of value-based models and the adoption of precision medicine.

NantHealth Solutions

Our NantHealth solutions comprise a highly differentiated, integrated model for the delivery of healthcare, comprised of our unique molecular profiling solution, software, middleware and hardware systems infrastructure, which integrates patient data management, bioinformatics, and molecular medicine, enabling value-based care and evidence-based clinical practice. Our platform and our multi-domain solutions are designed to address some of the most pressing cross-domain challenges across the healthcare continuum. Built upon our unifying Systems Infrastructure, our solutions are single-domain and cross-domain offerings that can be applied, for example, within a hospital system or for a hospital system and a commercial insurance provider in an Accountable Care Organization, or ACO, crossing multiple domains. We believe this integrated and comprehensive systems-based approach uniquely positions us (i) to deliver 21st century molecular and biometric signature-driven precision medicine and potentially change the current paradigm of uncoordinated healthcare and (ii) as a next-generation payor intermediary who facilitates payment for value.

- **Oncology Solutions**. Our comprehensive set of interoperability, advanced diagnostics, risk stratification and decision support solutions (eviti) can enable our clients to improve decision-making and coordinate care across the healthcare continuum. Our molecular profiling solution, GPS Cancer, is the only comprehensive and commercially available clinical cancer platform incorporating and integrating whole genome (comparing both a patient's normal and tumor tissue), RNA, proteomic and molecular pathways information into a clinical report that analyzes this data and identifies actionable targets and potential clinical treatment decisions.

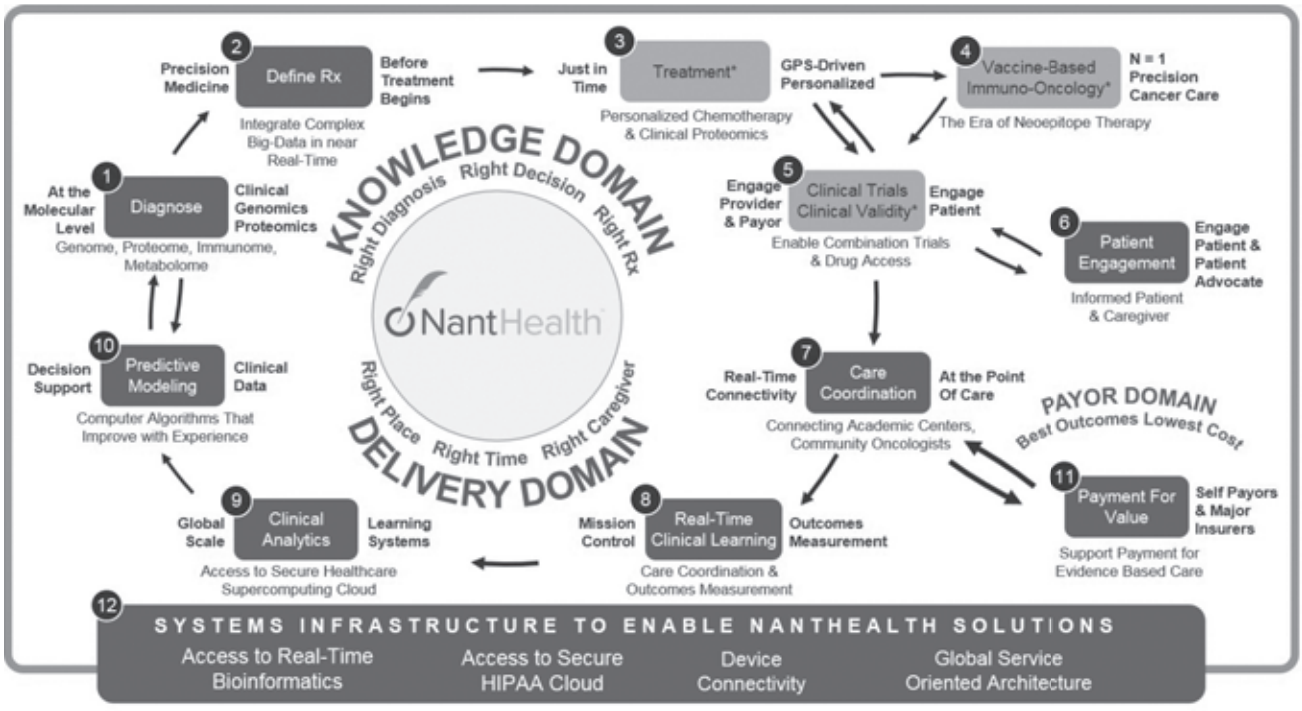
- **Patient and Provider Solutions**. Our provider solution software and middleware, comprised of an integration of our various solutions, including cOS, FusionFX, DeviceConX, VitalsConX and NaviNet Open, or collectively NantOS, leverage the data available on our Systems Infrastructure to enable patient-centered engagement and coordination across care locations. Our web-based and mobile NantOS apps include patient, provider and collaboration portals for advanced care coordination, including real-time vitals connectivity, clinical and administrative workflow, eligibility and benefits, claims, referral and readmissions management solutions, secure messaging and analytical applications to measure outcomes and costs. Our database of clinical pathways and decision algorithms is continuously being enhanced, enabling the delivery of evidence-based clinical decision support. Our device connectivity modules and flexible applications analyze and interpret patient- and provider-specific information and can deliver critical clinical and administrative insights.

- **Payor Solutions**. Our payor NantOS app solutions establish daily access to the clinical practice and caregiver and leverage the data available on our Systems Infrastructure to facilitate payment for value. We believe our position between the payor and the provider allows us to align incentives as a next-generation payor intermediary, to help payors ensure consistent evidence-based treatment pathways and to accelerate pre-adjudication and lower administrative overhead for providers. This can ultimately drive quality of care and streamline workflows while improving control over the administrative and operating costs associated with eligibility and benefits, claims processing, referrals, authorizations, document exchange and review utilization. Our multi-payor collaboration NantOS app solution, NaviNet Open, offers provider end users a uniform set of workflows and services across many or all the payors with whom they routinely collaborate. This multipayor experience benefits payors and providers alike. Providers can benefit from a uniform experience and toolset across multiple payor relationships, and the payor can benefit from the uniform application of best practices, tools, and options, as well as the reduction in costly errors and phone-based interactions that can stem from a non-uniform end-user experience. Our NantOS app solutions can also identify high-risk patient populations, implement advanced diagnostics and FDA-approved, real-time biometric patient monitoring solutions to identify opportunities for precision medicine and preventative interventions, and enable provider and payor engagement in integrated and coordinated value-based models.

We designed our NantHealth solutions to enable providers, payors and self-insured employers to overcome challenges encountered across the knowledge, care delivery, and payor domains within the healthcare continuum. We are a leading vendor of payor-provider collaboration solutions (NaviNet Open), used by approximately 450,000 active users located in all 50 states. We also estimate that over 75% of all oncology practices in the United States have used eviti, our decision support solution. As of December 31,2016, our solutions have been widely adopted, with over 100 million lives across our Patient, Provider, and Payor solutions.

In this Annual Report, the term “lives” means the number of individuals and their eligible dependents enrolled in a particular insurance program (within the payor domain) plus the number of unique patients where clinical data can be accessed by our solution (within the care delivery domain), and “active users” means users of our NaviNet Open platform transacting at least once in the previous 90 days.

The chart below describes our systems-based approach to the delivery of healthcare:



NantHealth's platform includes (i) advanced molecular diagnosis (Box 1), defining treatment (Box 2) and patient engagement (Box 6) for the knowledge domain; (ii) care coordination and delivery of care (Box 7), real-time clinical learning (Box 8), clinical analytics and predictive modeling (Boxes 9 and 10) for the delivery domain; and (iii) payment for value (Box 11) in the payor domain. Our biopharmaceutical partners, including our affiliates NantKwest and NantBioScience, Inc. and other biopharmaceutical participants in the Cancer Breakthroughs 2020 Network, provide key therapeutic treatments, novel next-generation agents and clinical trials and validation (Boxes 3, 4 and 5) for the knowledge domain.

To our knowledge, no other system currently exists that provides insights from the scale of the individual patient molecular signature level up to entire populations. Our platforms are designed to normalize, organize and integrate our client's data streams, engage their workflows and implement our adaptive learning system. Our unique systems-based approach features:

- **Advanced Molecular Diagnosis (Box 1).** Our solutions enable diagnosis at the individual molecular signature level with genomic and proteomic analysis solutions through GPS Cancer, population-level analytics and risk stratification at the molecular level.
- **Define Right Treatment Before Treatment Begins (Boxes 2, 9, 10).** Our solutions support decision-making with near real-time bioinformatics and evidence-based protocols using our eviti solution, enabling the clinician to potentially make more optimal treatment decisions.
- **Patient Engagement (Box 6).** Our solutions inform the patient, patient advocate and caregivers to improve patient engagement, satisfaction and compliance and encourage active participation in the management of their own health (self-care).
- **Care Coordination and Delivery of Care (Box 7).** Our solutions enable point-of-care connectivity and coordinate and deliver care with clinical and administrative workflow collaboration portals, care coordination applications and clinical intervention engagement (mission control).
- **Real-time Clinical Learning (Box 8).** Our solutions implement advanced analytics and real-time clinical learning while monitoring and measuring outcomes to enrich data sets and to implement proactive and preventative clinical intervention engagement.
- **Payment for Value (Box 11).** Our solutions facilitate payment for value, better outcomes at lower cost, using our evidence-based approach to the clinical practice of medicine through our inter-domain collaboration portal NaviNet Open.

This integration continually enhances our database, clinical pathways and decision algorithms, which we believe leads to critical mass and network effects that further our competitive advantage.

Our Systems Infrastructure

Our unique interoperable Systems Infrastructure has been built over the last decade to address the knowledge, care delivery and payor domains. As of December 31, 2016, our NantHealth solutions or its components have been widely adopted, with over 100 million lives across our Patient, Provider, and Payor solutions, processing nearly 30 million payor-provider transactions per month with approximately 450,000 active users nationwide.

NantOS is a powerful systems infrastructure that organizes and integrates the data streams that form the foundation of our adaptive learning system. It serves as the foundation of our platforms and products and provides critical data and inter- and intra-domain interoperability to coordinate the complex, dynamic interplay of otherwise uncoordinated and segregated healthcare data. This systems-based approach enables the near real-time transfer and clinical translation of genomic and proteomic analysis, biometric signal data and actionable information to the care delivery domain, with access to a HIPAA-compliant cloud, providing the coordination of reimbursement between the care delivery domain and the payor domain. We have created and are applying a highly scaled, adaptive learning system that is designed to address many of the specific limitations and complexities of the current siloed healthcare system.

Our Systems Infrastructure is comprised of:

- Access to next-generation genomic and proteomic analysis technologies with near real-time bioinformatics, provided as part of GPS Cancer through our affiliate, NantOmics;
- Access to a secure HIPAA-compliant cloud environment maintained internally through our subsidiary NantCloud Services;
- Device connectivity in over 350 client sites to what we estimate to be more than 30,000 medical devices and collecting tens of billions of vital signs annually with the ability to connect to over 500 medical device and health and wellness sensors; and
- Open architecture, service-oriented software platform-as-a-service, enabling the integration and interoperability of disparate electronic medical records through 250 clinical, financial and operational systems connectors and 300 infrastructure and healthcare services, facilitating real-time clinical learning.

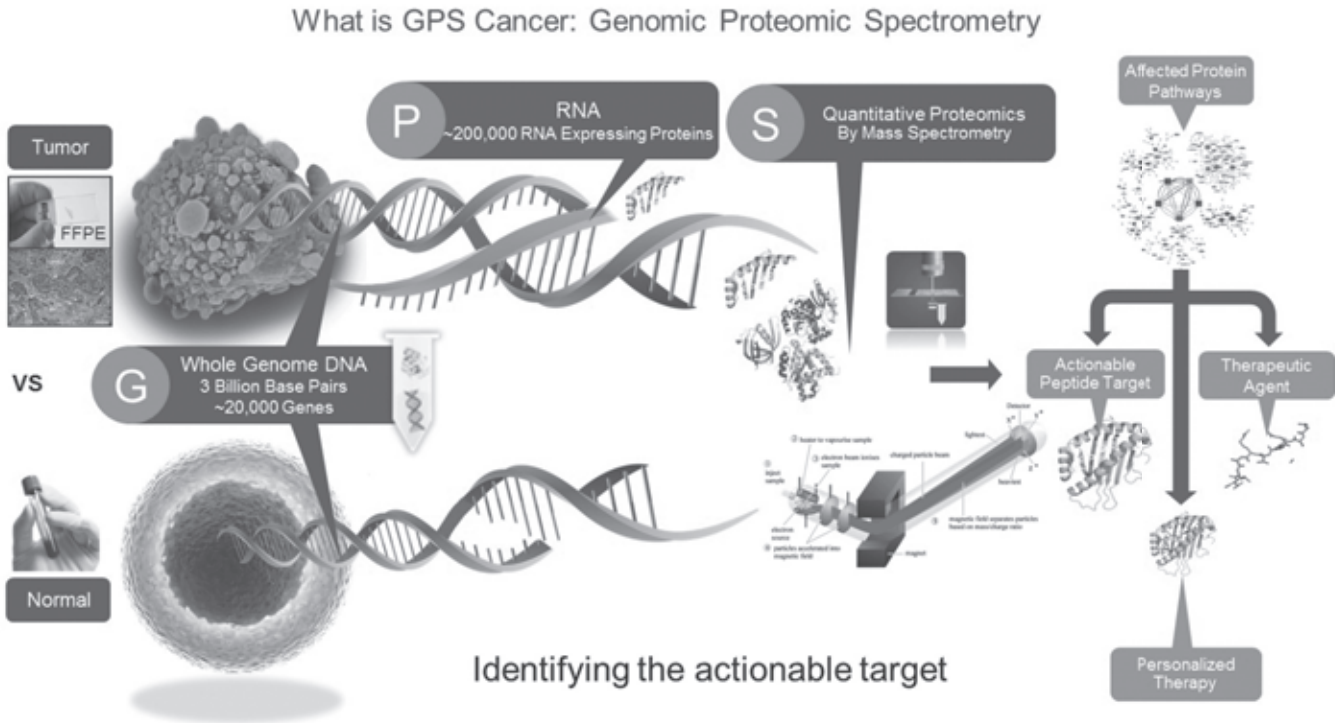
Our access to CAP- and CLIA-certified sequencing capability, coupled with supercomputer environments, enables us to deliver comprehensive genomic and quantitative proteomic analysis. We have established a HIPAA-compliant, secure and scalable cloud computing, storage and transport infrastructure capable of processing, storing and transporting petabytes of diverse, protected patient data. Our device connectivity and real-time biometric monitoring software and hardware solutions allow us to aggregate data through the open architecture platform, from one of the largest libraries of in-hospital and remote medical devices and wearables on the market. Our cloud-based NantOS accesses, integrates and updates information from disparate clinical, operational and financial systems to create a dynamic and actionable dataset. This framework enables us, our clients and third-party partners to develop an integrated ecosystem of compatible applications.

We believe other organizations have not yet been able to integrate these components in a similarly near real-time and continuous manner, and this personalized, evidence-based molecular approach, combined with our NantHealth solutions, significantly differentiates us from our competitors. In addition, third parties may use our solutions to deliver drugs to patients in a more predictive, preventative and evidence-based manner, potentially improving patient outcomes and pharmacoeconomics.

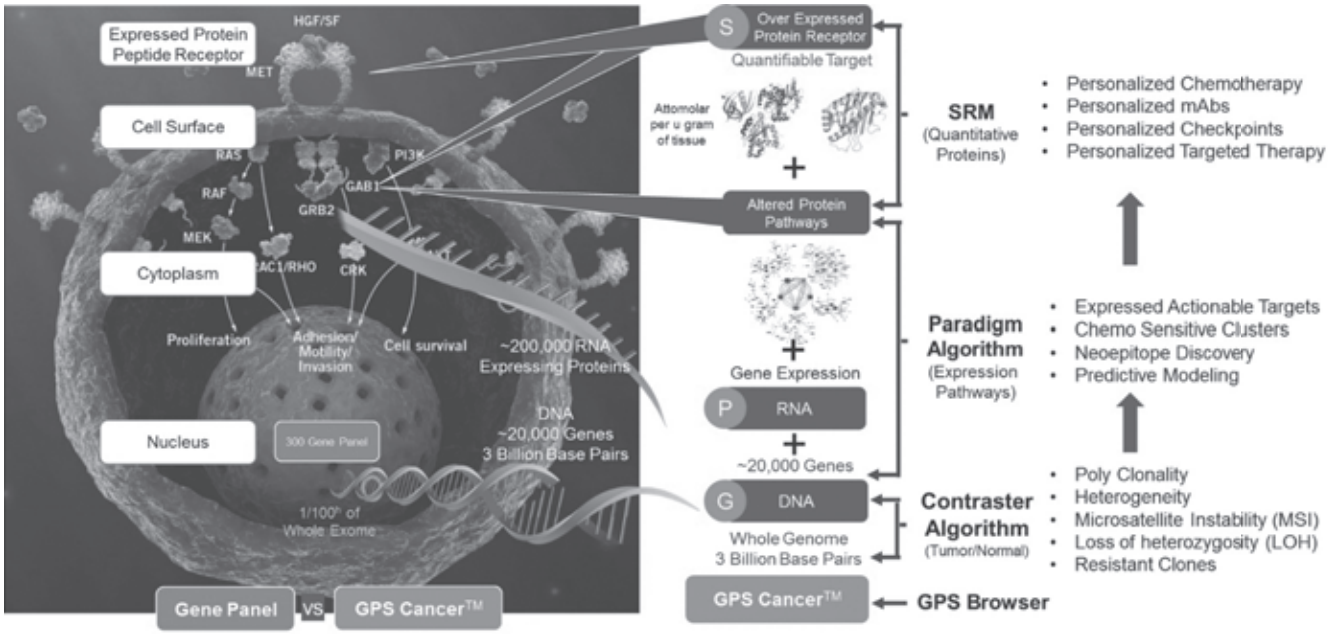
Product Overviews

GPS Cancer:

GPS Cancer is a comprehensive molecular profile that integrates whole genome (DNA) sequencing, whole transcriptome (RNA) sequencing, and quantitative proteomics by mass spectrometry, providing oncologists with unprecedented insights into the unique molecular signature of a patient’s cancer to inform personalized treatment strategies. The results of the GPS Cancer profile can provide oncologists with insight into cancer therapies that may have potential benefit - including active clinical trials - and those therapies to which the cancer may be resistant. GPS Cancer profiling is conducted in CLIA-certified and CAP-accredited laboratories.



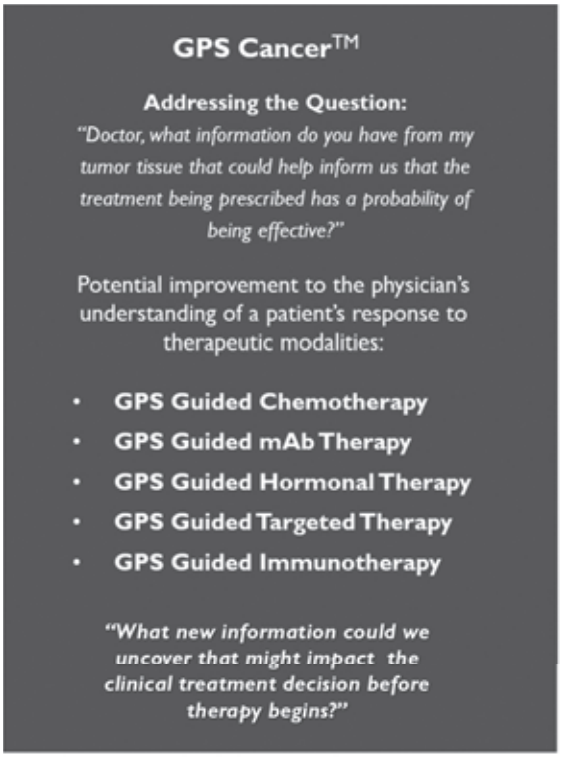
GPS Cancer compares a total of 6 billion DNA base pairs between a patient's healthy normal (or germline) sample and the tumor sample (usually Formalin-Fixed, Paraffin-Embedded-FFPE or fresh frozen tissue) each encoding for over 20,000 genes. All the RNA (over 200,000 transcripts) from the tumor sample is sequenced to confirm and give evidence of expression of mutations found in the genome. We identify affected molecular pathways that are drivers of a patient's cancer by analyzing DNA and RNA sequence data against our curated database of over 15,000 nodes within approximately 1,500 protein pathways. GPS Cancer's quantitative proteomics analysis, also performed on FFPE samples, is built on a platform of laser microdissection, proprietary liquid tissue processing and mass spectrometry-based Selected Reaction Monitoring (SRM), allowing measurements of proteins at the attomolar level. We gain insights into a patient's affected protein pathways using all these methods and determine actionable peptide targets to recommend potential therapeutic agents specifically designed for the individual patient.

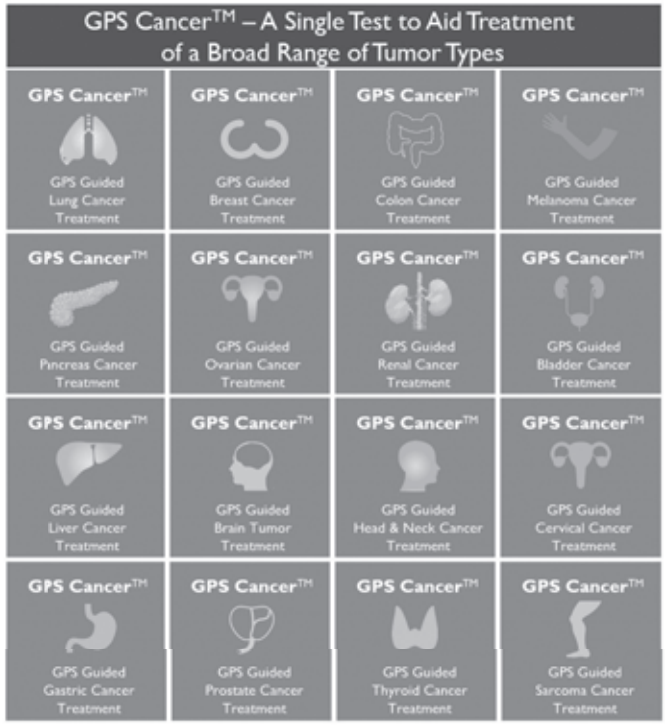


Cancer is increasingly understood to be a heterogeneous collection of rare diseases. As such, understanding genomic alterations and protein expression in tumor samples can help to identify potential treatment options for the personalized management of people with cancer.

Whole genome sequencing of a person's tumor sample against their normal sample highlights molecular alterations that are specific to their tumor DNA, and RNA sequencing subsequently confirms the alterations identified in the DNA of a person's tumor. Whole genome sequencing and RNA sequencing can provide vital clinical information about individual molecular alterations in tumors that result in abnormal proteins, which can be important targets for many cancer therapies.

Quantitative proteomics measures the amounts of clinically relevant proteins. Knowing the quantity of a specific protein present in a tumor can help oncology care providers better understand potential responses to conventional therapeutic modalities such as chemotherapies, targeted therapies, and immunotherapies.

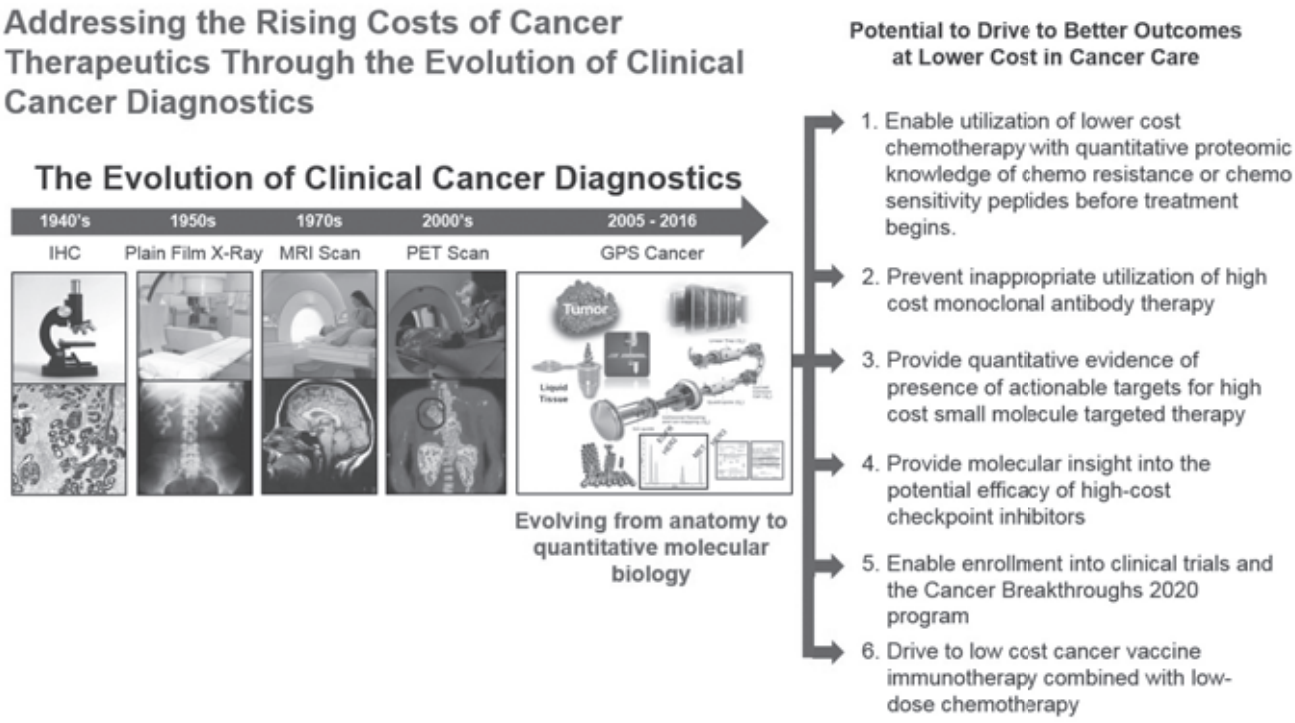




GPS Cancer identifies genomic and proteomic alterations with high clinical relevance to each person's tumor. The alterations are then matched to drugs that might be effective against tumors containing the specific change. By identifying the totality of alterations from whole genome sequencing, honing in on alterations that are associated with protein expression from RNA sequencing, and combining clinically relevant proteins determined from quantitative proteomics, a more accurate and comprehensive molecular profile is assembled that can inform the therapeutic options available to oncology care providers and their patients.

We believe that this in turn can drive better outcomes at lower costs through:

- Enabling utilization of lower cost chemotherapy with knowledge of quantitative proteomic chemo-resistance or chemo-sensitivity biomarkers before treatment begins
- Preventing inappropriate utilization of high cost monoclonal antibody therapy
- Providing quantitative evidence of presence of actionable targets for high cost small molecule targeted therapy
- Providing molecular insight into the potential efficacy of high-cost checkpoint inhibitors
- Enabling enrollment into clinical trials and the Cancer Breakthroughs 2020 program
- Driving to low cost cancer vaccine immunotherapy combined with low-dose chemotherapy



For example, according to a presentation at ASCO 2015, it was estimated that a typical patient receiving a combination therapy of two checkpoint inhibitors, one anti-PD-1 agent and one anti-CTLA-4 agent, would cost approximately $300,000 with approximately $60,000 being the patient's out-of-pocket cost (assuming a 20% copay). Applying this figure to the nearly 600,000 patients dying from metastatic cancer annually (no adjuvant therapy), the treatment would cost society nearly $174 billion annually. Studies suggest that cancer therapeutics such as immune checkpoint inhibitors are more effective when there is a high neoantigen and nonsynonymous mutation (i.e., results in a change in the amino acid sequence) burden in the tumor. We believe GPS Cancer's ability to identify mutation burden and neoepitopes through its comprehensive omics analysis will serve as a critical and novel source for both pre-treatment efficacy analysis and individualized immunotherapies for cancer patients.

GPS Cancer Report

Our GPS Cancer solution further leverages novel adaptive machine learning algorithms that match the identified alterations to an extensive and evolving library of signaling pathways, drugs and drug targets, regardless of indication, to provide predictive analyses that can enable the physician to make decisions regarding the potential efficacy of personalized therapies, as well as points of resistance. GPS Cancer results are available to the ordering physician in a concise report or through a cloud-based genome browser. While the GPS Cancer report does not recommend treatments, it can enable the treating physician to develop a personalized treatment plan after discussing with the patient the available treatment options and the potential risks associated with each treatment option. The GPS Cancer report can be utilized by the physician in several ways, as described in the "call out" bubbles on the example reports below. The report may:

- List targets based on DNA/RNA/quantitative protein analysis that may be treated by FDA-approved drugs either in an on-label or off-label manner based on peer-reviewed clinical data;
- List findings that suggest a particular targeted therapy which the physician would otherwise use may not work due to a potential resistance marker;
- List the quantitative expression of certain proteins that suggest a chemotherapy agent may be more likely, or alternatively, less likely, to work; and
- Provide the information necessary for the physician to decide whether it is appropriate to place the patient in a clinical trial.

GPS Cancer™

Genomic Report

NantHealth

Summary Page

General information

Patient	Jane Doe
DOB	January 1, 1981
Sex	Male
ID	colo829-rna-repA
Pathology	

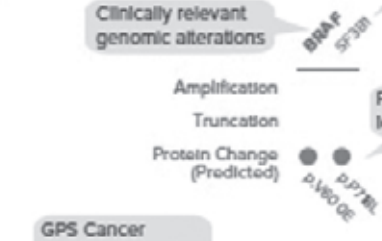
Basic information regarding the patient sample, the tumor type as defined by anatomic pathologist

Specimen ID	XYZ123
Physician	John Doe, M.D.
Date Ordered	Jan 1, 2016
Date Received	Jan 10, 2016
Date Reported	Jan 15, 2016

GPS Cancer findings

Known oncogenes labeled in red

Clinically relevant genomic alterations



Predicted protein change identified by GPS Cancer

Known tumor suppressors labeled in blue

Alterations identified in 2 genes:
1 **TREATABLE** gene,
2 KNOWN ONCOGENES, and
0 KNOWN TUMOR SUPPRESSORS
(see page 3)

GPS Cancer identified alteration

Target	Drug	Status	Additional Information
BRAF p.V600E (64%, RNA+) Mutation	A1. **Dabrafenib**	FDA (see page 1)	Approved against target, 9 clinical trials (pg. 2)
	A2. **Vemurafenib**	FDA (see page 1)	Approved against target, 9 clinical trials (pg. 2)
	A3. **Sorafenib**	FDA (see page 1)	Activity against gene, 50 clinical trials (pg. 2)
	A4. **Regorafenib**	FDA (see page 1)	Activity against gene, 30 clinical trials (pg. 2)
	A5. **Trametinib**	FDA (see page 1)	Approved against target
	A6. **LGX818**	Investigational	Activity against gene, 3 clinical trials (pg. 2)

Note: Values in parentheses after gene amplifications and small variants provide estimates of relative coverage (e.g. 5x) and mutation allele frequency (e.g. 55%), respectively. In the GPS Cancer findings diagram above, predicted protein changes found to be expressed in the RNA sequencing data are denoted by filled circles (RNA+), while empty circles indicate variants not expressed at a detectable level (RNA-).

Percent of tumor DNA with mutation adjusted for tumor sample purity; determination of mutation clonality

Therapeutic agents targeting alteration called by GPS Cancer

Regulatory status of therapeutic agents targeting called mutations

Highlights of other genomic findings made by GPS Cancer on ensuing pages

Additional findings

ACMG-Recommended Incidental Findings — No relevant variants were detected in ACMG-recommended genes (pg. 4)

Sample	Provenance analysis performed on sequences as a QA measure	Whole genome	Exome	RNA
Tumor		58x, Jan 17, 2016	*Not performed*	659x, Jan 30, 2016
Matched-normal		63x, Jan 17, 2016	*Not performed*	*Not applicable*
Provenance		99.2% match		

Depth of genomic sequencing performed on samples

Depth of RNAseq performed to validate mutation expression

GPS Cancer™

Targeted Proteomics Report

NantHealth

Patient	**Jane Doe**	Requisition #	**581**
Sex	**Female**	Physician	**Dr. Joe Smith**
Date of birth	**15-Jan-1955**	Physician institution	**General Hospital**
Medical record #	**12345**	Pathology institution	**Community Pathology Laboratory**
Incoming specimen ID	**CE0912**	Date received	**30-Nov-2015**
OPDx UID	**CE0138**	Date reported	**18-Dec-2015**
Pathology	**Right Lung Mass**		
Diagnosis code	**162.8, Malignant Neoplasm, other parts of bronchus or lung**		

Summary Page

Unique patient information

Location of tumor

Oncologist/Pathologist information

Specific sample information

Significant results:

Significant findings represent the most important proteomics information for the treating physician

- ***The expression levels of MET, PDL1 represent significant findings.***

The Medical Director makes specific notes about the case in the Pathology comments

Pathology comments:
The specimen was adequate for evaluation and tumor cells were collected using a pathologist-directed laser microdissection system.

Therapeutic Agents likely to provide benefit based on the expression of specific proteomic biomarkers and the biology of the tumor

Likely benefit

Treatment agent	Associated biomarker	Patient result
MET Targeted Clinical Trial	MET Protein	1130 amol/µg
Pembrolizumab, Nivolumab, or PD-1/PD-L1 Targeted Clinical Trial	PDL1 Protein	439 amol/µg
Gemcitabine	hENT1 Protein	102 amol/µg
Cisplatin, Carboplatin, Oxaliplatin	ERCC1 Protein	ND
AXL Targeted Clinical Trial	AXL Protein	243 amol/µg

Therapeutic agents where clinical trials may be available are identified where appropriate

Approved agents with likely benefit based on tumor biology

Proteomic Biomarkers associated with therapeutic benefit

Quantitative measurement of biomarkers in attomols/microgram of tumor protein

Therapeutic Agents unlikely to provide benefit based on the expression of specific proteomic biomarkers and the biology of the tumor

Unlikely benefit

Treatment agent	Associated biomarker	Patient result
Paclitaxel, nab-paclitaxel, docetaxel	TUBB3 Protein	1670 amol/µg
Temozolomide	MGMT Protein	281 amol/µg

Approved agents unlikely to provide benefit based upon measurement of proteomic biomarkers

Proteomic biomarkers conferring resistance to therapy

Quantitative proteomic measurement of resistance

Medical Director is a board certified Pathologist

Medical Director: Robert Heaton, M.D.

18-Dec-2015 9:39 am

CLIA # 21D2043150
Maryland Business License # 1872
Specimen UID: CE0138, Version: 2

www.GPSCancer.com

Insurance Coverage

In January 2016, a large health plan announced that it would provide insurance coverage for GPS Cancer, representing the nation's first such insurance coverage for a whole genome and proteome molecular diagnostic platform. This health plan's medical policy provides coverage for GPS Cancer for any of the following conditions in an individual with documented performance status that identifies treatment of their condition as a viable option:

- Cancer of unknown primary;
- Rare cancers (i.e., less than one percent of cancers) with metastases for which there are only documented case reports and small series of treatment experience;
- Metastatic cancer that has progressed after treatment with a regimen of chemotherapy and for which additional chemotherapy is indicated;
- Primary brain cancer;
- Pediatric cancers;
- Triple negative breast cancer;
- Virally infected tumors;
- Metastatic non-small cell lung cancer that has progressed after treatment with two different regimens of chemotherapy and for which additional chemotherapy is indicated; and
- Individuals eligible for cancer immunotherapy.

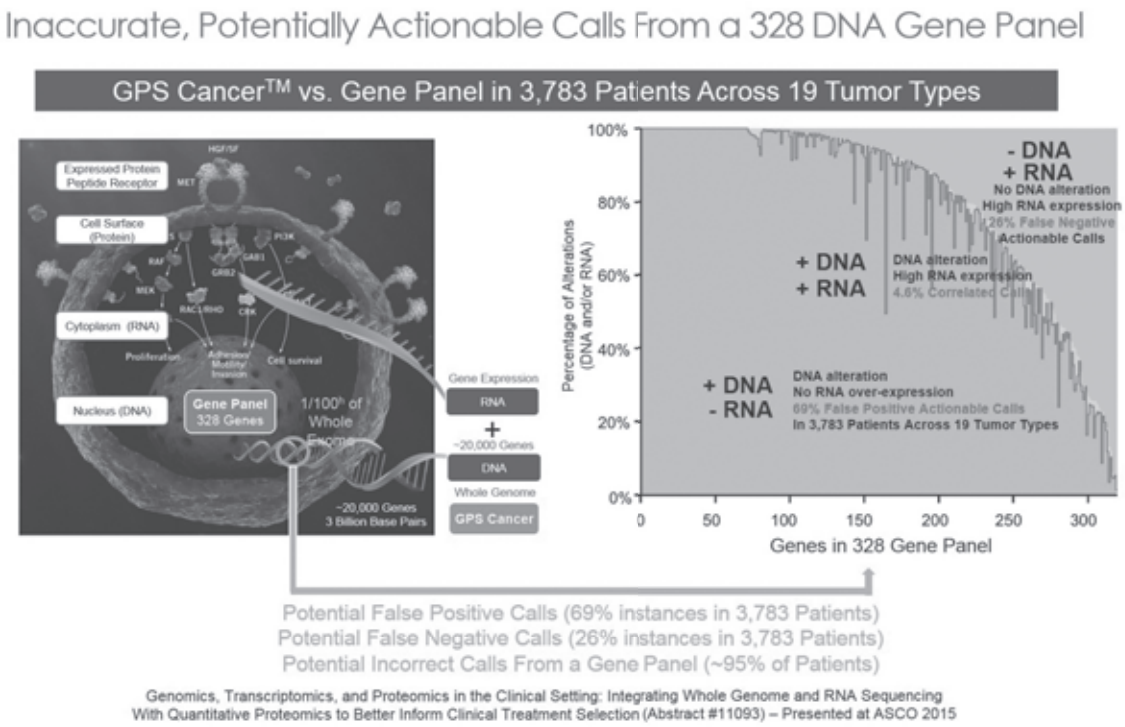
Subsequently, we have announced coverage of GPS Cancer by providers as well as self-insured employer groups. GPS has also been selected as the molecular profiling tool of choice for other projects (e.g., pilot, research study), including the Philadelphia Coalition for a Cure, which is seeking to advance treatment options for patients with brain tumors. We believe traction among commercial payors and self-insured employers will continue to grow.

Competitive Advantage of GPS Cancer's Comprehensive Molecular Analysis Capabilities

Many of the current gene panels on the market are limited to only a small fraction of the genome and fail to cover the full molecular profile of a patient's tumor. Because these panels measure less than 2% of the approximately 20,000 genes and less than 0.04% of the entire genome, the results may be fraught with a significant number of false negatives, potentially leading to erroneous clinical decisions. Furthermore, many gene panel tests fail to directly compare the patient's tumor to the patient's normal (or germline) genome, potentially leading to false positives by suggesting a mutation is in the cancer alone when it is really a normal variant.

Unlike most commercially available genomic tests, which are based on interrogation of predefined alterations in only a small fraction of the genome, GPS Cancer is based on whole genome sequencing (of tumor and normal samples), RNA sequencing and inferred and quantitative proteomics. GPS Cancer compares 6 billion DNA base pairs (tumor and normal), sequences 200,000 RNA transcripts and provides analysis for over 15,000 nodes within approximately 1,500 protein pathways. In addition, the test provides quantitative analysis of targeted proteins at the attomolar level.

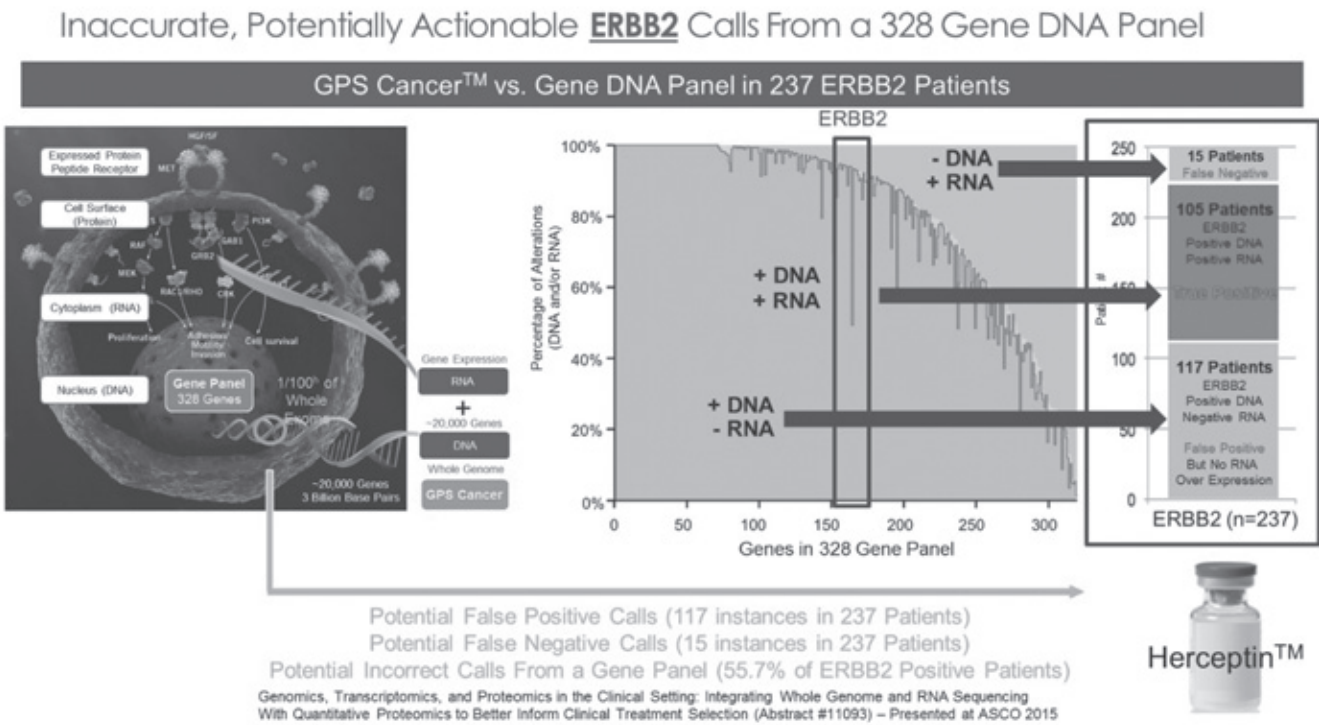
GPS Cancer Case Study



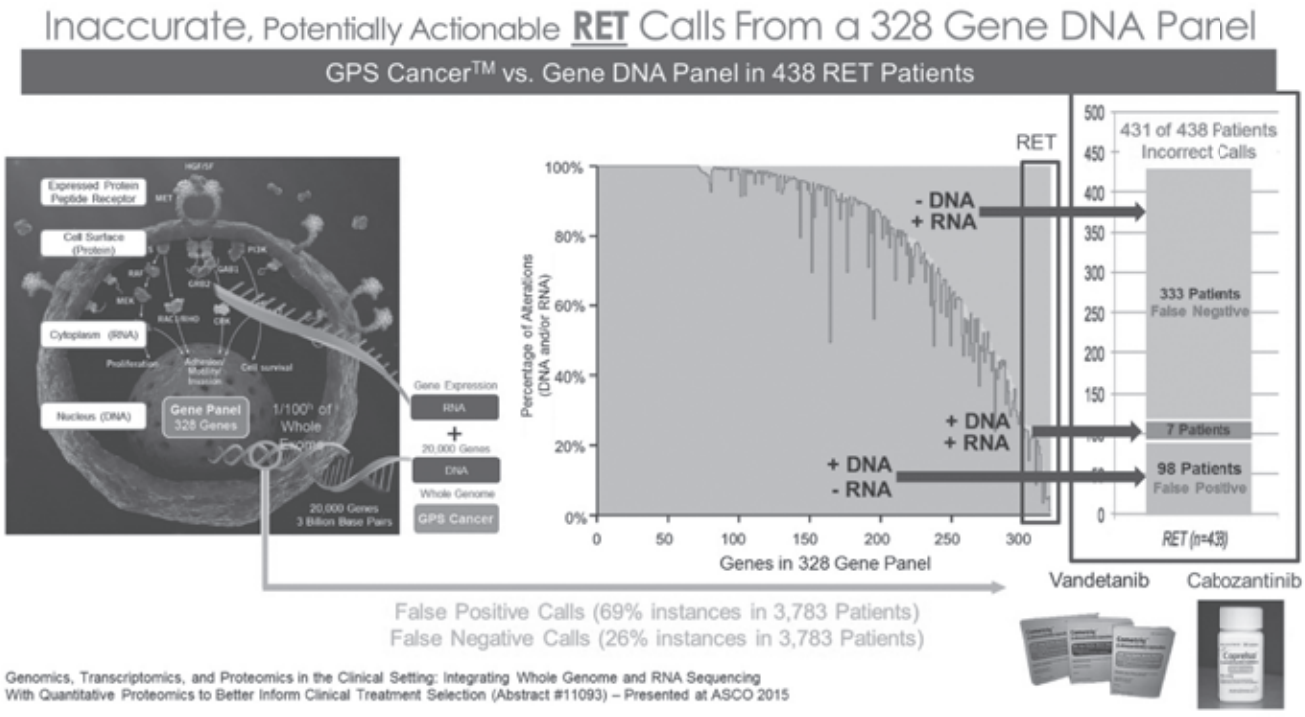
Genomics, Transcriptomics, and Proteomics in the Clinical Setting: Integrating Whole Genome and RNA Sequencing With Quantitative Proteomics to Better Inform Clinical Treatment Selection (Abstract #11093) – Presented at ASCO 2015

In 2015, data were presented on 3,783 patients at the 2015 annual meeting of the American Society of Clinical Oncology, or ASCO, entitled “Genomics, Transcriptomics, and Proteomics in the Clinical Setting: Integrating Whole Genome and RNA Sequencing with Quantitative Proteomics to Better Inform Clinical Treatment Selection” and showed that only 4.6% of altered DNA actually resulted in increased expression of a given actionable gene, whereas in 26% of instances, increased expression of an actionable gene could not be traced back to an alteration in the DNA. In 69% of positive mutation calls as determined by the gene panel, no increased RNA expression occurred, thus potentially resulting in a false positive gene panel reading.

GPS Cancer could help overcome these challenges by unearthing the breadth of mutated DNA via whole genome sequencing, identifying relevant mutations by RNA sequencing, and predicting potential therapeutic outcomes by quantifying clinically relevant proteins in a patient’s tumor sample. For example, as shown in the figure below, for a highly actionable target such as the protein HER2, 105 of 237 patients had elevated expression resulting from gene amplifications, whereas 117 patients with gene alterations did not result in elevated expression and 15 patients had elevated expression without gene alteration, thus revealing the potential false positives and false negatives by competitive products that do not take expression (e.g., RNA and protein) into account.



RET DNA mutation is a nucleotide variance in the DNA. The mutations, if expressed at the RNA level, may go on to cause changes at the protein level. If the mutation is expressed at the protein level, the tumor may be treatable by targeted therapies, such as vandetanib or cabozantinib, which act on the RET protein. Of 438 patients, only 7 had both DNA mutations and corresponding RNA expression (needed for the anti-RET targeted therapies to be potentially effective). In another 98 patient samples, DNA was altered but RNA had little or no alteration, suggesting that the DNA mutation was misleading and did not correspond to an altered protein level. Hence, treating the patient based on DNA findings alone would likely be unsuccessful. In another 333 patients, the RNA changes suggested elevated expression of the RET protein but there was no corresponding DNA change. Thus, testing RNA revealed many patients who may respond to the drug but would not have been identified on DNA testing alone.



Furthermore, for actionable targets such as HER2, RET and a larger menu of analytes (a chemical substance that is the subject of analysis), GPS Cancer reveals whether the amount of a given protein found in a patient sample is above or below what we have determined to be a threshold for response, which we believe contradicts the notion that a presence or absence of a protein is sufficient for the prediction of response. For HER2, published reports provide that ~750 amol/ug (attomolar per microgram) is the lower limit for response to trastuzumab, whereas 2,200 amol/ug of HER2 is predictive of complete response (as measured by overall survival after 6 years) in 100% of breast cancer patients in the adjuvant setting. Patients in this setting with HER2 <2,200 amol/ug should be monitored more frequently after initial treatment. Additionally, as presented at the San Antonio Breast Cancer Symposium, or SABCS, in 2015, GPS Cancer also distinguishes between modes of therapy in that patients with high HER2 expression respond favorably to the HER2 antibody trastuzumab whereas low HER2 expressors respond more favorably to the HER2 small molecule therapeutic lapatinib. Immunohistochemistry and other non-quantitative tests may not accurately predict response to therapies or distinguish between different therapies targeting the same analyte.

We believe the ability of GPS Cancer to measure clinically relevant proteins is important. The amount of certain proteins in cancer can provide valuable information on the potential response to targeted therapies such as trastuzumab, cabozantinib and to chemotherapies and immunotherapies. We believe there exists a level of protein that determines either a response or lack of response to these therapies. For example, a high expression of the protein ERCC1 in a tumor predicts that it will not respond to DNA damaging chemotherapy agents such as cisplatin and carboplatin. ERCC1 repairs the damage to DNA caused by the platinum-based chemotherapies thus making them ineffective. Conversely, high expression of the protein hENT1 is potentially predictive of response to the chemotherapy agent gemcitabine since hENT1 is needed to allow gemcitabine to enter the cancer cell.

The case study below, presented at the 2016 Congress on Targeted Anticancer Therapies, is a demonstration of the utility of GPS Cancer in therapy selection. In a patient with metastatic uterine cancer, where an oncologist has a choice of chemotherapies with various mechanisms of action, GPS Cancer potentially eliminates some of the guesswork involved in choosing therapeutic regimen.

The y-axis shows the level of the patient's cancer antigen 125 (CA-125) count, which is indicative of disease progression as it measures the amount of CA-125 in a person's blood. CA-125 is a protein that is a biomarker, or tumor marker, and is found in greater concentration in cancer cells.

The case study progresses as described below:

- The patient is initially treated with the checkpoint inhibitor pembrolizumab (MK-3475). Since the target analyte, PD-L1, is expressed in low amounts, or less than the 100 amol/ug in the "Efficacy Threshold" column of the table to the left of the graph below, published reports would suggest a decreased likelihood of benefit from the treatment. Consistent with the expected result, the patient did not respond well to the treatment, as reflected by an increase in the CA-125 level in the graph below.

- The patient is then treated with paclitaxel (Taxol) and trastuzumab (HerceptinTM). Published reports indicate an increased likelihood of benefit from the treatments if the TUBB3 expression level is below 850 amol/ug and the HER2 expression level is greater than 740 amol/ug for paclitaxel and trastuzumab respectively. In this case, the patient's tumor expresses less than 100 amol/ug of the TUBB3 analyte and 4,995 amol/ug of the HER2 analyte. The result of the treatment is consistent with the published studies' efficacy thresholds. As illustrated in the graph below through the significant decline of CA-125, the patient had a beneficial response to the combination of paclitaxel and trastuzumab until approximately June of 2015, a period of nine months, when CA-125 starts to increase again.

- The patient is then taken off paclitaxel and put on doxorubicin. GPS Cancer results suggest a reduced likelihood of response to doxorubicin since the level of TOPO2A analyte needed for such a response is greater than 1,530 amol/ug (per published studies) and the patient's level is only 472 amol/ug. As illustrated in the graph below, the treatment was not effective as there was an increase in CA-125 during the duration of time the patient was being treated with doxorubicin.

- After the ineffective doxorubicin treatment, the patient is then put on pemetrexed. Published studies indicate that pemetrexed is more likely to be effective when the FRa analyte is present in amount greater than 1,510 amol/ug. In this case, the patient's tumor expressed 10,500 amol/ug of the FRa analyte, well in excess of the published analyte threshold. Consistent with the efficacy thresholds, the patient had a beneficial response to pemetrexed, which is visually depicted by the decreasing CA-125 level in the bottom right of the graph below.

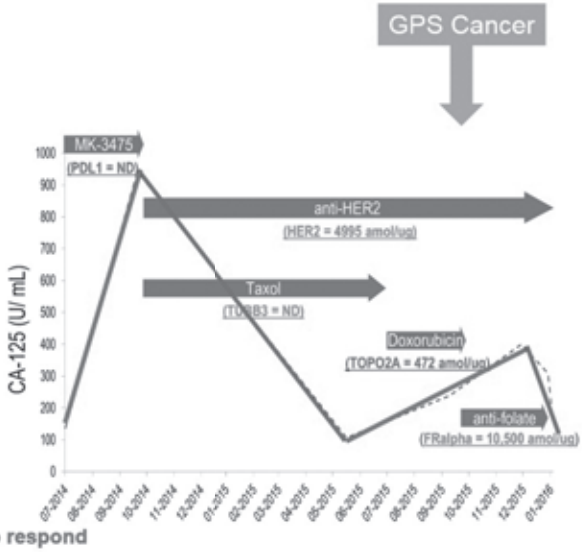
GPS Cancer: Guided Cancer Therapy Predictive of Efficacy and Resistance

2014-2016 Case Study: Metastatic Uterine Cancer

Standard of Care Treatment Options					
paclitaxel	ifosfamide	carboplatin cisplatin	doxorubicin	topotecan	radiation

Quantitative Proteomics (GPS Cancer)

Drug	Analyte	DNA	RNA	Quant Protein (amol/ug)	Efficacy Threshold
Pembrolizumab MK-3475	PD-L1, MSI	No MSI	No PD-L1	< 100	> 100
Paclitaxel	TUBB3	Intact	Expressed	< 100	< 850
Trastuzumab	HER2	Amplified	Amplified	4,995	> 740
Doxorubicin	TOPO2A	Intact	Expressed	472	> 1,530
Pemetrexed	FRa	Intact	Expressed	10,500	> 1,510



Green: Likely to respond; Red: Unlikely to respond

GPS Cancer is the only comprehensive and commercially available clinical cancer platform incorporating and integrating whole genome (comparing both a patient's normal and tumor tissue), RNA, proteomic and molecular pathways information into a clinical report that analyzes this data and identifies actionable targets to inform clinical treatment decisions.

GPS in Rare Diseases and Chronic Illnesses

Although we are deploying GPS initially for cancer, we believe this solution has potential application in identifying molecular profiles and germline mutations in rare diseases and chronic illnesses. Our molecular profile solutions are being used by a large academic research institution to examine the genomic familial drivers of cardiac disease and to perform additional research in ALS, obesity, suicide and diabetes, among other diseases.

For example, in July 2016, NantHealth announced a partnership with the University of Utah to analyze the entire genomic profiles of at least 1,000 individuals who have a history of rare and life-threatening diseases and conditions in their respective families. The landmark project is focusing on researching the genetic causes of 25 conditions, including, breast, colon, ovarian, and prostate cancers, amyotrophic lateral sclerosis (ALS), chronic lymphocytic leukemia, autism, preterm birth, epilepsy, and other hereditary conditions.

GPS Cancer: Proprietary Methods and Software

Patents with claims related to GPS Cancer are issued or allowed in the United States and internationally, and GPS Cancer is the subject of several U.S. and foreign patent applications. The proprietary methods and software components underlying GPS Cancer include:

- **Liquid Tissue**. Extracts lysates from FFPE tissue using proprietary methods to examine tumor-normal proteins and genomes.
- **Transporter Software**. Securely transfers unassembled data from sequencing instruments to the analytical custom-designed supercomputing environment.
- **Contraster Software**. Rapidly identifies genomic variants in a patient's tumor samples and compares it to that patient's germline or proprietary database of disease associated genes.
- **Paradigm Software.** Integrates DNA sequencing data from the contraster software with RNA sequencing data to identify alterations in cellular signaling behavior that are driving disease progression. The algorithm matches the alterations to the library of all known signaling pathways and all drugs and drug targets, irrespective of indication, to potentially help predict the effectiveness of personalized therapies and points of resistance.

Define Right Treatment Before Treatment Begins (eviti):

The rapid advancement of molecular and biometric medicine is overwhelming many physicians' cognitive ability, while uncoordinated, non-evidence based treatment pathways are increasing costs and reducing the quality of care.

Within our oncology solutions, eviti, our decision support solution, provides evidence-based clinical decision support, which is a critical element to ensure optimal treatment regimens. eviti is a SaaS-based clinical decision support solution that centralizes clinical content, treatment cost data from Medicare reimbursements and treatment toxicity data. The clinical content is curated by our dedicated team of clinicians, including oncologists and oncology nurses, who convert published literature and clinical trials into structured information that can be used for decision support. The eviti Advisor product is an overlay on this platform and allows both physicians and patients to access this data to better inform treatment decisions. Thus, physicians can readily stay abreast of the latest advances in cancer care. In addition, physicians can simplify their ordering, since the treatment protocols can be exported to EHR systems for order execution.

eviti provides value to our clients through its access to over 10,000 active clinical trials updated weekly and over 2,500 evidence-based treatment regimens for the treatment of cancer arising from over 40 different anatomical locations. Unique to the care delivery domain, physicians also benefit from improved claim processing by using our eviti platform that issues a pre-authorization "eviti code" when the physician chooses an approved evidence-based clinical pathway, thereby validating appropriate treatment and pre-adjudicating the claim. This is an important step in that payors and providers are collaborating on high-value, evidence-based clinical pathways as opposed to non-value added reimbursements and denials of payments. We estimate that over 75% of all oncology practices in the United States have used eviti.

eviti also serves as the clinical trial-match engine for The American Cancer Society. At the 2016 HIMSS Conference, eviti was named #1 in Clinical Decision Support by Black Book Research, an independent industry analyst firm that tracks the top-performing healthcare technology companies. eviti is typically sold to health plans on a per member (or life) per month basis. These health plans sponsor the solution and provide eviti free of charge to oncologists and their staffs.

The snapshot of our system below illustrates how different cancer treatment options for a patient is presented to compare treatments across a variety of metrics, including treatment outcome, plan compliance and costs. By providing the oncologist with this comparison, we believe eviti drives compliance and a greater number of treatments to be in accordance with evidence-based pathways.

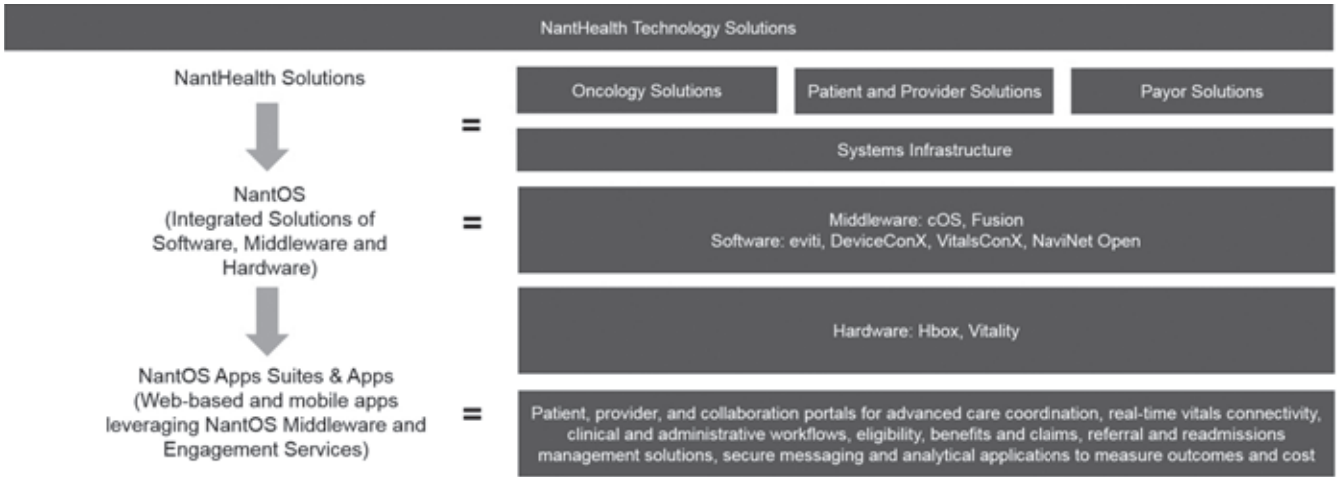
Patient and Provider Engagement (NantOS and NantOS Apps):

Our modular patient portal applications leverage NantOS and underlying data to engage and inform the patient, patient advocate and caregivers.

- **Patient Portal NantOS App:** Our Patient Portal NantOS app enables providers to incorporate the patient (or his or her proxy) as a full member of the care team, which can result in improved patient engagement, satisfaction and compliance. This NantOS app can pull information from EHRs and integrate the growing mobile health app and wearable health data into the patient's health records, providing a single access point and unified health record across the healthcare system. In addition to aggregating key data from the EHR and other sources, this NantOS app enables the patient to have convenient access to perform common tasks such as scheduling appointments, refilling prescriptions and reviewing lab tests. One feature enables the patient to actively participate in the management of their own health (self-care). The patient portal NantOS app includes a watch list that visualizes and explains key metrics, such as lab values, that a patient may want to track over time with the goal of better managing their health. This application meets or exceeds certain Meaningful Use Stage 2 requirements and can enable hospitals to achieve this certification.

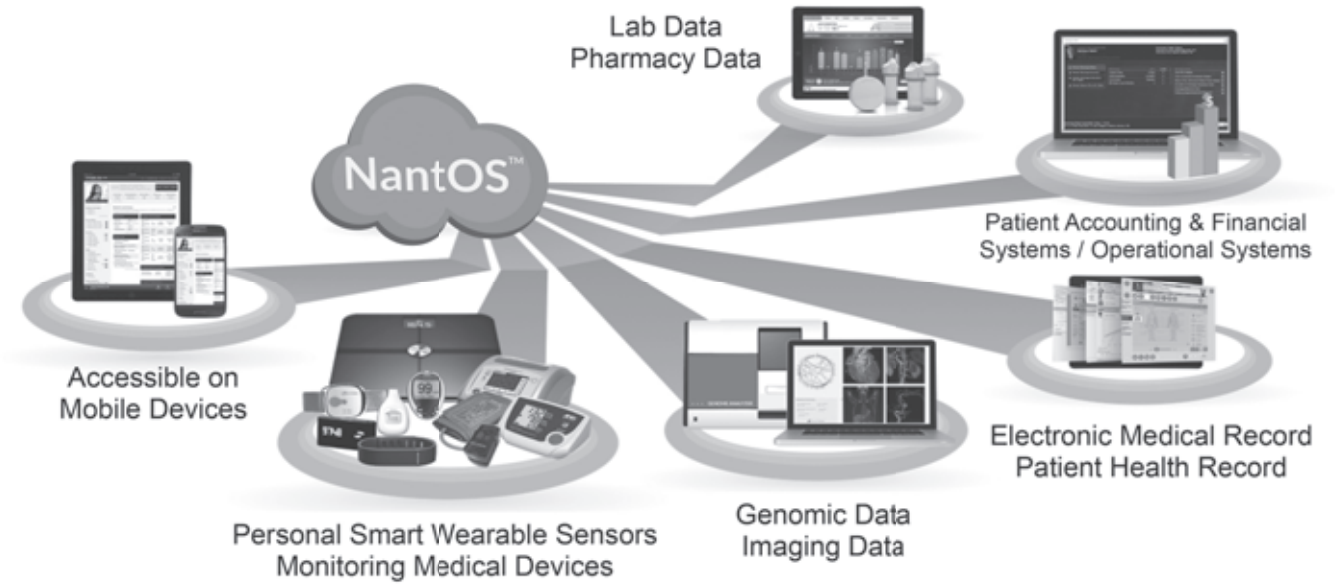
- **Health Heritage NantOS App:** The Health Heritage NantOS app is a patient-facing tool designed to empower users to collect, maintain and share their detailed personal and family medical histories and receive personalized risk assessments and recommendations. Branching logic and guidance enables users to easily construct the foundation of their medical history. This NantOS app can also work with health systems to extract key details from a user's electronic medical record automatically, in part, using its custom-built Natural Language Processing engine. Secure methods are provided for family members to share and maintain up-to-date family information. All information is currently used to identify individuals at risk for seven common cancers (breast, colorectal, melanoma, ovarian, pancreatic, prostate and uterine) and their related hereditary cancer syndromes and to provide evidence-based recommendations for users to discuss with their providers.

- **Cancer Genome Browser:** Allows users to view a patient's entire genome with the goal of understanding the totality of the genomic and proteomic expression information.



- **Care Coordination and Real-Time Connectivity (NantOS and NantOS Apps):** A key part of our care coordination and real-time connectivity solutions is to enable hospital systems, integrated delivery networks, health plans and government sponsored health organizations and their clinicians to improve productivity, more easily collaborate across the care team with both patients and payors through next-generation collaboration portals, and better manage the growing volume of data from numerous disparate sources to obtain actionable insights for improving performance at the enterprise, office and individual physician levels. Even where a hospital system may have a single EHR vendor across all its facilities, our provider engagement solution can be valued as a comprehensive, real-time solution to integrate the larger continuum of care (e.g., pharmacy, laboratory, imaging center and patient's home). Many other marketplace offerings typically provide retrospective analyses in siloed applications or do not adequately integrate health information across the continuum of care.

Our modular care coordination and connectivity applications leverage NantOS and underlying data to provide real-time data to the point-of-care. Our NantOS apps allow us to engage clients to provide next-generation collaboration portals for providers and caregivers to allow for patient-centered, proactive (as opposed to site-centered reactive) care. These NantOS apps connect and enhance disparate systems with next-generation devices and applications to help implement and coordinate pathway compliance. Our secure, cloud-based NantOS accesses, integrates and updates information from disparate clinical, operational and financial systems to create a dynamic and actionable dataset. NantOS, our middleware, can be utilized on a stand-alone basis, bundled as part of a more comprehensive solution with NantOS apps, or used as a platform of services to develop industry specific applications.



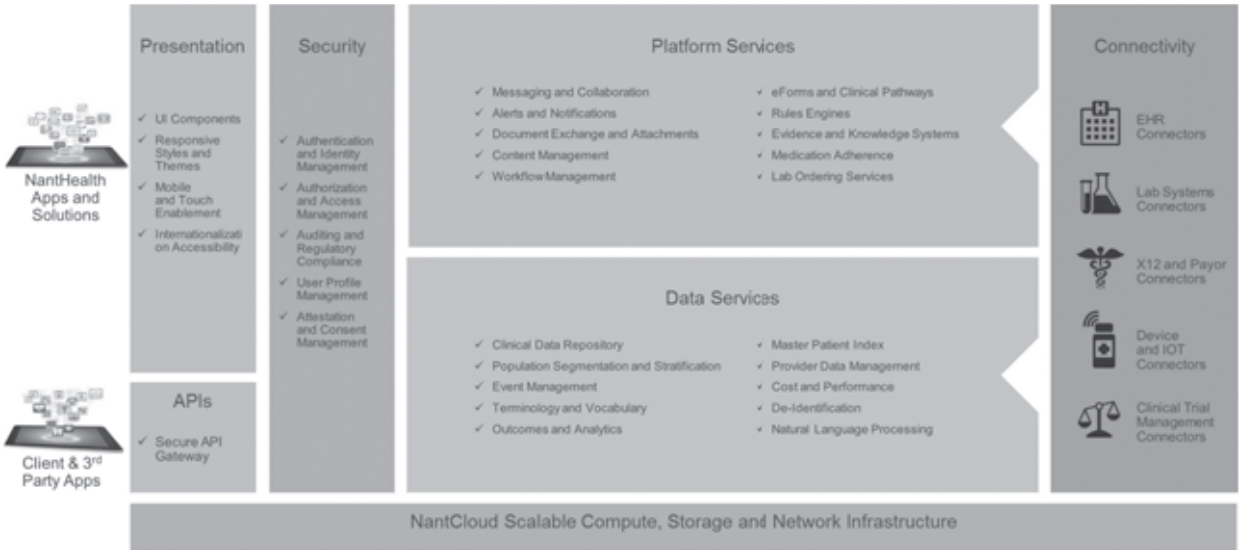
NantOS, our clinical operating system: Our provider solution software and middleware, comprised of an integration of our various solutions including cOS, FusionFX, DeviceConX, VitalsConX and NaviNet Open, or collectively NantOS, leverage the data available on our Systems Infrastructure to enable patient-centered engagement and coordination across care locations. NantOS is our core, cloud-based platform designed to address many of the coordination and interoperability challenges across the knowledge, provider and payor domains.

NantOS is patient centered and site neutral, as opposed to a site-centered operating system, which utilizes protocols and models derived from solutions targeting many of the coordination challenges inherent in supply chain management and real-time air-traffic control. NantOS enables stakeholders to better coordinate and utilize real-time integrated information, which we believe creates notable advantages relative to the traditional approach of mining retrospective and siloed sources of information. This system can be implemented by a single hospital, hospital systems, integrated delivery networks, physician groups, health plans, self-insured companies or any combination of the above, to enable value-based models. NantOS is based on an open Service Oriented Architecture, or SOA, and provides connectors, a data model, and services and makes accessible APIs that we, our clients and third parties can potentially leverage to develop next-generation healthcare applications. NantOS is compatible with both traditional data sources (e.g., EHR, labs, imaging, pharmacies, medical claims and pharmacy claims), and next-generation sources, including big data (genomics and proteomics) and real-time data sources (e.g., consumer wearables, biometrics and monitoring devices). We believe this can give our clients a unique multi-dimensional perspective from which they may garner novel insights and seek to identify and solve complex challenges associated with transitioning to value-based models and managing large amounts of data. NantOS can enable datasets to be interrogated by adaptive machine learning algorithms that can further inform and optimize decision-making. We believe that as we engage incremental populations, the predictive modeling capability will improve with the addition of a richer base of real-time information from individuals to whole population level phenotypic, molecular and biometric data.

- **Data Layer:** Our platform extracts, transforms, aggregates and contextualizes a vast array of molecular, clinical, financial, operational and other relevant data from internal and external sources into a more patient-centric information model. NantOS integrates with the systems provided by major health information technology vendors, including Varian Medical Systems, Inc., Epic, Cerner, McKesson and Allscripts, and has a robust library of over 250 EHR, pharmacy, lab, imaging, cost accounting, provider data and financial systems connectors. Additionally, our device connectivity platform has the ability to normalize and track data from over 300 inpatient and outpatient medical devices as well as over 200 consumer health and wellness sensors. Our data layer architecture is flexible to support federated, distributed or enterprise data repository approaches. This flexibility enables us to balance transactional, analytical, decision support, information security and performance requirements across different stakeholders and geographies. With an increasingly disparate set of data sources, ensuring data quality is a fundamental challenge in this space. Adjusting duplicative, incorrect, absent or irrelevant data into a consistent terminology is a core capability of our master data management services. We believe our experience integrating real-world data across millions of patients and billions of patient-level clinical data points across the globe enables us to provide some of the most usable, patient-centric data available. Furthermore, our clinical terminology translation service allows us to map disparate EHR, lab and pharmacy systems into a common clinical informatics model.

- **Services Layer:** We believe we have one of the most highly reliable and scalable suites of infrastructure and healthcare specific services. Clients and third parties use these services to build or integrate key applications. A SOA is an architectural pattern in computer software design in which application components provide services to other components via a communications protocol, typically over a network. The principles of service orientation are independent of any vendor, product or technology. We have been developing cloud-based SOA architectures for over a decade. We believe we have one of the largest open services SOA platforms in healthcare, with a growing library of over 300 infrastructure and healthcare specific services. Some of our infrastructure services include master data, identity management, security, audit and message orchestration. Other healthcare specific services include labs, orders, device, genomics, insurance administration and care plans.

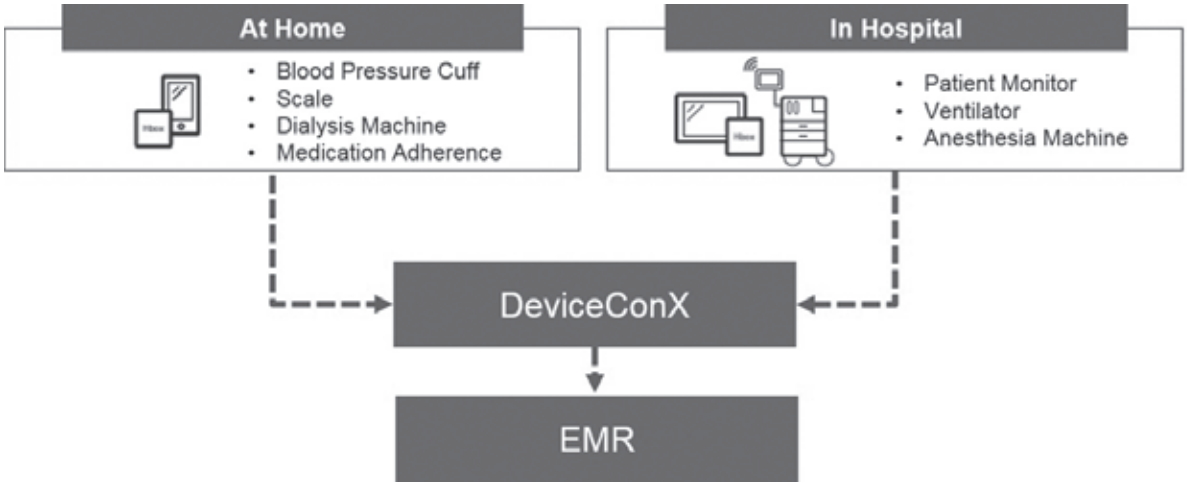
- **Application Programming Interfaces:** APIs are a set of routines, protocols and tools for building software applications. Nearly all the NantOS services have exposed APIs that enable distributed application development environments. These APIs enable us, our clients and third parties to develop ecosystems of compatible applications. Using these APIs, we have developed a series of applications such as secure messaging, value monitor, care coordination, population explorer and patient and provider portals. Additionally, certain of our clients and third-party partners have built their own internal and cross enterprise solutions using NantOS' exposed APIs.



NantOS and NantOS Apps:

Our web-based and mobile ***NantOS apps*** include patient, provider and collaboration portals for advanced care coordination, including real-time vitals connectivity, clinical and administrative workflow, eligibility and benefits, claims, referral and readmissions management solutions, secure messaging and analytical applications to measure outcomes and costs.

- **Device Connectivity Suite:** Our device connectivity and real-time biometric software and hardware suite allow us to aggregate data from one of the largest libraries of in-hospital and remote medical devices and wearables on the market. Utilizing our hardware and software platform, we can extract data from various disparate provider systems, payor systems and consumer devices across the care continuum. Our offerings can enable real-time collection of quantifiable biometric and phenotypic data, enriching the holistic patient health record to improve care and treatment. In addition, our offerings can improve care coordination and data aggregation across care settings to facilitate transitioning patients to lower cost care settings such as a skilled nursing facility or the patient's home. Key offerings include device integration to EHR systems, remote patient monitoring and medication adherence.



- **DeviceConX, or DCX, a NantOS App:** DCX is an FDA-approved device data normalization software that connects to hundreds of inpatient and outpatient clinical devices and converts data into a standard format that can be integrated into EHR systems and decision support platforms such as NantOS. This offering provides physicians with a real-time and integrated snapshot of a patient's physiological data. Our software is scalable and can be embedded across the care continuum, including inpatient, outpatient and home settings. In addition, our platform can enable connectivity with both networked and non-networked medical devices and can eliminate the need for manual entry by physicians, which can result in clinician time savings and potentially eliminate transcription errors. DCX is installed in over 350 client sites across the United States, Singapore and Denmark.

- **HBox:** The HBox is an Internet of Medical Things, or IoMT, and Internet of Things, or IoT, hardware hub that provides wired or wireless connectivity to multiple monitoring devices and transmits the data into our remote monitoring centers, our care coordination software and third-party EHR systems, giving providers real-time access to physiological data. We offer several home monitoring devices that have been tested and integrated with the HBox to support remote monitoring, readmission management and care coordination solutions and services. The HBox integrates with various weight scales, pulse oximeters and blood pressure monitors and mobile health devices, including various consumer wearables. For non-networked medical devices, we use our proprietary DeviceEscort adapter and HBox to wirelessly connect to nearly any medical device that is capable of outputting discrete medical data. HBox is currently installed at client sites in both the United States and Singapore.

- **VitalsConX, or VCX, a NantOS App:** In addition to DCX and HBox, we also provide a tablet-optimized application that sits on top of our DCX platform to provide clinicians more convenient and ubiquitous access to capture a wide array of patient vitals such as respiratory rate, blood pressure and heart rate in addition to performing patient assessments. Our solution can enable more efficient patient monitoring and provides a near real-time stream of data unlike periodic sampling typically captured in an EHR.

- **Vitality:** Vitality Medication Adherence is a hardware device and cloud-connected software NantOS app (GlowCaps for pill bottles) that tracks, reminds and alerts patients to reinforce them to take their prescribed medication. The hardware components use escalating reminders such as light and sound and the software includes text, email or phone reminders along with easy-to-understand weekly reports that can be sent to patients, family members and/or providers.

- **Provider Portal NantOS App:** Provider Portal is a clinical and administrative workflow and collaboration support NantOS app for care teams within a healthcare system, including affiliated providers in the community. The application helps providers obtain the relevant information in configurable, specific clinical views and leverage data across any connected source system, including legacy EHRs, health information exchanges, or HIEs, and data warehouses. The Provider Portal NantOS app is a patient-centric web application for viewing a virtual longitudinal care record. The Provider Portal NantOS app is context aware, which facilitates integration of our products into clinical workflow and can be synchronized with context enabled (CCOW) applications. For clients that are seeking an enterprise context management functionality, we offer a clinical workstation solution to launch multiple applications in a context-sensitive manner. The portal can be used to integrate siloed systems into unique user-specific clinical and administrative views to enable providers to make more informed decisions and improve care coordination on a near real-time basis.

- **Care Coordination NantOS App Suite:** Our Care Coordination NantOS app suite manages patient care across multiple care settings and supports longitudinal clinical record management. Using proprietary techniques and supply chain management principles, the Care Coordination app suite integrates evidence-based pathways to activity-based costing, potentially enabling clinicians to provide high-quality care at a lower cost. The NantOS Care Coordination app suite can integrate, aggregate and normalize data from medical claims, pharmacy claims, EHR systems, lab systems and pharmacy systems, cost accounting systems, operational and financial systems. Our care coordination application suite organizes care activities and information sharing among key constituents managing a patient with the goal of helping achieve safer and more effective care. Our Care Coordination NantOS app suite includes:

  - **Guided Care NantOS App:** The Guided Care NantOS app is a mobile and web application that is designed for organizing the care activities and sharing information among all participants concerned with a patient's care, to achieve optimal care. The Guided Care app can be used to put patients on the most appropriate care plan, set goals for the patients to target, schedule regular calls or visits with the patients and monitor their adherence to the care plan via real time feedback from biometric devices and other health tracking apps. The Guided Care app can be used to manage both disease management programs as well as lifestyle management program for payors, providers and self-insured employers.

  - **Urgent Care NantOS App:** The Urgent Care NantOS app is used to coordinate care of patients that have urgent care requirements. Using its telemedicine capabilities, the Urgent Care app can be used by remote providers to tele-triage the patient thereby potentially saving emergency department admission costs. In a Medicare-sponsored program, this application, along with appropriate business process changes, resulted in projected savings of over $30 million dollars in hospitalization costs over a 3-year period.

- **Transition Planner and Readmissions Management NantOS App:** The Transition Planner and Readmissions Management NantOS app proactively manages patient discharge, care transitions and medication reconciliation for patients with a high risk of readmission. This application leverages data across disparate physician electronic medical record, or EMR, systems and hospital information technology systems to provide important post-discharge care for high-risk patients, thereby potentially reducing costs. It also allows hospitals to potentially reduce exposure to readmission penalties from CMS and commercial payors.

- **Referral Management NantOS App:** The Referral Management NantOS app is a web application that allows for the creation and tracking of a patient referral that includes up to date documentation of their care for viewing and managing by the care team. A referral may be as simple as a provider requesting a patient consultation from another provider or as complex as a primary care provider requesting that a specialist assumes responsibility for all or part of a patient's treatment. This NantOS app manages the entire life-cycle of the referral process-creation, scheduling, management, procedures and results documentation. Role-based views and workflows facilitate each step in the referral process. The 360-degree view and near real-time care information keep every clinician notified of the patient's progress throughout their continuum of care. Additionally, this NantOS app can retrieve referral requests from a health information exchange.

- **Secure Messaging NantOS App:** The Secure Messaging NantOS app is an easily integrated information exchange solution that can help improve care coordination while protecting patient privacy. Messages are transported between trusted parties using the direct trust standards. The identity of recipients and the security and privacy of electronic protected health information are designed to be assured for the exchange participants, including providers, clinicians and patients. Patient information can be sent to or received from third-party direct messaging applications as attachments via direct protocols. Each message contains a unique patient context that allows the recipient to view the patient's clinical record with a single click.

Real-Time Clinical Learning (NantOS, NantOS Apps and Engagement Services):

Our near real-time clinical learning solutions leverage NantOS and underlying data to provide real-time data to measure and monitor key provider performance metrics and consist of (i) a set of business intelligence dashboards and value monitors in the areas of medical operations, quality, patient safety and finance, and (ii) high-risk patient engagement services through home health and health coaching services. Our real-time clinical learning NantOS apps include:

- **Outcomes Analytics:** Outcomes Analytics is a set of applications that run on the NantOS platform that allows payors and providers to perform comparative effectiveness studies. The NantOS big data infrastructure provides multiple levels of outcomes data starting with structured and standardized models to unstructured, schema-on-read models that can ingest large volumes and varieties of data (phenotype, omics, bio-metric, etc.). The omics results data from the reference labs and the phenotypic data from EMR and financial/cost data is normalized into a single model and made available for comparative research purposes. Outcomes Analytics is then used to create cohorts and design research studies using the study designer. We also make available to our customers a NantHealth-wide customer outcomes data repository derived from our other customers that have agreed to share de-identified data for comparative effectiveness research purposes, enabling our customers to search for cohorts and obtain access to a wider database of patients beyond their own patient cohorts.

- **Value Monitor NantOS App:** The Value Monitor NantOS app is designed to measure and monitor providers with respect to resource usage, procedure usage, efficiency, cost and customer satisfaction as compared to their peer group. Value Monitor also looks at the near real-time costs incurred versus outcomes achieved. Currently, Value Monitor is looking at high-level outcomes such as length of stay, readmissions and mortality (as specified by the CMS value-based purchasing program).

    - **Quality Scoring NantOS App:** The Quality Scoring NantOS app monitors quality of care across a patient's care team and records compliance with existing pay-for-performance measures as well as custom measures with the goal of ensuring high-quality outcomes and expected reimbursement.

- **Population Health Assessment NantOS App Suite:** We believe controlling costs requires identifying and exploring cohorts most in need of targeted interventions, necessitating advanced risk stratification at the population level. Our NantOS population health assessment applications consist of:

  - **Risk Stratification NantOS App:** The Risk Stratification NantOS app provides analysis and reporting applications and algorithms that can enable users to gain insight into operational or financial risks within their patient population and identifies detectable characteristics associated with unwanted outcomes (e.g., hospital readmissions or longer-length stays).

  - **Population Explorer NantOS App:** The Population Explorer NantOS app is an application used to analyze and stratify populations into various groups of patients with common attributes. After stratifications are complete, patients in each strata or cohort can be assigned to specific care plans. These stratifications can provide insight into the population and segment provider performance. We use several groupers including the Hopkins Grouper for identifying high-cost and high-risk patients and the Lace Algorithm for identifying patients that are at high risk for readmission. The Population Explorer NantOS app also creates disease registries by analyzing the patient populations by ICD-9 and ICD-10 classifications.

- **"Mission Control" Patient Engagement Services:** We provide targeted health services and interventions through our remote "mission control" patient engagement center where our team of clinicians develops clinical care plans for certain high-risk patients identified in our risk stratification process (e.g., hypertension, diabetes and cancer patients). These services are intended to encourage behavioral modification and are supported by clinical psychologists, pharmacists, nurses and nutritionists.

- **Home Health Services:** We provide home healthcare services that enable adults to be cared for in their homes through Assisteo. Our home health business also provides an opportunity to potentially understand the effectiveness of new technologies and develop clinical care plans for patients in alternative healthcare settings. High-risk patients with chronic diseases identified through our "mission control" patient engagement services may be proactively managed through our home health service which can result in avoidance of unnecessary, expensive visits and admissions to the emergency room and hospital.

Chronic Disease Program Case Study for Real-Time Clinical Learning:

We have initiated a wellness program with a large financial institution focused on improving employee health and satisfaction and reducing annual healthcare costs. We are implementing our Systems Infrastructure across the knowledge, care delivery and payor domains as the program fuses behavioral science with healthcare wisdom. Each participant is stratified by risk level and personality type and offered connected personal health devices along with access to our patient portal and health coaches. Their historical health data is combined with near real-time biometric data to continuously monitor the participant's activity. Our interactive business analytics create personalized care pathways that are executed, and measured with the goal of ensuring compliance and accountability. Our predictive modeling engine embedded in our platform can enable dynamic patient engagement.

Patient Engagement Center:

We provide targeted health services and interventions through our remote "mission control" patient engagement center, which is staffed by our own employees and consultants, consists of clinical psychologists, pharmacists, nurses and nutritionists. Our GPS Cancer patient engagement team, which we previously marketed as our NantCare team, also includes healthcare professionals who possess specialized skills and knowledge about, and provide specific support for, GPS Cancer. Specifically, for non-GPS Cancer matters, our patient engagement team develops clinical care plans for certain high-risk patients identified in our risk stratification process (e.g., hypertension, diabetes and cancer patients). These services are intended to encourage behavioral modification and track outcomes and pursue interventions. For GPS Cancer, our support team spearheads obtaining patient consents and documentation; coordinating logistics for tissue collection; educating caregivers, office staff and patients about GPS Cancer generally; coordinating interpretation of results from the GPS Cancer reports using our own team of oncologists and nurses to liaise with a patient's caregiver, including addressing substantive questions or concerns; and serving generally as the customer service or call center for fielding patient service questions and resolving issues. Our patient engagement center is a critical component of our GPS Cancer solution.

Payment for Value (NaviNet Open):

Our NaviNet Open multi-tenant payor portal establishes daily access to the clinical practice and caregiver and leverages the data available on NantHealth solutions with the goal of facilitating payment for value. We believe our position between the payor and the provider allows us to align incentives as a next-generation payor intermediary, to help payors ensure consistent evidence-based treatment pathways and accelerate pre-adjudication and lower administrative overhead for providers. This is designed to ultimately drive quality and streamline workflows while helping better control the administrative and operating costs associated with eligibility and benefits, claims processing, referrals, authorizations, document exchange and review utilization. This multipayor experience can benefit payors and providers alike. Provider users can benefit from a uniform experience and toolset across multiple payor relationships, and the payor can benefit from the uniform application of best practices, tools, and options, as well as the reduction in costly errors and phone-based interactions than can stem from a non-uniform end-user experience. Our payor-provider collaboration solutions are used by over 2,000 hospitals. We also estimate that more than 70% of physicians' offices nationwide connected to our NaviNet Open app during the fourth quarter of 2016. Our suite of NaviNet Open apps include:

- **Plan Central:** Provides each health-plan client with the ability to provide end users with a branded custom-content experience that allows plan customers to communicate, broadcast, share, and inform end users in support of their business. Plans can benefit from an open communication channel to the entire provider community, and providers can benefit from the ability to access plan-specific communications in one place, across many plans.

- **Eligibility and Benefits:** Delivers rich patient eligibility information on a single, user friendly screen, allowing providers to verify insurance and benefit levels at the time of a patient visit or as part of the billing cycle.

- **Claims Status Inquiry:** Allows provider office staff access to near real-time, detailed claim status information, potentially eliminating the need for the provider office to call a health plan directly to maintain a healthy revenue cycle. Users can check claim status at any time following a claim submission, and can check all claims regardless of whether submission took place on our collaboration platform or via another method. Reducing phone calls would not only eliminate costs, but also dramatically improve provider network satisfaction.

- **Claims Management:** A suite of powerful, yet easy-to-use claims-related provider applications consisting of web-based Claim Entry and Submission, Claim Repair, Claim Adjustment, Claims Log, and Claim Attachments. With these applications, provider office users can submit new claims with or without attachments, repair and re-submit rejected claims, and adjust claims that were processed or paid incorrectly due to a billing error. Notably, Claim Adjustment and Claim Attachments are both able to support any claim - regardless of whether the original claim was submitted through NaviNet, a practice management system, or even a clearinghouse. With NaviNet Open Claims Management, health plans finally have a solution to eliminate costly paper claims and attachments as well as the phone calls and manual processes associated with claims follow-up, correction, and resubmission. Additionally, providers now have access to a powerful set of claim-related applications without needing a sophisticated EMR or even a practice management system.

- **Document Exchange:** Designed to ensure that relevant clinical data are available at the right place and right time to improve overall patient care, while reducing inefficiencies in communication and transaction completion. The solution can enable rich, bi-directional interactions between payors and providers in a flexible, bi-directional, multi-tenant service, available alone via API, or in the context of our collaboration application portal.

- **Authorizations:** Allows provider staff to submit near real-time authorizations and conduct subsequent status inquiries directly with authorizing health plans. The simplified workflow guides provider choices by offering relevant information such as preferred-provider status.

- **Advanced Referrals:** Empowers providers to submit and access referrals in near real time. Key features of this application include a user-friendly, multi-payor portal, easily configurable business terms and automated decision support. The application supports provider offices with a broad range of referral information. This can result in increased provider productivity and reduced operational costs through near real-time access to up-to-date and complete referral network information.

- **Provider Data Management:** A web-based, multi-payer application that allows providers to update, validate, and attest to their provider information directly. The Application allows providers to communicate provider information updates to health plans in support of the Centers for Medicare and Medicaid Services (CMS) and state-based network adequacy mandates. The NaviNet Open Provider Data Management Application enables health plans to improve provider directory accuracy, increase operational efficiency, and adhere to compliance and audit checks.

NantHealth Systems Infrastructure to Enable NantHealth Solutions:

As the backbone to our Systems Infrastructure and Platforms, we have established a highly secure and scalable cloud-based computing, storage and transport infrastructure-as-a-service capable of processing, storing and transporting petabytes of diverse data. Our infrastructure also supports the aggregation of lab, device, EHR, medication, claims and imaging data, in addition to transporting, storing and analyzing enterprise resource planning, or ERP, cost and other key operational and financial data. We host our applications and serve all our clients from four redundant data centers in geographically diverse locations. Our infrastructure is available to all our solutions and is also consumed by third parties to host their software in our cloud. These infrastructure-hosting services also include capabilities such as secure server and application hosting, secure offsite backup, disaster recovery and business continuity solutions.

Due to the sensitive nature of our clients' data, we have a heightened focus on data security and protection. We have implemented healthcare IT industry-standard processes, policies and tools through all levels of our software development and network administration, including regularly scheduled vulnerability scanning and third-party penetration testing to reduce the risk of vulnerabilities in our system. On an annual basis, we also undergo independent, third-party SSAE 16 compliance audits, which cover HIPAA requirements. Our clinical decision support platform achieved initial URAC accreditation in Health Utilization Management, or HUM, during September 2010 and was re-accredited during August 2016 for another 3-year period. Our cloud platform achieved HITRUST CSF Assurance certification in October 2015.

Our Relationship with NantOmics, Allscripts, and Cancer Breakthroughs 2020

We have worldwide, exclusive rights from NantOmics to resell their proprietary GPS Cancer product to institutional clients, including payors, self-insured employers and healthcare providers. NantOmics provides whole genome, whole exome and RNA sequencing, and inferred and quantitative proteomic analysis, along with related computational and data management and bioinformatics services. We provide these services as part of our comprehensive molecular analysis offering. Under the agreement, we are responsible for various aspects of delivering our sequencing and molecular analysis solutions, including patient engagement and communications with providers such as providing interpretations or our GPS Cancer reports and resolving any disputes, ensuring customer satisfaction, and managing billing and collections. Our current agreement with NantOmics expires in December 2020, subject to renewal for up to an additional nine years if certain thresholds are met. The terms of the agreement include an annual minimum of $2.0 million in fees for years 2016-2020, $25.0 million in fees for years 2021-2023 and $50.0 million in fees for years 2024-2029 paid to NantOmics.

In June 2015, Allscripts purchased a 10% equity stake in our company for $200.0 million in cash. In addition, NantCapital, LLC, or NantCapital, a personal investment vehicle of Dr. Patrick Soon-Shiong, announced a $100.0 million investment into Allscripts. NantCapital's investment was executed through a private placement of Allscripts common stock. The investments and commercial agreement strengthen the partnership between Allscripts and our company, originally announced in March 2015, to develop an integrated, evidence-based, personalized approach to healthcare solutions, and specifically cancer care. We plan to use Allscripts' scale, global network of hospital and physician clients and leading software solutions, combined with our clinical platform, applications and connectivity devices to build out the infrastructure for new personalized, precision medicine programs for our clients to improve cancer care. Together, our goal is for physicians and patients to have the tools to stay engaged and active and provide the necessary intervention as early as possible.

We are a founding member of the Cancer Breakthroughs 2020 Global Immunotherapy Coalition, a cancer collaborative initiative seeking to accelerate the potential of combination immunotherapy as the next-generation standard of care in cancer patients, with the aspirational goal of developing an effective vaccine-based immunotherapy to combat cancer by 2020. As a foundation for the Cancer Breakthroughs 2020 Network, the National Immunotherapy Coalition is designing a master clinical trial protocol, entitled QUILT (QUantum Immuno-oncology Lifelong Trial) Program that is designed to incorporate a broad range of immune system components and synergistically integrate these elements by evaluating novel combinations of drugs in patients who have undergone next-generation, panomic molecular fingerprinting (whole genome, transcriptome and quantitative proteomic analysis) with the goal of achieving durable, long-lasting remission.

Our Clients

NantHealth solutions and technology platforms are used by key healthcare stakeholders, including healthcare providers, payors, self-insured employers, academic institutions and biotechnology and pharmaceutical companies. NantHealth solutions, coupled with our engagement methodology, is designed to be tailored to meet the large-scale needs of governmental organizations and private entities while remaining convenient, intuitive and configurable at the user level. We believe that this provides us with a significant advantage over a siloed, single vendor approach, which often requires the removal or replacement of existing information technology infrastructure and applications. While historically many of our solutions have been consumed on a stand-alone basis, we are increasingly bundling our solutions as our clients look for comprehensive approaches that leverage our learning algorithms.

Our total revenue was $100.4 million, $58.3 million and $33.9 million in 2016, 2015 and 2014, respectively. For the year ended December 31, 2016, AIM - American Imaging Management, Inc. and Highmark Blue Shield each accounted for more than 10% of our revenue. For the year ended December 31, 2015, AIM - American Imaging Management, Inc. accounted for more than 10% of our revenue. For the year ended December 31, 2014, no customer accounted for more than 10% of our revenue.

In January 2016, we acquired NaviNet. On a pro forma combined basis, two of NaviNet's customers would have accounted for 10.5% and 10.6%, respectively, of our total revenue for the year ended December 31, 2015.

Sales and Marketing

Our sales organization is primarily comprised of direct sales executives and pre-sales support teams organized by account type and domain and subject matter expertise. We also leverage strategic reseller arrangements and a channel relationship coverage team.

- **Direct sales organization:** We leverage domain and subject matter expertise, market credibility, thought leadership, and relationships of our executives, senior management, and product leaders in our sales efforts. Our direct sales organization is divided into two focused teams, one dedicated to commercializing our GPS Cancer solution, and the other focused on NantHealth's health information technology solutions portfolio. These two primary direct coverage teams include both sales professionals searching for new accounts and client engagement sales professionals responsible for developing existing accounts. Furthermore, sales professionals have unique expertise and specialized coverage for health plans, self-insured employers, health systems, and individual providers. Our account management organization is responsible for the continuity of current client relationships and the expansion of those relationships to include additional solutions and services.

  We have a pre-sales organization that includes clinical, business and technical customer alignment teams to support our sales organization in addition to executive sponsorship with members of our senior management team.

- **Resale and channel partnership:** In the United States, we have entered strategic resale arrangements with major partners, including EHR vendors (including Allscripts), in-hospital medical devices manufacturers and health plans who resell our solutions to their customer base. Internationally, we have entered resale arrangements with major telecommunications companies, systems integrators and other strategic distributors to accelerate our market adoption. Reseller revenue in 2016 and 2015 was $19.0 million and $9.2 million, respectively.

We also maintain business relationships with individuals and organizations that promote or support our sales or services. We refer to these individuals and organizations as our channel partners.These channel partners generally do not make sales directly like our resale partners, but instead provide us with leads that we use to develop new business through our direct sales force. These relationships enable access to broader hospital and physician clients, leading software solutions and multiple cross-selling opportunities.

We complement our sales efforts with a marketing organization that plans and execute marketing and communication strategies that are centered on initiatives that drive awareness of our company and solutions. These initiatives include educating the market about our company broadly, as well as solutions-specific campaigns for lead generation. Marketing efforts also include participation in speaking engagements and strategic interfacing with key business and trade media personnel. We employ a broad array of specific events to facilitate these initiatives, including, but not limited to, sponsorship and partnership of key industry conferences such as HIMSS and or ASCO, events and client-focused programs such as key partner user groups.

Our sales cycle can vary significantly and typically ranges from 6 months to 18 months from initial contact to contract execution. The sales cycle significantly differs based on the domain, type of solution and size of the client. Implementation, training and professional services are normally rendered based on a mutually agreed upon timetable.

Competition

The competitive landscape is highly fragmented, and to our knowledge, no single competitor currently offers similarly expansive capabilities and solution offerings in comprehensive molecular analysis, software, and systems infrastructure, particularly with a focus on creating a learning system. Our primary competitors can be characterized by the following categories of companies that provide capabilities or solutions that compete with one or more of our platforms or solutions:

- Genetic testing providers and platforms, such as Foundation Medicine, Caris Life Sciences, Personal Genome Diagnostics, and academic hospitals and research centers, including University of Michigan, Baylor Medical Genetics Laboratories, and Washington University in St. Louis;
- EHR vendors, such as Allscripts, athenahealth, Cerner, Epic, Flatiron Health, GE Healthcare, McKesson, Meditech, and Quality Systems;
- HIE and integration vendors, such as Allscripts, Intersystems, and Orion Health; and
- Healthcare IT decision support vendors, such as The Advisory Board Company, Castlight Health, HealthCatalyst, IBM, Inovalon and Truven (acquired by IBM).

The principal competitive factors in our industry include:

- Breadth and depth of application functionality;
- Ease of use and performance;
- Network strength and level of user adoption;
- Client testimonials and recommendations;
- Breadth of client base;
- Cloud-based delivery model;
- Competitive and understandable pricing;
- Ability to deliver actionable information in a relevant time period;
- Size and scope of payor clinical policy knowledge;
- Sale and marketing capabilities of vendor;
- Financial stability of vendor;
- Ability to integrate with legacy enterprise infrastructures and third-party applications; and
- Ability to innovate and respond rapidly to client needs and regulatory changes.

We believe we will compete favorably despite competing against a broad, diverse set of businesses and with increasing competition as other established and emerging companies enter our industry, client requirements evolve, and new products and technologies are introduced. Moreover, some of our actual and potential competitors have certain advantages over us, such as greater financial, technical, marketing, research and development and other resources, stronger brand and business user recognition, larger installed customer bases, larger intellectual property portfolios and broader global distribution and presence.

Research and Development

Our research and development efforts consist primarily of new product research and development, significant product improvements, the development of our knowledge base, the development of our online tools, such as our online portal and mobile applications, and the improvement and augmentation of our learning system.

Our ability to compete and attract new clients depends, in large part, on our continuous commitment to rapidly introduce new applications, technologies, features, and functionality. Our research and development team is responsible for the design and development of our applications and software tools. We follow state-of-the-art practices in software development using modern programming languages, data storage systems, and other tools.

Research and development expenses increased $37.8 million or 158.6%, from $23.8 million in 2015 to $61.6 million in 2016. This increase was driven by an increase of $16.4 million in stock compensation expense in connection with the vesting of equity awards upon the consummation of our IPO and Series C/restricted stock vesting, as well as the inclusion of research and development expenses of HCS and NaviNet. Specifically, we had $16.3 million due to an increase in personnel related expenses, and a $3.2 million increase in investments in information technology as we invest in assets to support future growth. In addition, we saw a $1.2 million increase in professional services expenses in connection with the growth of the business. Finally, we saw a $0.7 million increase in research and development general overhead expenses due to timing of certain research and development projects as well as the inclusion of research and development expenses of NaviNet. We expect to continue to invest in opportunities to leverage our solutions towards growth in our molecular sequencing and analysis and other solutions revenue.

Research and development expenses increased $6.9 million, or 40%, in the year ended December 31, 2015 compared to the year ended December 31, 2014. The increase was primarily attributable to $4.7 million of expense related to the HCS acquisition in July 2015. Our increased research and development expense reflects our continuing investment in our technology solutions including Systems Infrastructure and platforms.

We expect that our overall research and development expenses will continue to increase in absolute dollars as we continue to innovate our informational technology capabilities, develop additional products, and expand our data management resources.

Intellectual Property

We strive to protect and enhance the proprietary technology, inventions, and improvements that are commercially important to our business, including seeking, maintaining, and defending patent rights, whether developed internally or acquired from third parties. Our policy is to seek to protect our proprietary position by, among other methods, filing patent applications in the United States and in jurisdictions outside of the United States related to our proprietary technology, inventions, and improvements that are important to the development and implementation of our business. We also rely on trade secrets and know-how relating to our proprietary technology, continuing innovation, and acquisition and in-licensing opportunities to develop, strengthen, and maintain our proprietary position in the field of molecular diagnostics and healthcare technology products and services.

Our commercial success may depend in part on our ability to obtain and maintain patent and other proprietary protection for our technology, inventions, and improvements; to preserve the confidentiality of our trade secrets; to defend and enforce our proprietary rights, including our patents; and to operate without infringing on the valid and enforceable patents and other proprietary rights of third parties.

We have developed and acquired numerous patents and patent applications and we possess substantial know-how and trade secrets relating to the development and commercialization of healthcare technology products and services. As of March 30, 2017, our patent portfolio consists of the following matters relating to our proprietary technology and inventions: (i) six issued U.S. patents, of which five are U.S. utility patents and one is a U.S. design patent; (ii) 24 pending U.S. patent applications; (iii) one issued patent outside the United States; and (iv) two patent application pending in jurisdictions outside the United States.

For example, the issued U.S. patents include claims directed to the following subject matters:

- Clinical operating system architectures and clinical operating system servers;
- Designs for a medication container top;

- Computer program generation systems and methods for creating a computer program by recording the actions of a user to easily repeat tasks to streamline workflow;
- Computer systems and methods for monitoring changes in one or more variables in one or more target applications to efficiently synchronize computer applications; and
- Hub-spoke model health care transaction systems and methods where a user interface communication bridge allows users to query disparate, remote databases and supports converting health care data to and from specific formats.

Our published U.S. patent applications include claims directed to the following subject matter:

- Healthcare data networks and management methods for synchronizing healthcare databases;
- Electronic caps for medication containers featuring e-ink and curved displays;
- Night light devices operable in a medication compliance system;
- Methods, logic, and apparatus for generating a healthcare signature for an individual;
- Methods, logic, and apparatus for facilitating access to aggregated medical data;
- Methods, logic, and apparatus for generating visual displays of medical data;
- Methods, media, and apparatus for generating and executing individual patient care plans;
- Methods, media, and apparatus for analyzing clinical, operational, and financial outcomes resulting from execution of patient care plans to determine status of medical care facilities and patients;
- Methods and apparatus where personal health operating system uses n-gram analysis of sensor data to determine a person's fitness;
- Methods and systems for receiving, mapping, and routing medical event data associated with a patient;
- Clinical operating system servers;
- Methods, systems, and apparatus for modifying alarms at a medical device based on an alarm fatigue level of a user;
- Systems and apparatus for adjusting the measurement latency of a patient sensor based on the health status of the patient to achieve real-time monitoring;
- Systems and apparatus for reconfiguring networked patient sensors;
- Systems for querying an electronic medical record database from a mobile device over a cellular network; and
- Methods, systems, and media for data analysis, secured by a homomorphic encryption scheme, in a healthcare network environment.

The patent applications outside the United States in our portfolio were filed in the United Kingdom and India, and the granted patent outside the United States in our portfolio is in Taiwan.

Individual patents extend for varying periods of time, depending upon the date of filing of the patent application, the date of patent issuance, and the legal term of patents in the countries in which they are obtained.

Generally, patents issued for applications filed in the United States are effective for 20 years from the earliest effective filing date. The patent term may be adjusted to compensate for delayed patent issuance, when such delays are caused by the patent office or successful appeals against patent office actions. There is no limit on this patent term adjustment. The duration of patents outside of the United States varies in accordance with provisions of applicable local law, but typically is also 20 years from the earliest effective filing date. Our issued U.S. patents will expire on dates ranging from 2022 to 2031. If patents are issued on our pending U.S. patent applications, the resulting patents are projected to expire on dates ranging from 2026 to 2035. However, the actual protection afforded by a patent varies on a product-by-product basis, from country-to-country, and depends upon many factors, including the type of patent, the scope of its coverage, the availability of legal remedies in a particular country, and the validity and enforceability of the patent.

The patent positions of companies like ours are generally uncertain and involve complex legal and factual questions. No consistent policy regarding the scope of claims allowable in patents in the field of healthcare information technology has emerged in the United States. The patent situation outside of the United States is even more uncertain. Changes in either the patent laws or their interpretation in the United States and other countries may diminish our ability to protect our inventions and enforce our intellectual property rights, and more generally could affect the value of our intellectual property. In particular, our ability to stop third parties from making, using, selling, offering to sell, or importing products that infringe our intellectual property will depend in part on our success in obtaining and enforcing patent claims that cover our technology, inventions, and improvements.

With respect to our intellectual property, we cannot be sure that patents will be granted with respect to any of our pending patent applications or with respect to any patent applications filed by us in the future, nor can we be sure that any of our existing patents or any patents that may be granted to us in the future will be commercially useful in protecting our products and the processes involved in using those products. Moreover, even our issued patents do not guarantee us the right to practice our technology in relation to the commercialization of our products. However, the area of patent and other intellectual property rights in healthcare technology is an evolving one with many risks and uncertainties, and third parties may have blocking patents that could be used to prevent us from commercializing our patented products and practicing our proprietary technology. Our issued patents and those that may issue in the future may be challenged, invalidated, or circumvented, which could limit our ability to stop competitors from marketing related products or limit the length of the term of patent protection that we may have for our products. In addition, the rights granted under any issued patents may not provide us with protection or competitive advantages against competitors with similar technologies. Furthermore, our competitors may independently develop similar technologies. For these reasons, we may have competition for our products and services. Moreover, because of the extensive time required for development and testing of a potential product or service, it is possible that, before any particular product or service can be commercialized, any related patent may expire or remain in force for only a relatively short period following commercialization, thereby reducing any advantage of the patent.

We may also rely, in some circumstances, on trade secrets to protect our technology. However, trade secrets are difficult to protect. We seek to protect our technology and product candidates, in part, by entering confidentiality agreements with those who have access to our confidential information, including our employees, contractors, consultants, collaborators, and advisors. We also seek to preserve the integrity and confidentiality of our proprietary technology and processes by maintaining physical security of our premises and physical and electronic security of our information technology systems. Although we have confidence in these individuals, organizations, and systems, agreements or security measures may be breached and we may not have adequate remedies for any breach. In addition, our trade secrets may otherwise become known or may be independently discovered by competitors. To the extent that our employees, contractors, consultants, collaborators, and advisors use intellectual property owned by others in their work for us, disputes may arise as to the rights in related or resulting know-how and inventions.

For this and more comprehensive risks related to our proprietary technology, inventions, improvements and products, please see the section captioned “Risk Factors-Risks Related to Intellectual Property.”

Associates and Culture

We view our employees, which we refer to as associates, and company culture as integral to the successful execution of our vision and mission. As a result, our leadership team prioritizes establishing trusting relationships with our clients, our partners, and each other. We encourage our associates to “rise up” to the challenge and believe that this collective mindset has enabled us to attract and retain some of the best minds in technology, bioscience and healthcare to build and advance our offering. Our core values, which we seek to reflect in our work are:

- Building and cultivating RELATIONSHIPS with our clients and each other. Treating individuals with dignity and respect and contributing to the success of others.
- Demonstrating INTEGRITY by being intellectually honest, doing what you say, and engaging with others from a point of honesty and trust.
- Delivering excellence in SERVICE. Aspiring to be the best through quality outcomes, partnering to optimize solutions, and holding self and others accountable for success.
- Actively seeking out the opportunity to ELEVATE by speaking up, contributing feedback and ideas, and advancing the organization’s mission and purpose.

As of December 31, 2016, we had a total of 922 full-time associates in the United States, Canada, the United Kingdom (Including Great Britain and Ireland), Singapore and India, with 446 associates in operations, including engineering, 13 in product management, 226 in client services, 83 serving in a clinical function, 70 in sales and business development, and 84 in general and administrative functions. Associate engagement is a core tenant of our leadership focus and monitor of our performance and organizational health. None of our associates are represented by a labor union or covered by a collective bargaining agreement. We have not experienced any work stoppages, and we consider our relations with our associates to be good.

Government Regulation

The products and services that we provide are regulated by federal, state and foreign governmental authorities. Failure to comply with the applicable laws and regulations can subject us to repayment of amounts previously paid to us, significant civil and criminal penalties, loss of licensure, certification, or accreditation, or exclusion from government healthcare programs. The significant areas of regulation are summarized below.

Clinical Laboratory Improvement Amendments of 1988 and state regulation

The Omics services we perform fall under CLIA. A clinical laboratory is required to hold certain federal and state licenses, certifications, and permits to conduct business. As to federal certifications, Congress passed CLIA in 1988, establishing quality standards for all laboratory testing to ensure the accuracy, reliability, and timeliness of patient test results regardless of where the test was performed. The laboratory that performs our Omics services is CLIA-certified and is also required to meet certain laboratory licensing requirements for states with regulations beyond CLIA.

Under CLIA, a laboratory is any facility which performs laboratory testing on specimens derived from humans for the purpose of providing information for the diagnosis, prevention or treatment of disease, or the impairment or assessment of health. CLIA regulates virtually all clinical laboratories by requiring they be certified by the federal government and comply with various operational, personnel, facilities administration, quality, and proficiency requirements intended to ensure that their clinical laboratory testing services are accurate, reliable, and timely. Laboratories must register and list their tests with CMS, the agency that oversees the CLIA program. CLIA compliance and certification is also a prerequisite to be eligible to bill for services provided to governmental payor program beneficiaries and for many private payors. CLIA is user-fee funded. Therefore, all costs of administering the program must be covered by the regulated facilities, including certification and survey costs.

Clinical laboratories are subject to survey and inspection every two years to assess compliance with program standards, and may be subject to additional unannounced inspections. Laboratories performing high complexity testing are required to meet more stringent requirements than laboratories performing less complex tests. In addition, a laboratory, like the one which performs our Omics services, that is certified as “high complexity” under CLIA, may develop, manufacture, validate, and use proprietary tests referred to as laboratory developed tests, or LDTs. CLIA requires full validation, including accuracy, precision, specificity, sensitivity, and establishment of a reference range for any LDT used in clinical testing.

In addition to the federal certification requirements under CLIA, certain states require clinical laboratories to maintain a state license. State licensure authorities typically regulate the day-to-day operations of a clinical laboratory, including the training and skills required of its personnel and quality control. Certain states may also mandate proficiency testing, which requires the clinical laboratory to verify the accuracy of any test or procedure it performs. In addition, certain states require out-of-state laboratories to be licensed if they accept specimens from those states. CLIA provides that a state may adopt laboratory regulations that are more stringent than those under federal law. In some cases, state licensure programs substitute for the federal CLIA program. In other instances, the state’s regulations may be in addition to the CLIA program. If a laboratory is out of compliance with state laws or regulations governing licensed laboratories, penalties for violation vary from state to state but may include suspension, limitation, revocation or annulment of the license, assessment of financial penalties or fines, or imprisonment.

FDA

The FDA regulates the sale and distribution in interstate commerce of medical devices under the Federal Food, Drug, and Cosmetic Act, or the FDCA, including in vitro diagnostic devices, reagents, and instruments used to perform diagnostic testing. Devices must undergo premarket review by the FDA prior to commercialization unless the device is of a type exempted from such review by statute, regulation, or pursuant to the FDA's exercise of enforcement discretion. The FDA, to date, has generally not exercised its authority to actively regulate the development and use of LDTs, which are tests that are designed, manufactured, validated, and used within a single laboratory, and, therefore, we do not believe that the LDTs and other tests performed by the Omics laboratory currently require premarket clearance or approval. It is likely that the FDA will more actively regulate LDTs in the future, which could lead to premarket and post-market obligations. In October 2014, the FDA issued draft guidance documents stating that the FDA intends to change its policy and describing an approach to regulating LDTs using a risk-based, phased-in approach. If finalized as drafted, the guidance documents would impose premarket review and other medical device requirements under the FDCA on LDTs classified as high and moderate risk. Enforcement of premarket review and QSR requirements would be phased-in based on the risk of the LDT over a period of several years, but Medical Device Reporting requirements and compliance with either a new notification procedure in which the laboratory must provide the FDA with certain basic information about each LDT offered by their laboratory or the FDA's device registration and listing requirements would be required within six months of finalization of the guidance documents (with limited exceptions). In November, 2016, the FDA state it had decided to delay finalizing its draft guidance on regulating LDTs, and it would be seeking input from the new presidential administration and Congress on the subject. In the meantime, the laboratory that performs the Omics services will maintain its CLIA certification, which permits the use of LDTs for the purpose of providing information for treatment and other clinical purposes.

The FDA regulations pertaining to medical devices govern, among other things, the research, design, development, pre-clinical and clinical testing, manufacture, safety, effectiveness, clearance or approval, record-keeping, packaging, labeling, storage, adverse event reporting, advertising, promotion, marketing, sales, distribution, and import and export of medical devices. Pursuant to the FDCA, and its implementing regulations, medical devices are subject to varying degrees of regulatory control and are classified in one of three classes depending on the controls the FDA determines necessary to reasonably ensure their safety and effectiveness.

Class I devices are those for which reasonable assurance of safety and effectiveness can be provided by adherence to the FDA's general controls for medical devices, which include applicable portions of the FDA's QSR, facility registration and product listing, reporting of adverse medical events, and appropriate, truthful, and non-misleading labeling, advertising and promotional materials. Many Class I devices are exempt from premarket regulation; however, some Class I devices require premarket clearance by the FDA through the 510(k) premarket notification process described below.

Class II devices are subject to the FDA's general controls, and any other special controls, such as performance standards, post market surveillance, and FDA guidelines, deemed necessary by the FDA to provide reasonable assurance of the devices' safety and effectiveness. Premarket review and clearance by the FDA for Class II devices are accomplished through the 510(k) premarket notification procedure, although some Class II devices are exempt from the 510(k) requirements. We currently resell a blood pressure monitor, which is a Class II medical device that has received 510(k) clearance. Premarket notifications are subject to user fees, unless a specific exemption applies. To obtain 510(k) clearance, a manufacturer must submit a premarket notification demonstrating that the proposed device is "substantially equivalent" to a predicate device, which is a previously cleared 510(k) device or a pre-amendment device that was in commercial distribution before May 28, 1976, for which the FDA has not yet called for the submission of a premarket approval, or PMA, application. In determining substantial equivalence, the FDA assesses whether the proposed device has the same intended use and technical characteristic as the predicate device, or whether the proposed device has different technological characteristics, but the information submitted in the premarket notification demonstrates the device is as safe and effective as a legally marketed device and does not raise different questions of safety and effectiveness than the predicate device. The FDA may request additional information, including clinical data. Under the FDCA, and its implementing regulations, a manufacturer submits a premarket notification 90 days before introducing a device into interstate commerce, but the FDA's review of the premarket notification can take significantly longer. If the FDA determines that the device is substantially equivalent to the predicate device(s), the subject device may be marketed. However, if the FDA determines that a device is not substantially equivalent to the predicate device(s), then the device would be regulated as a Class III device, discussed below. If a manufacturer obtains a 510(k) clearance for its device and then makes a modification that could significantly affect the device's safety or effectiveness, a new premarket notification must be submitted to the FDA.

Class III devices are those deemed by FDA to pose the greatest risk, such as those that are life-sustaining or life-supporting and for which reasonable assurance of the device's safety and effectiveness cannot be assured solely by the general controls and special controls described above. Some pre-amendment Class III devices for which the FDA has not yet required a PMA require the FDA's clearance of a premarket notification in order to be marketed. However, most Class III devices are required to undergo the PMA process in which the manufacturer must demonstrate reasonable assurance of the safety and effectiveness of the device to the FDA's satisfaction. A PMA application must provide valid scientific evidence, typically extensive preclinical and clinical trial data, and information about the device and its components regarding, among other things, device design, manufacturing, and labeling. PMA applications (and supplemental PMA applications) are subject to significantly higher user fees than are 510(k) premarket notifications. Some PMA applications are exempt from a user fee, for example, a small business's first PMA.

Even if regulatory approval or clearance of a device is granted, the FDA may impose limitations on the uses and indications for which the device may be labeled and promoted, and the device remains subject to significant regulatory requirements. Medical devices may be marketed only for the uses and indications for which they are cleared or approved. Device manufacturers must register their facilities and list their devices with the FDA. A device manufacturer's manufacturing processes and those of some of its suppliers are required to comply with the applicable portions of the QSR, which covers quality management, design, production and process controls, quality assurance, labeling, packaging, shipping, and complaint handling. Device manufacturers must submit to the FDA medical device reports for deaths, serious injuries, and certain malfunctions and report certain field corrections and product recalls or removals. Some manufacturers also may be subject to post-market surveillance regulations. Facility records and manufacturing processes are subject to periodic unscheduled inspections by the FDA.

Failure to comply with applicable regulatory requirements can result in enforcement action by the FDA, which may include any of the following sanctions: public warning letters, fines, injunctions, civil or criminal penalties, recall or seizure of products, operating restrictions, partial suspension or total shutdown of production, delays in or denial of 510(k) clearance or PMA applications for new products, challenges to existing 510(k) clearances or PMA applications, and a recommendation by the FDA to disallow a device manufacturer from entering into government contracts. The FDA also has the authority to request repair, replacement, or refund of the cost of any device manufactured or distributed. If a supplier fails to maintain compliance with a device manufacturer's quality requirements, the manufacturer may have to qualify a new supplier and could experience manufacturing delays as a result.

HIPAA and HITECH

Under the administrative simplification provisions of HIPAA, as amended by the HITECH Act, the HHS issued regulations that establish uniform standards governing the conduct of certain electronic healthcare transactions and protecting the privacy and security of protected health information used or disclosed by healthcare providers and other covered entities. Three principal regulations with which we are required to comply have been issued in final form under HIPAA: privacy regulations, security regulations, and standards for electronic transactions, which establish standards for common healthcare transactions. The privacy and security regulations were extensively amended in 2013 to incorporate requirements from the HITECH Act.

The privacy regulations cover the use and disclosure of protected health information by healthcare providers and other covered entities. They also set forth certain rights that an individual has with respect to his or her protected health information maintained by a covered entity, including the right to access or amend certain records containing protected health information, or to request restrictions on the use or disclosure of protected health information. The security regulations establish requirements for safeguarding the confidentiality, integrity, and availability of protected health information that is electronically transmitted or electronically stored. The HITECH Act, among other things, makes certain of HIPAA's privacy and security standards applicable to business associates of covered entities, and established certain protected health information security breach notification requirements. A covered entity must notify affected individual(s) and the HHS when there is a breach of unsecured protected health information. The HIPAA privacy and security regulations establish a uniform federal "floor" that covered entities and their business associates must meet and do not supersede state laws that are more stringent or provide individuals with greater rights with respect to the privacy or security of, and access to, their records containing protected health information. HIPAA also governs patient access to laboratory test reports. Effective October 6, 2014, individuals (or their personal representatives, as applicable), have the right to access test reports directly from clinical laboratories and to direct that copies of those test reports be transmitted to persons or entities designated by the individual.

These laws contain significant fines and other penalties for wrongful use or disclosure of protected health information. Additionally, to the extent that we submit electronic healthcare claims and payment transactions that do not comply with the electronic data transmission standards established under HIPAA and the HITECH Act, payments to us may be delayed or denied.

In addition to the federal privacy regulations, there are several state laws regarding the privacy and security of health information and personal data that are applicable to our operations. The compliance requirements of these laws, including additional breach reporting requirements, and the penalties for violation vary widely and new privacy and security laws in this area are evolving. Massachusetts, for example, has a state law that protects the privacy and security of personal information of Massachusetts residents that is more prescriptive than HIPAA. Many states have also implemented genetic testing and privacy laws imposing specific patient consent requirements and protecting test results. In some cases, we are prohibited from conducting certain tests without a certification of patient consent by the physician ordering the test. Requirements of these laws and penalties for violations vary widely. We believe that we have taken the steps required of us to comply with health information privacy and security statutes and regulations in all jurisdictions, both state and federal. However, we may not be able to maintain compliance in all jurisdictions where we do business. Failure to maintain compliance, or changes in state or federal laws regarding privacy or security, could result in civil and/or criminal penalties and could have a material adverse effect on our business.

Federal, state and foreign fraud and abuse laws

In the United States, there are various fraud and abuse laws with which we must comply and we are potentially subject to regulation by various federal, state and local authorities, including CMS, other divisions of the HHS (e.g., the Office of Inspector General), the U.S. Department of Justice, and individual U.S. Attorney offices within the Department of Justice, and state and local governments. We also may be subject to foreign fraud and abuse laws.

In the United States, the federal Anti-Kickback Statute prohibits, among other things, knowingly and willfully offering, paying, soliciting or receiving remuneration to induce, or in return for patient referrals for, or purchasing, leasing, ordering, recommending or arranging for the purchase, lease or order of, any healthcare item or service reimbursable under a governmental payor program. Courts have stated that a financial arrangement may violate the Anti-Kickback Statute if any one purpose of the arrangement is to encourage patient referrals or other federal healthcare program business, regardless of whether there are other legitimate purposes for the arrangement. The definition of "remuneration" has been broadly interpreted to include anything of value, including gifts, discounts, credit arrangements, payments of cash, consulting fees, waivers of co-payments, ownership interests, and providing anything at less than its fair market value. Recognizing that the Anti-Kickback Statute is broad and may technically prohibit many innocuous or beneficial arrangements within the healthcare industry, the HHS issued a series of regulatory "safe harbors." These safe harbor regulations set forth certain provisions, which, if met, will assure healthcare providers and other parties that they will not be prosecuted under the federal Anti-Kickback Statute. Although full compliance with these provisions ensures against prosecution under the federal Anti-Kickback Statute, the failure of a transaction or arrangement to fit within a specific safe harbor does not necessarily mean that the transaction or arrangement is illegal or that prosecution under the federal Anti-Kickback Statute will be pursued. Many states also have anti-kickback statutes, some of which may apply to items or services reimbursed by any third-party payor, including commercial insurers.

In addition, federal false claims laws, including the federal civil False Claims Act, prohibit, among other things, any person or entity from knowingly presenting, or causing to be presented, a false claim for payment to, or approval by, the federal government or knowingly making, using, or causing to be made or used a false record or statement material to a false or fraudulent claim to the federal government. As a result of a modification made by the Fraud Enforcement and Recovery Act of 2009, a claim includes "any request or demand" for money or property presented to the U.S. government. Recently, several pharmaceutical and other healthcare companies have been prosecuted under these laws for allegedly providing free product to customers with the expectation that the customers would bill federal programs for the product. Other companies have been prosecuted for causing false claims to be submitted because of the companies' marketing of the product for unapproved, and thus generally non-reimbursable, uses. The civil monetary penalties statute imposes penalties against any person or entity who, among other things, is determined to have presented or caused to be presented a claim to a federal health program that the person knows or should know is for an item or service that was not provided as claimed or is false or fraudulent.

HIPAA created additional federal criminal statutes that prohibit knowingly and willfully executing, or attempting to execute, a scheme to defraud or to obtain, by means of false or fraudulent pretenses, representations or promises, any money or property owned by, or under the control or custody of, any healthcare benefit program, including private third-party payors and knowingly and willfully falsifying, concealing or covering up by trick, scheme or device, a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services.

In addition, various states have enacted false claim laws analogous to the federal False Claims Act, although many of these state laws apply where a claim is submitted to any third-party payor and not merely a governmental payor program. If our operations are found to be in violation of any of the federal and state healthcare laws described above or any other governmental regulations that apply to us, we may be subject to significant penalties, including without limitation, civil, criminal and/or administrative penalties, damages, fines, disgorgement, exclusion from participation in government programs, such as Medicare and Medicaid, injunctions, private "qui tam" actions brought by individual whistleblowers in the name of the government, or refusal to allow us to enter into government contracts, contractual damages, reputational harm, administrative burdens, diminished profits and future earnings, and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations.

In Europe, various countries have adopted anti-bribery laws providing for severe consequences, in the form of criminal penalties and/or significant fines, for individuals and/or companies committing a bribery offence. Violations of these anti-bribery laws, or allegations of such violations, could have a negative impact on our business, results of operations and reputation. For instance, in the United Kingdom, under the Bribery Act 2010, which went into effect in July 2011, a bribery occurs when a person offers, gives or promises to give a financial or other advantage to induce or reward another individual to improperly perform certain functions or activities, including any function of a public nature. Bribery of foreign public officials also falls within the scope of the Bribery Act 2010. Under the new regime, an individual found in violation of the Bribery Act 2010 faces imprisonment of up to 10 years. In addition, the individual can be subject to an unlimited fine, as can commercial organizations for failure to prevent bribery.

Federal and state physician self-referral prohibitions

Under a federal law directed at "self-referral," commonly known as the "Stark Law," there are prohibitions, with certain exceptions, on referrals for certain designated health services, including laboratory services, that are covered by the Medicare and Medicaid programs by physicians who personally, or through a family member, have an investment or ownership interest in, or a compensation arrangement with, an entity performing the tests. The prohibition also extends to payment for any testing referred in violation of the Stark Law. A person who engages in a scheme to circumvent the Stark Law's referral prohibition may be fined up to $100,000 for each such arrangement or scheme. In addition, any person who presents or causes to be presented a claim to the Medicare or Medicaid programs in violation of the Stark Law is subject to civil monetary penalties of up to $15,000 per bill submission, an assessment of up to three times the amount claimed and possible exclusion from participation in federal governmental payor programs. Bills submitted in violation of the Stark Law may not be paid by Medicare or Medicaid, and any person collecting any amounts with respect to any such prohibited bill is obligated to refund such amounts. Many states have comparable laws that are not limited to Medicare and Medicaid referrals.

Corporate practice of medicine

Numerous states have enacted laws prohibiting business corporations, such as us, from practicing medicine and employing or engaging physicians to practice medicine, generally referred to as the prohibition against the corporate practice of medicine. These laws are designed to prevent interference in the medical decision-making process by anyone who is not a licensed physician. For example, California's Medical Board has indicated that determining what diagnostic tests are appropriate for a particular condition and taking responsibility for the ultimate overall care of the patient, including providing treatment options available to the patient, would constitute the unlicensed practice of medicine if performed by an unlicensed person. Violation of these corporate practice of medicine laws may result in civil or criminal fines, as well as sanctions imposed against us and/or the physician through licensure proceedings. Typically, such laws are only applicable to entities that have a physical presence in the state.

Healthcare reform

The United States and some foreign jurisdictions are considering or have enacted several legislative and regulatory proposals designed to change the healthcare system in ways that could affect our business. In the United States, there is significant interest in promoting changes in the health care system with the stated goal of containing healthcare costs, improving quality or expanding access. For example, the ACA contains certain measures that may be significant for our business. The ACA includes, among other things, provisions regarding initiatives to revise Medicare payment methodologies; the coordination and promotion of research on comparative clinical effectiveness of different technologies and procedures; and initiatives to promote quality indicators in payment methodologies. The ACA also includes an annual excise tax on device manufacturers of 2.3% of the price for which manufacturers sell their devices. The excise tax has been temporarily suspended for calendar years 2016 and 2017, but will be reinstated in 2018 without additional Congressional action.

There have been other health reform measures taken since the enactment of the ACA. For example, the Budget Control Act of 2011, among other things, created measures for spending reductions by Congress. A Joint Select Committee on Deficit Reduction, tasked with recommending a targeted deficit reduction of at least $1.2 trillion for the years 2013 through 2021, was unable to reach required goals, thereby triggering the legislation's automatic reduction (known as sequestration) to several government programs. This includes aggregate reductions to Medicare payments to providers of 2% per fiscal year, beginning April 1, 2013, which, following passage of subsequent legislation, will remain in effect through 2025 unless additional Congressional action is taken. Furthermore, on January 2, 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, increased the statute of limitations for the government to recover overpayments to providers from three years to five years.

The current presidential administration and Congress are also expected to attempt broad sweeping changes to the current health care laws. We face uncertainties that might result from modification or repeal of any of the provisions of the ACA, including as a result of current and future executive orders and legislative actions. The impact of those changes on us and potential effect on the participants in the health care system as a whole is currently unknown. But, any changes to the ACA are likely to have an impact on our results of operations, and may have a material adverse effect on our results of operations. We cannot predict what other healthcare programs and regulations will ultimately be implemented at the federal or state level or the effect of any future legislation or regulation in the United States may have on our business.

Other regulatory requirements

The laboratory performing the Omics services is subject to federal, state and local regulations relating to the handling and disposal of regulated medical waste, hazardous waste and biohazardous waste, including chemical, biological agents and compounds, blood and bone marrow samples, and other human tissue. Typically, the laboratory uses outside vendors who are contractually obligated to comply with applicable laws and regulations to dispose of such waste. These vendors are licensed or otherwise qualified to handle and dispose of such waste.

The U.S. Occupational Safety and Health Administration has established extensive requirements relating to workplace safety for healthcare employers, including requirements to develop and implement programs to protect workers from exposure to blood-borne pathogens by preventing or minimizing any exposure through needle stick or similar penetrating injuries.

Backlog

We have no material backlog of orders.

Geographic Information

During 2016, substantially all of our long-lived assets were located within the United States.

Revenue from international markets were approximately 4% of our consolidated revenue for 2016 and less than 1% of our consolidated revenue for 2015. No sales to international markets recorded in 2014.

Corporate Information

We were founded in 2010 as a Delaware limited liability company under the name “About Advanced Health, LLC.” In 2011, our affiliates NantWorks, LLC, or NantWorks, and California Capital Equity, LLC, or Cal Cap, purchased certain assets from Abraxis Bioscience, LLC, which were subsequently contributed to us. We subsequently changed our name to “All About Advanced Health, LLC,” and then to “Nant Health, LLC.” On June 1, 2016, in connection with our initial public offering, we converted from a limited liability company into a Delaware corporation and changed our name from Nant Health, LLC to NantHealth, Inc., which we refer to as the “LLC Conversion.” In conjunction with the LLC Conversion, (a) all of our outstanding units were automatically converted into shares of our common stock, based on the relative rights of our pre-IPO equityholders as set forth in the Nant Health, LLC limited liability company agreement, or the LLC Agreement, and (b) we adopted and filed a certificate of incorporation with the Secretary of State of the State of Delaware and adopted bylaws. Our principal executive offices are located at 9920 Jefferson Blvd, Culver City, CA 90232 and our telephone number is (310) 883-1300. Our corporate website address is www.nanthealth.com. We make available on our website, free of charge, our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and any amendments to those reports, as soon as reasonably practicable after we electronically file such material with, or furnish it to, the Securities and Exchange Commission, or SEC. Our SEC reports can be accessed through the investor relations page of our website located at http:// http://ir.nanthealth.com/. Additionally, a copy of this Annual Report on Form 10-K is located at the SEC’s Public Reference Room at 100 F Street, NE, Washington, D.C. 20549. Information on the operation of the Public Reference Room can be obtained by calling the SEC at 1-800-SEC-0330.

The contents of our website are not a part of, and are not incorporated by reference into, this Annual Report on Form 10-K or any other report or document we file with the SEC, and any references to our website are intended to be inactive textual references only.

Item 1A. Risk Factors

Investing in our common stock involves a high degree of risk. You should carefully consider the risks described below, as well as all other information included in this Annual Report on Form 10-K, including our financial statements and the related notes thereto and Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" any of which may be relevant to decisions regarding an investment in or ownership of our common stock. Our future operating results may vary substantially from anticipated results due to a number of risks and uncertainties, many of which are beyond our control. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties that we are unaware of, or that we currently believe are not material, may also become important factors that affect us. The following discussion highlights some of these risks and uncertainties and the possible impact of these risks on future results of operations. If any of the following risks actually occurs, our business, financial condition, operating results, prospects and ability to accomplish our strategic objectives could be materially harmed. As a result, the trading price of our common stock could decline and you could lose all or part of your investment. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our business operations and the market price of our common stock.

Risks related to our business approach

We are an early, commercial-stage company attempting to integrate a complex learning system to address a wide range of healthcare issues, and we may not be successful in doing so.

We are an early, commercial-stage company with a business model based upon a novel approach to healthcare. NantHealth solutions is designed to address many of the key challenges healthcare constituents face by enabling them to acquire and store genomic and proteomic data, combine diagnostic inputs with phenotypic and cost data, analyze datasets, securely deliver that data to providers in a clinical setting to aid selection of the appropriate treatments, monitor patient biometric data and progression on a real-time basis, and demonstrate improved patient outcomes and costs. Integration across our Systems Infrastructure and platforms may take longer than we expect, or may never occur at all.

We have also recently made multiple acquisitions of businesses, technologies and service offerings including Net.Orange, Inc., or NDO, certain assets of Harris Corporation, through its HCS business unit, and NaviNet, in an effort to expand the breadth of our offerings. We have not yet completed the integration of these businesses, technologies and service offering into our operations. Additionally, certain of these acquired businesses, technologies and service offerings have not yet been commercially tested or validated. We may not be able to integrate these new business, technologies and services offerings into our operations effectively or at all. Additionally, we may be unable to extract the synergies or benefits that we currently expect from these business, technologies and service offerings.

Due to the above factors, it may take longer than we expect, or we may never be able, to fully integrate our system as planned. If our integration efforts are not successful we may not be able to attract new clients and to expand our offerings to existing clients.

The success of NantHealth solutions is dependent upon the robustness of the information we and others input into the system to achieve maximum network effects, and if we are unable to amass and input the requisite data to achieve these effects, our business will be adversely affected.

NantHealth solutions becomes more valuable as more accurate and clinically relevant information is integrated into it, and our ultimate outputs and recommendations to a patient, provider or payor are therefore highly dependent on the information that is input into our system. As a result, we will need to consistently and continuously have access to and integrate the most medically relevant and cutting edge clinical data and research studies with patient-specific real-time genomic and proteomic sequences and biometric data. To have access to biometric data in particular, we rely on patients, provider and payors to adopt devices that are compatible with our systems and they may not adopt such devices on a scale or at a rate sufficient to support our offerings or at all. Further, to have access to certain other data points, we rely in part on third parties to develop applications to run on NantOS operating system and to generate more data to be integrated into NantHealth solutions. These third parties may never develop applications compatible with NantOS or may develop them at a slower rate than our ability to address shifts in healthcare. To the extent we are unable to amass enough data, keep an inflow of current and continuous data or integrate and access the data we currently have to continue to populate NantHealth solutions, the network effects we expect will not be fully realized and our business may be adversely affected.

We may be unable to appropriately allocate our financial and human resources across our broad array of product and service offerings.

We have a broad array of product and service offerings. Our management team is responsible for allocating resources across these products and services, and may forego or delay pursuit of opportunities with certain products or services that later prove to have greater commercial potential. Our resource allocation decisions may cause us to fail to capitalize on attractive products or services or market opportunities. Our spending on current and future research and development programs and future products or services may not yield commercially viable products or services, or may fail to optimize the anticipated network effects of NantHealth solutions. If our management team is unable to appropriately prioritize the allocation of our resources among our broad range of products and services in an efficient manner, our business may be adversely affected.

Risks related to our financial condition and capital requirements

We have a limited operating history, which may make it difficult to evaluate our current business and predict our future performance.

We were organized as a limited liability company in Delaware and began operations in 2010. In June 2016, we converted to a Delaware corporation. Additionally, our business has operated as part of the larger NantWorks LLC, or NantWorks group of affiliated companies. Our limited independent operating history, particularly in light of the increasingly complex and rapidly evolving healthcare and technology markets in which we operate, may make it difficult to evaluate our current business and predict our future performance. In addition, we have acquired numerous companies or businesses over the past two years, including certain assets of Harris Corporation and NaviNet. We have had limited experience operating these businesses as a whole and as such, it may be difficult to evaluate our current business and predict our future operating performance. In light of the foregoing, any assessment of our profitability or prediction about our future success or viability is subject to significant uncertainty. We have encountered and will continue to encounter risks and difficulties frequently experienced by early, commercial-stage companies in rapidly evolving industries. If we do not address these challenges successfully, our business results will suffer.

We have a history of significant losses, which we expect to continue, and we may never achieve or sustain profitability in the future.

We have incurred significant net losses in each fiscal year since inception and expect to continue to incur net losses for the foreseeable future. We experienced net losses of $184.1 million, $72.0 million and $84.6 million during the years ended December 31, 2016, 2015 and 2014, respectively. As of December 31, 2016, we had an accumulated deficit of $475.3 million. The losses and accumulated deficit were primarily due to the substantial investments we made to grow our business and enhance our Systems Infrastructure and platforms. We have grown our business through research and development and the acquisition of assets, businesses and customers. We anticipate that our operating expenses will increase substantially in the foreseeable future as we seek to continue to grow our business, including through strategic acquisitions, and build and further penetrate our client base and develop our product and service offerings, including GPS Cancer. These efforts may prove more expensive than we currently anticipate, and we may not succeed in increasing our revenue sufficiently to offset these higher expenses.

Our prior losses, combined with our expected future losses, have had and will continue to have an adverse effect on our stockholders' equity and working capital. We expect to continue to incur operating losses for the foreseeable future and may never become profitable on a quarterly or annual basis, or if we do, we may not be able to sustain profitability in subsequent periods. Our failure to achieve and sustain profitability in the future would negatively affect our business, financial condition, results of operations and cash flows, and could cause the market price of our common stock to decline.

We may need to raise additional capital to fund our existing operations, develop our solutions, commercialize new products and expand our operations.

Based on our current business plan, we believe the net proceeds from our initial public offering and our convertible notes offering, together with our current cash, cash equivalents, marketable securities, and our ability to borrow from affiliated entities, will be sufficient to meet our anticipated cash requirements over at least the next 12 months. If our available cash balances and anticipated cash flow from operations are insufficient to satisfy our liquidity requirements, we may seek to sell common or preferred equity or convertible debt securities, enter into a credit facility or another form of third-party funding, or seek other debt financing.

We may consider raising additional capital in the future to expand our business, to pursue strategic investments, to take advantage of financing opportunities, or for other reasons, including to:

- increase our sales and marketing efforts to drive market adoption of NantHealth solutions, GPS Cancer, NantOS and NantOS apps;
- address competitive developments;
- fund development and marketing efforts of any future platforms and solutions;
- expand adoption of GPS Cancer and eviti platform solutions into critical illnesses outside of oncology;
- acquire, license or invest in complimentary businesses, technologies or service offerings; and
- finance capital expenditures and general and administrative expenses.

Our present and future funding requirements will depend on many factors, including:

- our success in driving adoption of GPS Cancer;
- our success in making GPS cancer reimbursable by payors;
- our ability to achieve revenue growth;
- the cost of expanding our products and service offerings, including our sales and marketing efforts;
- our ability to achieve interoperability across all of our acquired businesses, technologies and service offerings to deliver networking effects to our clients;
- the effect of competing technological and market developments;
- costs related to international expansion; and
- the potential cost of and delays in product development as a result of any regulatory oversight applicable to our products.

The various ways we could raise additional capital carry potential risks. If we raise funds by issuing equity securities, dilution to our stockholders could result. Any equity securities issued also could provide for rights, preferences or privileges senior to those of holders of our common stock. If we raise funds by issuing debt securities, those debt securities would have rights, preferences and privileges senior to those of holders of our common stock. The terms of debt securities issued or borrowings pursuant to a credit agreement could impose significant restrictions on our operations.

We are involved in pending securities litigation and an adverse resolution of such litigation may adversely affect our business, financial condition, results of operations and cash flows.

The Company has been named as a defendant in lawsuits arising out of our initial public offering and later public statements. In March 2017, a number of putative class action securities complaints were filed in U.S. District Court California, naming as defendants the Company and certain of our executive officers and directors. Certain plaintiffs also named as defendants investment banks who were underwriters in our initial public offering. The complaints generally allege that defendants made material misstatements and omissions in violation of the federal securities laws. The outcomes of litigation are difficult to predict. Plaintiffs may seek recovery of a substantial amount. The monetary and other impact of this action may remain unknown for substantial periods of time. The cost to defend, settle or otherwise resolve this matter may be significant and divert management's attention from the operations of the Company. We cannot assure you that we will prevail in this lawsuit. If we are ultimately unsuccessful in this matter, we could be required to pay substantial amounts which might materially adversely affect our business, operating results and financial condition. For additional information regarding this and other lawsuits in which we are involved, see Part I, Item 3, Legal Proceedings.

Risks related to our sequencing and molecular analysis solutions, including GPS Cancer

We may not be able to generate sufficient revenue from our sequencing and molecular analysis solutions, including GPS Cancer, or our relationships with sequencing and molecular analysis customers, to achieve and maintain profitability.

We believe our commercial success depends significantly upon our ability to successfully market and sell our sequencing and molecular analysis solutions, including GPS Cancer, to continue to expand our current relationships and develop new relationships with physicians, self-insured employers, payors and healthcare providers, and expand adoption of sequencing and molecular analysis for disease indications outside oncology. Net revenue from our sequencing and molecular analysis solutions representing 0.6% and 0.1% of our total net revenue for the years ended December 31, 2016 and 2015, respectively. The demand for sequencing and molecular analysis may decrease or may not continue to increase at historical rates for a number of reasons. Our clients may decide to decrease or discontinue their use of sequencing and molecular analysis due to changes in research and product development plans, financial constraints or utilization of internal molecular testing resources or molecular tests performed by others, which are circumstances outside of our control. In addition to reducing our revenue, this may reduce our exposure to early stage research that facilitates the incorporation of newly developed information about cancer into GPS Cancer. Further, we may be unsuccessful in expanding our clients' use of sequencing and molecular analysis outside of oncology.

We are currently not profitable. Even if we succeed in increasing adoption of sequencing and molecular analysis by physicians, self-insured employers, payors and healthcare providers, and maintaining and creating relationships with our existing and new clients, we may not be able to generate sufficient revenue from sequencing and molecular analysis to achieve profitability.

Sequencing and molecular analysis may have limited utility unless we or third parties are able to successfully establish links between genomic sequencing and expression analysis and disease and treatment pathways.

Full genomic sequencing and expression analysis may have limited utility on a stand-alone basis. We believe the real value is derived by linking genomic sequencing and RNA and proteomic analysis with disease pathways to help enable the discovery and development of personalized treatments. We do not currently, and do not expect in the future to, engage in research regarding disease pathways or engage in the development or commercialization of specific therapeutics or drugs. Instead, we will rely on third parties to do so. However, if third-party time and funding is not devoted to determining disease pathways or to discovering, developing and marketing therapeutics or drugs specific to such pathways, sequencing and molecular analysis and GPS Cancer will be perceived to have limited utility and our business may be adversely affected.

Our success will depend on our ability to use rapidly changing genetic data to interpret molecular analysis results accurately and consistently, and our failure to do so would have an adverse effect on our operating results and business.

Our success depends on our ability to provide reliable, high-quality molecular profiling tests that incorporate rapidly-evolving information about the role of genes and gene variants in disease and clinically relevant outcomes associated with those variants. The accuracy and reproducibility we have demonstrated to date may not continue, particularly for clinical samples, as molecular analysis volume increases. Errors, including as a result of molecular analysis failing to detect genomic variants with high accuracy, or omissions, including as a result of failing to or incompletely or incorrectly identify the significance of gene variants, could have a significant adverse impact on our business. Hundreds of genes can be implicated in some disorders, and overlapping networks of genes and symptoms can play a role in multiple conditions. We also rely on clinicians to interpret what we report and to incorporate specific information about an individual patient into the physician's treatment decision. As a result, a substantial amount of judgment is required in order to interpret testing results for an individual patient and to develop an appropriate patient report. Due to such errors in judgment, patient outcomes may not be improved even if GPS Cancer performs to our expectations.

The efficiency of sequencing and molecular analysis, including GPS Cancer, and the results that we achieve depend on the design and operation of our sequencing process, which uses a number of complex and sophisticated biochemical, informatics, optical, and mechanical processes, many of which are highly sensitive to external factors. An operational or technology failure in one of these complex processes or fluctuations in external variables may result in sequencing processing efficiencies that are lower than we anticipate or that vary between sequencing runs. In addition, we regular evaluate and if necessary, refine our sequencing process. These refinements may initially result in unanticipated issues that further reduce our sequencing process yields or increase the variability of our sequencing yields. Low sequencing yields can cause variability in our operating results and damage our reputation. In addition, although we believe GPS Cancer is a comprehensive molecular profiling solution, no solution is fully comprehensive and it will need to be continually improved in line with improvements in science and technology and potential developments by our competitors. If GPS Cancer proves to not be fully comprehensive customer demand for GPS Cancer may be adversely affected.

GPS Cancer can determine whether specific genes are over- or under-expressed which can affect protein levels and, as a result, cancer phenotype and drug efficacy in a particular patient. Such gene expression can also capture the effect of post-translational modifications, which can have equally significant implications on how a cancer is expressed in a patient and in turn may impact treatment decisions. GPS Cancer represents a novel and largely unproven approach to the diagnosis of cancer and may not be accurate based on the evolving understanding of how genomic sequences and proteomic analysis relate to disease progression and drug efficacy and resistance. As a result, the marketing, sale and use of molecular analysis and GPS Cancer could subject us to liability for errors in, misunderstandings of, or inappropriate reliance on, information we provide to physicians or geneticists, and lead to claims against us if someone were to allege that our solutions failed to perform as they were designed, if we failed to correctly interpret results, or if the ordering physician were to misinterpret our results or improperly rely on them when making a clinical decision. A product liability or professional liability claim could result in substantial financial and reputational damage and be costly and time-consuming for us to defend. Although we maintain liability insurance, including for errors and omissions, we cannot assure you that our insurance would fully protect us from the financial impact of defending against these types of claims or any judgments, fines or settlement costs arising out of any such claims. Any liability claim, including an errors and omissions liability claim, brought against us, with or without merit, could increase our insurance rates or prevent us from securing insurance coverage in the future. Additionally, any liability lawsuit could cause injury to our reputation or cause us to suspend sales of our sequencing and or molecular analysis solutions. The occurrence of any of these events could have an adverse effect on our business, reputation and results of operations.

Our sequencing and molecular analysis solutions may never achieve significant commercial market acceptance.

Our sequencing and molecular analysis solutions may never gain significant acceptance in the marketplace and, therefore, may never generate substantial revenue or profits for us. Our ability to achieve commercial market acceptance for our sequencing and molecular analysis solutions will depend on several factors, including:

- our ability to convince key thought lenders, physicians and caregivers and other key oncology stakeholders of the clinical utility of our entire product offering and its potential advantages over existing sequencing tests, specifically, the advantages of our RNA sequencing, which maps oncology disease pathways versus a patient's own germline and our quantitative proteomic analysis;

- the willingness of physicians, self-insured employers, payors and healthcare providers to utilize GPS Cancer; and

- the willingness of commercial third-party payors and government payors to reimburse GPS Cancer, the scope and amount of which will affect patients' willingness or ability to pay for GPS Cancer and likely heavily influence our customers' decisions to recommend GPS Cancer.

Further, today's most advanced diagnostics tests analyze narrow gene panels that capture only a limited number of the most common gene alterations, as compared to GPS Cancer, which sequences the patient's whole genome (comparing both a patient's normal and tumor tissue) and RNA and performs quantitative proteomic analysis. These narrow gene panels for specific treatments or disease areas are much less expensive than GPS Cancer. Although we believe that the advantages of sequencing the patient's whole genome for the treatment of cancer, as well as running additional RNA and proteomic sequencing tests, outweigh the costs, key thought leaders, physicians and other caregivers, other key oncology stakeholders and payors may not agree. Further, if advances in the understanding of disease states and pathways do not reveal a benefit to whole genome and RNA and proteomic sequencing in areas beyond cancer then the market potential for GPS Cancer will be limited. Failure to achieve widespread commercial market acceptance for our sequencing and molecular analysis solutions could materially harm our business, financial condition and results of operations.

If we cannot compete successfully with our competitors for our sequencing and molecular analysis solutions, including GPS Cancer, we may be unable to increase or sustain our revenue or achieve and sustain profitability.

Personalized molecular analysis is a new area of science, and we face competition from companies that offer products, or have conducted research, to profile genes and gene expression in various cancers. Our principal competition for GPS Cancer comes from diagnostic companies that also offer whole genome sequencing. We also compete with diagnostic companies offering molecular diagnostic tests that capture only a single marker or test panels that capture a limited number of the most well-known gene alterations, known as hotspot panel tests. In addition, academic research centers, diagnostic companies and next-generation sequencing, or NGS, platform developers are offering or developing NGS-based testing. NGS-based testing also has the capability to provide whole genome sequencing to compete with GPS Cancer.

Our competitors include companies such as Foundation Medicine, Inc., or Foundation Medicine, Caris Life Sciences, LLC, or Caris Life Sciences, and Personal Genome Diagnostics, Inc., or Personal Genome Diagnostics. Many hospitals and academic medical centers may also seek to perform the type of molecular testing we perform at their own facilities. As such, our competition may include entities such as the University of Michigan, Baylor Medical Genetics Laboratories, Washington University in St. Louis and other academic hospitals and research centers. In addition to developing kits, some diagnostic companies also provide NGS platforms. Illumina, Inc., Thermo Fisher Scientific Corporation, Invitae Corporation, and other companies develop NGS platforms that are being sold directly to research centers, biopharmaceutical companies and clinical laboratories. While many of the applications for these platforms are focused on the research and development markets or testing for conditions outside of oncology, these companies have launched and will continue to commercialize products focused on the clinical oncology market. Although we believe GPS Cancer is a comprehensive molecular profiling solution, our competitors may develop more comprehensive or superior alternative offerings. We believe diagnostic platform providers will seek to place sequencing machines in laboratories to develop NGS-based laboratory-developed tests, or LDTs. In addition, we believe these companies will also develop their own diagnostic kits approved by the Food and Drug Administration, or FDA, which can be sold to the clients who have purchased their platforms. Also, many private companies are developing information technology-based tools to support the integration of NGS-based testing into the clinical setting.

Additionally, some of our competitors' sequencing tests are being used in FDA clinical trials as companion diagnostics. Because companion diagnostics help identify whether a patient's disease expresses the molecular target, or biomarker, for the particular drug, they can help ensure the drug's efficacy and are sometimes required by the FDA to be used with certain drugs. GPS Cancer may not have the genetic and proteomic analysis capability on par with a companion diagnostic to guide therapeutic treatments for certain customers. Further, the FDA requires a companion diagnostic test if a new drug works on a specific genetic or biological target that is present in some, but not all, patients with a certain cancer or disease. Even if it is shown to be on par with FDA-approved companion diagnostics, physicians and payors may still not choose to use GPS Cancer. If physicians and payors utilize and pay for these FDA-approved companion diagnostic tests instead of GPS Cancer, our business may be adversely affected.

Any of these competitors could have technological, financial and market access advantages that are not currently available to us.

The molecular diagnostics industry is subject to rapidly changing technology, which could make GPS Cancer and other products we may develop or license in the future obsolete.

Our industry is characterized by rapid technological changes, frequent new product introductions and enhancements and evolving industry standards, all of which could make GPS Cancer or our other products we develop or license obsolete. Our future success will depend on our ability to keep pace with the evolving needs of our clients on a timely and cost-effective basis and to pursue new market opportunities that develop as a result of technological and scientific advances. In recent years, there have been numerous advances in technologies relating to the diagnosis and treatment of cancer. There have also been advances in methods used to analyze very large amounts of genomic information. We must continuously enhance GPS Cancer and our other solutions, and we may also need to develop or license new technologies, to keep pace with evolving standards of care. If we do not update GPS Cancer or our other solutions to reflect new scientific knowledge about cancer biology, information about new cancer therapies, or relevant clinical trials, GPS Cancer could become obsolete and our GPS Cancer revenue growth would be limited or eliminated, which would have a material adverse effect on our business, financial condition and results of operations.

If we are not able to establish relationships with, or lose the support of, key thought leaders or payors' key decision makers, it may be difficult to establish GPS Cancer as a standard of care for patients with cancer, which may limit our revenue growth and ability to achieve profitability.

We are establishing relationships with leading oncology thought leaders and payors' key decision makers. If we are unable to establish these relationships, or these key thought leaders or payors' key decision makers determine that GPS Cancer, or other products or services that we develop or license, are not clinically or operationally effective or that alternative technologies and services are more effective or cost-efficient, or if they elect to use and promote internally developed products, we would encounter significant difficulty driving adoption of GPS Cancer and other technologies and services and validating GPS Cancer as a standard of care, which would limit our revenue growth and our ability to achieve profitability.

Ethical, legal and social concerns related to the use of genomic information could reduce demand for our sequencing and molecular analysis solutions, including GPS Cancer.

Genomic testing, like that conducted using GPS Cancer, has raised ethical, legal and social issues regarding privacy and the appropriate uses of the resulting information. Governmental authorities could, for social or other purposes, limit or regulate the use of genomic information or genomic testing, particularly for those diseases that have no known cure. These concerns may lead patients to refuse to use, or clinicians to be reluctant to order, whole genome genomic tests even if permissible.

Ethical and social concerns may also influence U.S. and foreign patent offices and courts with regard to patent protection for technology relevant to our business. These and other ethical, legal and social concerns may limit market acceptance of our products or reduce the potential markets for products enabled by our sequencing and molecular analysis solutions, including GPS Cancer, either of which could have an adverse effect on our business, financial condition or results of operations.

Risks related to our System Infrastructure, NantOS and NantOS apps business

The market for our Systems Infrastructure, NantOS and NantOS apps is new and unproven and may not grow.

We believe our future success will depend in large part on establishing and growing a market for our Systems Infrastructure, NantOS and NantOS apps that are able to provide operational intelligence, particularly designed to collect and index machine data. Our Systems Infrastructure is designed to address interoperability challenges across the healthcare continuum. It integrates big data with real time resources and applies machine learning algorithms to inform and optimize treatment decisions. In order to grow our business, we intend to expand the functionality of our offering to increase its acceptance and use by the broader market. In particular, our Systems Infrastructure is targeted at those in the healthcare continuum that are transitioning from fee-for-service to a value-based reimbursement models. While we believe this to be the current trend in healthcare, this trend may not continue in the future. Our Systems Infrastructure is less effective with a traditional fee-for-service model and if there is a reversion in the industry towards fee-for-service, or a shift to another model, we would need to update our offerings and we may not be able to do so effectively or at all. It is difficult to predict client adoption and renewal rates, client demand for our software, the size and growth rate of the market for our solutions, the entry of competitive products or the success of existing competitive products. Many of our potential clients may already be party to existing agreements for competing offerings that may have lengthy terms or onerous termination provisions, and they may have already made substantial investments into those platforms which would result in high switching costs. Any expansion in our market depends on a number of factors, including the cost, performance and perceived value associated with such operating system and software applications particularly in light of the aforementioned shifting market dynamics. Although we have experienced rapid adoption of our Systems Infrastructure, NantOS and NantOS apps to date, that rate may slow or decline in the future, which would harm our business and operating results. In addition, while many large hospital systems and payors use our solutions, many of these entities use only certain of our offerings, and we may not be successful in driving broader adoption of our solutions among these existing users, which would limit our revenue growth.

If the market for our offerings does not achieve widespread adoption or there is a reduction in demand for our offerings in our market caused by a lack of customer acceptance, technological challenges, lack of accessible machine data, competing technologies and products, decreases in corporate spending, weakening economic conditions, or otherwise, it could result in reduced customer orders, early terminations, reduced renewal rates or decreased revenues, any of which would adversely affect our business operations and financial results. You should consider our business and prospects in light of the risks and difficulties we may encounter in this new and unproven market.

The data and information that we provide to our clients, and their constituents, could be inaccurate or incomplete, which could harm both patients and our business, financial condition and results of operations.

Our NantOS offering stores and displays data from a variety of third-party sources for use in treating patients and to search and compare options for healthcare services and treatments. As part of our eviti platform solutions, we provide up-to-date information regarding cancer research, along with a list of potential treatments and relevant clinical trials seeking enrollment. Most of this data comes from health plans, our clients, published guidelines, peer-reviewed journals and other third parties. Because data in the healthcare industry is often fragmented in origin, inconsistent in format and often incomplete, the overall quality of certain types of data we receive can be poor. If these data are incorrect or incomplete or if we make mistakes in the capture or input of their data, or in our interpretation or analysis of such data, adverse consequences, including patient death and serious injury, may occur and give rise to product liability and other claims against us. In addition, a court or government agency may take the position that our storage and display of health information exposes us to personal injury liability or other liability for wrongful delivery or handling of healthcare services or erroneous health information. While we maintain insurance coverage, we cannot assure that this coverage will prove to be adequate or will continue to be available on acceptable terms, if at all. Even unsuccessful claims could result in substantial costs, reputational damage, and diversion of management resources. A claim brought against us that is uninsured or under-insured could harm our business, financial condition and results of operations.

Our use of open source technology could impose limitations on our ability to commercialize our offerings.

Our offerings incorporate open source software components that are licensed to us under various public domain licenses. Some open source software licenses require users who distribute open source software as part of their software to publicly disclose all or part of the source code to such software or make available any derivative works of the open source code on unfavorable terms or at no cost. There is little or no legal precedent governing the interpretation of many of the terms of these licenses and therefore the potential impact of such terms on our business is not fully known or predictable. There is a risk that such licenses could be construed in a manner that imposes unanticipated conditions or restrictions on our ability to market our software products and services. While we monitor our use of open source software and try to ensure that none is used in a manner that would require us to disclose our source code or that would otherwise breach the terms of an open source agreement, such use could inadvertently occur and we may be required to release our proprietary source code, pay damages for breach of contract, re-engineer one or more of our offerings, discontinue sales of one or more of our offerings in the event re-engineering cannot be accomplished on a timely basis or take other remedial action that may divert resources away from our development efforts, any of which could cause us to breach obligations to our clients, harm our reputation, result in customer losses or claims, increase our costs or otherwise adversely affect our business and operating results.

If we are not able to enhance our Systems Infrastructure, NantOS or NantOS apps to achieve market acceptance and keep pace with technological developments, our business will be harmed.

Our ability to attract new subscribers and increase revenue from existing subscribers depends in large part on our ability to enhance and improve our existing offerings and to introduce new products and services, including products and services designed for a mobile user environment. To grow our business, we must develop products and services that reflect the changing nature of business management software and expand our NantOS offering. The success of any enhancements to our offerings depends on several factors, including timely completion, adequate quality testing and sufficient demand. Any new product or service that we develop may not be introduced in a timely or cost-effective manner, may contain defects or may not achieve the market acceptance necessary to generate sufficient revenue. If we are unable to successfully develop new products or services, enhance our existing offerings to meet subscriber requirements or otherwise gain market acceptance, our business and operating results will be harmed.

In addition, because many of our offerings are available over the Internet, we need to continuously modify and enhance them to keep pace with changes in Internet-related hardware, software, communications and database technologies and standards. If we are unable to respond in a timely and cost-effective manner to these rapid technological developments and changes in standards, our offerings may become less marketable, less competitive or obsolete, and our operating results will be harmed. If new technologies emerge that are able to deliver competitive products and applications at lower prices, more efficiently, more conveniently or more securely, such technologies could adversely impact our ability to compete. Our offerings must also integrate with a variety of network, hardware, mobile, and software platforms and technologies, and we need to continuously modify and enhance them to adapt to changes and innovation in these technologies. Any failure of our offerings to operate effectively with future infrastructure platforms and technologies could reduce the demand for such offerings. If we are unable to respond to these changes in a cost-effective manner, our offerings may become less marketable, less competitive or obsolete, and our operating results may be adversely affected.

Our data suppliers might restrict our use of or refuse to license data, which could lead to our inability to provide certain products or services.

A portion of the data that we use is either purchased or licensed from third parties or is obtained from our customers for specific customer engagements. Although we typically enter into long-term contractual arrangements with many of these suppliers of data, at the time of entry into a new contract or renewal of an existing contract, suppliers may increase restrictions on our use of such data, increase the price they charge us for data or refuse altogether to license the data to us. In addition, during the term of any data supply contract, suppliers may fail to adhere to our data quality control standards or fail to deliver data. Further, although no single individual data supplier is material to our business, if a number of suppliers collectively representing a significant amount of data that we use for one or more of our services were to impose additional contractual restrictions on our use of or access to data, fail to adhere to our quality-control standards, repeatedly fail to deliver data or refuse to provide data, now or in the future, our ability to provide those services to our clients could be materially adversely impacted, which may harm our operating results and financial condition.

We believe that we have rights necessary to use the data that is incorporated into our offerings. However, in the future, data providers could withdraw their data from us if there is a competitive reason to do so, or if legislation is passed restricting the use of the data, or if judicial interpretations are issued restricting use of the data that we currently use in our products and services. If a substantial number of data providers were to withdraw their data, our ability to provide our offerings to our clients could be materially adversely impacted.

For example, in order to deliver the full functionality offered by NantOS, we need access, on behalf of our customers, to sources of pricing and claims data, much of which is managed by a limited number of health plans and other third parties. We have developed various long-term and short-term data sharing relationships with certain health plans and other third parties, including many of the largest health plans in the United States. The health plans and other third parties that we currently work with may, in the future, change their position and limit or eliminate our access to pricing and claims data, increase the costs charged to us for access to data, provide data to us in more limited or less useful formats, or restrict our permitted uses of data. Furthermore, some health plans have developed or are developing their own proprietary price and quality estimation tools and may perceive continued cooperation with us as a competitive disadvantage and choose to limit or discontinue our access to pricing and claims data. Failure to continue to maintain and expand our access to pricing and claims data will adversely impact our ability to continue to serve existing clients and expand NantOS and our other offerings to new clients.

If the validity of an informed consent from a patient enrolled in a clinical trial with one of our clients was challenged, we could be forced to stop using some of our resources, which would hinder the development efforts for our sequencing and molecular analysis solutions.

We have implemented measures designed to ensure that clinical data and genetic and other biological samples that we receive from our customers have been collected from subjects who have provided appropriate informed consent for purposes which extend to our product development activities. We seek to ensure that these data and samples are provided for processing via our molecular profiling solution in a manner that does not use readily individually identifiable information of the subject. We also have measures in place to ensure that the subjects from whom the data and samples are collected do not retain or have conferred on them any proprietary or commercial rights to the data or any discoveries derived from them. Further, our clients may conduct clinical trials in a number of different countries, and, to a large extent, we rely upon them to comply with the subject's informed consent and with local law and international regulation. The collection of data and samples in many different countries results in complex legal questions regarding the adequacy of informed consent and the status of genetic material under a large number of different legal systems. The subject's informed consent obtained in any particular country could be challenged in the future, and those informed consents could prove invalid, unlawful, or otherwise inadequate for our purposes. Any findings against us, or our clients, could deny us access to or force us to stop using some of our clinical samples, which would hinder our molecular profiling solution development efforts. We could become involved in legal challenges, which could consume our management and financial resources.

Failure by our clients to obtain proper permissions and waivers may result in claims against us or may limit or prevent our use of data which could harm our business.

We require our clients and business associates to provide necessary notices and to obtain necessary permissions and waivers for use and disclosure of the information that we receive, and we require contractual assurances from them that they have done so and will do so. If they do not obtain necessary permissions and waivers, then our use and disclosure of information that we receive from them or on their behalf may be limited or prohibited by state or federal privacy laws or other laws. This could impair our functions, processes and databases that reflect, contain or are based upon such data and may prevent use of such data. In addition, this could interfere with or prevent creation or use of rules, analyses or other data-driven activities that benefit us. Moreover, we may be subject to claims or liability for use or disclosure of information by reason of lack of valid notice, permission or waiver. These claims or liabilities could subject us to unexpected costs and adversely affect our operating results.

Our sales cycle can be lengthy and unpredictable, which may cause our revenue and operating results to fluctuate significantly.

Our sales cycle can be lengthy and unpredictable. Our sales efforts involve educating our customers about the use and benefits of our offerings and solutions, including the technical capabilities of our solutions and the potential cost savings and productivity gains achievable by deploying them. Additionally, many of our potential clients are typically already in long-term contracts with their current providers and face significant costs associated with transitioning to our offerings and solutions. As a result, potential customers typically undertake a significant evaluation process, which frequently involves not only NantHealth solutions and component Systems Infrastructure and platforms, including NantOS and NantOS apps in comparison with our competitors, but also their existing capabilities and solutions, and can result in a lengthy sales cycle. We spend substantial time, effort and money on our sales efforts without any assurance that our efforts will produce any sales. In addition, purchases of NantHealth solutions and component Systems Infrastructure and platforms, including NantOS and NantOS apps, are frequently subject to budget constraints, multiple approvals and unplanned administrative, processing and other delays. For example, at this time, hospitals in the United States face significant uncertainty over the continuing impact of federal government budgets, and continuing changes in the implementation and deadlines for compliance with the Patient Protection and Affordable Care Act of 2010, or ACA, and other healthcare reform legislation, as well as potential future statutes and rulemaking. Many of our potential hospital clients, in particular, have used all or a significant portion of their revenues to comply with federal mandates to adopt electronic medical records in order to maintain their Medicaid and Medicare reimbursement levels. In the event we are unable to manage our lengthy and unpredictable sales cycle, our business may be adversely affected.

We bill our clients and recognize revenue over the term of the contract for certain of our products; near term declines in new or renewed agreements for these products may not be reflected immediately in our operating results and may be difficult to discern.

A portion of our revenue in each quarter is derived from agreements entered into with our clients during previous quarters. Consequently, a decline in new or renewed agreements in any one quarter may not be fully reflected in our revenue for that quarter. Such declines, however, would negatively affect our revenue in future periods and the effect of significant downturns in sales of and market demand for certain of our solutions, and potential changes in our rate of renewals or renewal terms, may not be fully reflected in our results of operations until future periods. In addition, we may be unable to adjust our cost structure rapidly, or at all, to take account for reduced revenue. Our subscription model for certain of our solutions also makes it difficult for us to increase our total revenue through additional sales in any quarterly period, as revenue from new clients for those products must be recognized over the applicable term of the agreement. Accordingly, the effect of changes in the industry impacting our business or changes we experience in our new sales may not be reflected in our short-term results of operations.

A large portion of our revenue is derived from a small group of our clients, and the loss of such clients could adversely affect our business.

We derive a large portion of our revenue from a small group of our clients. In 2015 and 2016, we derived a significant portion of our revenue from a single reseller, who contracts with various health plans and other healthcare entities to manage the utilization of specialty health services for their covered members. For the year ended December 31, 2015, 14.7% of our revenue was derived through this reseller. During the year ended December 31, 2016, we derived 10.6% of our revenue through this reseller and another 10.2% of our revenue through a customer relationship with a major health plan from our acquisition of NaviNet. We cannot guarantee that these clients will continue to contract for our services or acquire new services. The contract governing the reseller relationship is terminable without cause upon 12 months' written notice, but the health plan customer cannot terminate without cause. Additionally, the reseller may not be successful in reselling our products to its covered members, or covered members may reduce their orders for our products for a number of reasons. If this happens, our revenue could be greatly reduced, which would materially and adversely affect our business.

If our existing clients do not continue or renew their agreements with us, renew at lower fee levels or decline to purchase additional applications and services from us, our business and operating results will suffer.

We expect to derive a significant portion of our revenue from renewal of existing customer agreements, and sales of additional applications and services to existing clients. As a result, achieving high customer satisfaction to keep existing clients and sell additional platform offerings is critical to our future operating results.

Factors that may affect the renewal rate for our offerings and our ability to sell additional solutions include:

- the price, performance and functionality of our offerings;
- the availability, price, performance and functionality of competing solutions;
- our ability to develop complementary applications and services;
- our continued ability to access the pricing and claims data necessary to enable us to deliver reliable data in our cost estimation and price transparency offering to customers;
- the stability, performance and security of our hosting infrastructure and hosting services;
- changes in healthcare laws, regulations or trends; and
- the business environment of our clients, in particular, headcount reductions by our clients.

For our NantOS and related offerings, we typically enter into master services agreements with our clients. These agreements generally have stated terms of three to five years. Our clients have no obligation to renew their subscriptions for our offering after the term expires. In addition, our clients may negotiate terms less advantageous to us upon renewal, which may reduce our revenue from these clients. Factors that are not within our control may contribute to a reduction in our contract revenue. For instance, our clients may reduce their number of employees, which would result in a corresponding reduction in the number of employee users eligible for our offering and thus a lower aggregate monthly services fee. Our future operating results also depend, in part, on our ability to sell new solutions to our existing customers. If our clients fail to renew their agreements, renew their agreements upon less favorable terms or at lower fee levels, or fail to purchase new solutions from us, our revenue may decline or our future revenue may be constrained.

In addition, a significant number of our customer agreements allow our clients to terminate such agreements for convenience at certain times, typically with one to three months advance notice. Any cancellations of such agreements would have a negative result on our business and results of operations.

If any new applications and services we may develop or acquire are not adopted by our customers, or if we fail to continue to innovate and develop or acquire new applications and services that are adopted by customers, then our revenue and operating results will be adversely affected.

In addition to past investments made in NantHealth solutions, and component Systems Infrastructure and platforms, including NantOS and NantOS apps, we have invested, and will continue to invest, significant resources in research and development and in acquisitions to enhance our existing offerings and introduce new high quality applications and services. If existing clients are not willing to make additional payments for such new applications, or if new clients do not value such new applications, our business and operating results will be harmed. If we are unable to predict user preferences or our industry changes, or if we are unable to modify our offering and services on a timely basis, we might lose clients. Our operating results would also suffer if our innovations and acquisitions are not responsive to the needs of our clients, are not appropriately timed with market opportunity or are not effectively brought to market.

Security breaches, loss of data and other disruptions could compromise sensitive information related to our business and/or protected health information or prevent us from accessing critical information and expose us to liability, which could adversely affect our business and our reputation.

In the ordinary course of our business, we and our clients, consultants, contractors and business associates collect and store petabytes of sensitive data, including legally protected health information, personally identifiable information, intellectual property and proprietary business information owned or controlled by ourselves or our clients, payors, providers and partners. We manage and maintain our applications and data by utilizing a combination of on-site systems, managed data center systems, and cloud-based data center systems. These applications and data encompass a wide variety of business-critical information, including research and development information, commercial information and business and financial information. We face four primary risks relative to protecting this critical information, including loss of access risk, inappropriate disclosure risk, inappropriate modification risk and the risk of being unable to adequately monitor our controls over the first three risks.

The secure processing, storage, maintenance and transmission of this critical information is vital to our operations and business strategy, and we devote significant resources to protecting such information. Although we take measures to protect sensitive information from unauthorized access or disclosure, our information technology and infrastructure, and that of our third-party billing and collections provider, may be vulnerable to attacks by hackers or viruses or breached due to employee error, malfeasance or other disruptions. Any such breach or interruption could compromise our networks and the information stored there could be accessed by unauthorized parties, publicly disclosed, lost or stolen. Any such access, disclosure or other loss of information could result in legal claims or proceedings, liability under laws that protect the privacy of personal information, such as the Health Insurance Portability and Accountability Act, or HIPAA, and regulatory penalties. Although we have implemented security measures and a formal, dedicated enterprise security program to prevent unauthorized access to patient data, there is no guarantee we can continue to protect our online portal or will be able to protect our mobile applications from breach. Unauthorized access, loss or dissemination could also disrupt our operations, including our ability to conduct our analyses, provide test results, bill payors, providers or patients, process claims and appeals, provide customer assistance services, conduct research and development activities, collect, process and prepare company financial information, provide information about our products and other patient and physician education and outreach efforts through our website, manage the administrative aspects of our business and damage our reputation, any of which could adversely affect our business.

The U.S. Office of Civil Rights may impose penalties on us if we do not fully comply with requirements of HIPAA. Penalties will vary significantly depending on factors such as whether we knew or should have known of the failure to comply, or whether our failure to comply was due to willful neglect. These penalties include civil monetary penalties of $100 to $50,000 per violation, up to an annual cap of $1,500,000 for identical violations. A person who knowingly obtains or discloses individually identifiable health information in violation of HIPAA may face a criminal penalty of up to $50,000 per violation and up to one-year imprisonment. The criminal penalties increase to $100,000 per violation and up to five years imprisonment if the wrongful conduct involves false pretenses, and to $250,000 per violation and up to 10 years imprisonment if the wrongful conduct involves the intent to sell, transfer, or use identifiable health information for commercial advantage, personal gain, or malicious harm. The U.S. Department of Justice is responsible for criminal prosecutions under HIPAA. Furthermore, in the event of a breach as defined by HIPAA, we have specific reporting requirements to the Office of Civil Rights under the HIPAA regulations as well as to affected individuals, and we may also have additional reporting requirements to other state and federal regulators, including the Federal Trade Commission, and/or to the media. Issuing such notifications can be costly, time and resource intensive, and can generate significant negative publicity. Breaches of HIPAA may also constitute contractual violations that could lead to contractual damages or terminations.

In addition, the interpretation and application of consumer, health-related and data protection laws in the United States, Europe and elsewhere are often uncertain, contradictory and in flux. It is possible that these laws may be interpreted and applied in a manner that is inconsistent with our practices. If so, this could result in government-imposed fines or orders requiring that we change our practices, which could adversely affect our business. In addition, these privacy regulations vary between states, may differ from country to country, and may vary based on whether testing is performed in the United States or in the local country. Complying with these various laws could cause us to incur substantial costs or require us to change our business practices and compliance procedures in a manner adverse to our business.

We rely on Internet infrastructure, bandwidth providers, data center providers, other third parties and our own systems for providing services to our users, and any failure or interruption in the services provided by these third parties or our own systems could expose us to litigation and negatively impact our relationships with clients, adversely affecting our brand and our business.

Our ability to deliver our internet-based services is dependent on the development and maintenance of the infrastructure of the Internet by third parties. This includes maintenance of a reliable network backbone with the necessary speed, data capacity and security for providing reliable Internet access and services. Our services are designed to operate without interruption in accordance with our service level commitments. However, we expect that we will in the future experience interruptions and delays in services and availability from time to time. We rely on internal systems as well as third-party vendors, including data center providers and bandwidth providers, to provide our services. We store, process and transport petabytes of data and the nature of our business requires us to scale our storage capacity. In the event we are unable to scale appropriately, we may lose clients or fail to realize the network effects of our system and our business may be impaired. We do not maintain redundant systems or facilities for some of these services. In the event of a catastrophic event with respect to one or more of these systems or facilities, we may experience an extended period of system unavailability, which could negatively impact our relationship with users. To operate without interruption, both we and our service providers must guard against:

- damage from fire, power loss and other natural disasters;
- communications failures;
- software and hardware errors, failures and crashes;
- security breaches, computer viruses and similar disruptive problems; and
- other potential interruptions.

Any disruption in the network access or co-location services provided by third-party providers or any failure of or by third-party providers or our own systems to handle current or higher volume of use could significantly harm our business. We exercise limited control over third-party vendors, which increases our vulnerability to problems with services they provide.

Any errors, failures, interruptions or delays experienced in connection with third-party technologies and information services or our own systems could negatively impact our relationships with clients and adversely affect our business and could expose us to third-party liabilities. Although we maintain insurance for our business, the coverage under our policies may not be adequate to compensate us for all losses that may occur. In addition, we cannot provide assurance that we will continue to be able to obtain adequate insurance coverage at an acceptable cost.

The reliability and performance of the Internet may be harmed by increased usage or by denial-of-service attacks. The Internet has experienced a variety of outages and other delays as a result of damages to portions of its infrastructure, and it could face outages and delays in the future. These outages and delays could reduce the level of Internet usage as well as the availability of the Internet to us for delivery of our internet-based services. Any failure to offer high-quality technical support services may adversely affect our relationships with our clients and harm our financial results.

As a result of the complexity of the issues facing healthcare providers and payors and the inherent complexity of our solutions to such issues, our clients depend on our support organization to resolve any technical issues relating to our offering. In addition, our sales process is highly dependent on the quality of our offerings, our business reputation and on strong recommendations from our existing clients. Any failure to maintain high-quality and highly responsive technical support, or a market perception that we do not maintain high-quality and highly responsive support, could harm our reputation, adversely affect our ability to sell our offering to existing and prospective clients, and harm our business, operating results and financial condition.

We offer technical support services with our offerings and we may be unable to respond quickly enough to accommodate short-term increases in customer demand for support services, particularly as we increase the size of our customer base. We also may be unable to modify the format of our support services to compete with changes in support services provided by competitors. It is difficult to predict customer demand for technical support services and if customer demand increases significantly, we may be unable to provide satisfactory support services to our clients and their constituents. Additionally, increased customer demand for these services, without corresponding revenue, could increase costs and adversely affect our operating results.

If we cannot implement NantHealth solutions and component Systems Infrastructure and platforms, including NantOS and NantOS apps, for customers in a timely manner, we may lose customers and our reputation may be harmed.

Our clients have a variety of different data formats, enterprise applications and infrastructures, and NantHealth solutions and component Systems Infrastructure and platforms, including NantOS and NantOS apps, must support our clients' data formats and integrate with complex enterprise applications and infrastructures. Similarly, our connectivity devices and applications must interact with a wide variety of devices and data formats. If our platforms do not currently support a customer's required data format or appropriately integrate with a customer's applications and infrastructure, then we must configure our Systems Infrastructure to do so, which increases our expenses. Additionally, we do not control our clients' implementation schedules. As a result, if our clients do not allocate internal resources necessary to meet their implementation responsibilities or if we face unanticipated implementation difficulties, the implementation may be delayed. Further, our implementation capacity has at times constrained our ability to successfully implement our offering for our clients in a timely manner, particularly during periods of high demand. If the customer implementation process is not executed successfully or if execution is delayed, we could incur significant costs, customers could become dissatisfied and decide not to increase usage of our offering, or not to use our offering beyond an initial period prior to their term commitment or, in some cases, revenue recognition could be delayed. In addition, competitors with more efficient operating models with lower implementation costs could penetrate our customer relationships.

Additionally, large and demanding enterprise clients, who currently comprise the substantial majority of our customer base, may request or require specific features or functions unique to their particular business processes, which increase our upfront investment in sales and deployment efforts and the revenue resulting from the clients under our typical contract length may not cover the upfront investments. If prospective large customers require specific features or functions that we do not offer, then the market for our offering will be more limited and our business could suffer.

In addition, supporting large clients could require us to devote significant development services and support personnel and strain our personnel resources and infrastructure. Furthermore, if we are unable to address the needs of these clients in a timely fashion or further develop and enhance our offering, or if a client or its constituents are not satisfied with the quality of work performed by us or with the offerings delivered or professional services rendered, then we could incur additional costs to address the situation, we may be required to issue credits or refunds for pre-paid amounts related to unused services, the profitability of that work might be impaired and the client's dissatisfaction with our offerings could damage our ability to expand the number of applications and services purchased by that client. Furthermore, if a client or its constituents do not opt into or need certain aspects of our offering, there may not be enough demand for that aspect of our offering to warrant future purchases by that client, or the client may seek to terminate their relationship with us. These clients may not renew their agreements, seek to terminate their relationship with us or renew on less favorable terms. Moreover, negative publicity related to our client relationships, regardless of its accuracy, may further damage our business by affecting our ability to compete for new business with current and prospective clients. If any of these were to occur, our revenue may decline and our operating results could be adversely affected.

We face intense competition in our markets, and we may be unable to compete effectively for new clients.

Although our product offerings target the new and emerging market for evidence-based personalized healthcare technology solutions, we compete against a variety of large software vendors and smaller specialized companies, open source initiatives and custom development efforts, which provide solutions in the specific markets we address. Our principal competitors include:

- Electronic Health Record, or EHR, vendors such as Allscripts Healthcare Solutions, Inc., or Allscripts, athenahealth, Inc., or athenahealth, Cerner Corporation, or Cerner, Epic Systems Corporation, or Epic, Flatiron Health Inc., or Flatiron, GE Healthcare, Inc., or GE Healthcare, McKesson Corporation, or McKesson, Medical Information Technology, Inc., or Meditech, and Quality Systems, Inc., or Quality Systems;

- Health Information Exchange, or HIE, and integration vendors such as Allscripts, Intersystems Corporation, or Intersystems, and Orion Health Group Limited, or Orion; and

- Healthcare information technology decision support vendors such as The Advisory Board Company, Castlight Health, Inc., or Castlight Health, HealthCatalyst, Inc., or HealthCatalyst, International Business Machines Corporation, or IBM, Inovalon Holdings, Inc., or Inovalon, and Truven Health Analytics, or Truven (acquired by IBM).

The principal competitive factors in our markets include product features, performance and support, product scalability and flexibility, ease of deployment and use, total cost of ownership and time to value. Some of our actual and potential competitors have advantages over us, such as longer operating histories, significantly greater financial, technical, marketing or other resources, stronger brand and business user recognition, larger intellectual property portfolios and broader global distribution and presence. Further, competitors may be able to offer products or functionality similar to ours at a more attractive price than we can by integrating or bundling their software products with their other product offerings. In addition, our industry is evolving rapidly and is becoming increasingly competitive. Larger and more established companies may focus on creating a learning system or solutions that could directly compete with one or more of our offerings. If companies move a greater proportion of their data and computational needs to the cloud, new competitors may emerge which offer services comparable to ours or that are better suited for cloud-based data, and the demand for one or more of our offerings may decrease. Smaller companies could also launch new products and services that we do not offer and that could gain market acceptance quickly.

In recent years, there have been significant acquisitions and consolidation by and among our actual and potential competitors. We anticipate this trend of consolidation will continue, which will present heightened competitive challenges to our business. In particular, consolidation in our industry increases the likelihood of our competitors offering bundled or integrated products, and we believe that it may increase the competitive pressures we face with respect to our solutions. If we are unable to differentiate one or more of our offerings from the integrated or bundled products of our competitors, such as by offering enhanced functionality, performance or value, we may see decreased demand for those solutions, which would adversely affect our business, results of operations, financial condition and cash flows. Further, it is possible that continued industry consolidation may impact our clients' and prospective clients' perceptions of the viability of smaller or even medium-sized software firms and, consequently, their willingness to use technology solutions from such firms. Similarly, if customers seek to concentrate their technology purchases in the product portfolios of a few large providers, we may be at a competitive disadvantage regardless of the performance and features of our offerings. We believe that in order to remain competitive at the large enterprise level, we will need to develop and expand relationships with resellers and large system integrators that provide a broad range of products and services. If we are unable to compete effectively, our business, results of operations, financial condition and cash flows could be materially and adversely affected.

The healthcare technology industry in which we operate is subject to rapidly changing technologies and trends, each of which could contribute to making our products obsolete.

The markets for cloud-based data platforms and internet-based business services such as NantHealth solutions and component Systems Infrastructure and platforms, including our NantOS and NantOS apps and their associated offerings, are in the early stages of development, but the market is competitive even at this stage, and we expect it to attract increased competition, which could make it hard for us to succeed. We currently face competition for one or more of our offerings from a range of companies, including EHR vendors such as Allscripts, Cerner, Epic, and GE Healthcare, and healthcare IT decision support vendors such as Castlight Health, IBM, Inovalon and Truven (acquired by IBM). In addition, large, well-financed health plans, with whom we cooperate and on whom we depend in order to obtain the pricing and claims data we need to deliver our offerings to customers have in some cases developed their own cost and quality estimation tools and provide these solutions to their customers at discounted prices or often for free. If enterprises do not perceive the benefits of our services, then the market for these services may not develop at all, or it may develop more slowly than we expect, either of which would materially adversely affect our operating results. In addition, as a new company in this unproven market, we have limited insight into trends that may develop and affect our business. We may make errors in predicting and reacting to relevant business trends, which could harm our business. If any of these risks occur, it could materially adversely affect our business, financial condition or results of operations.

Healthcare industry consolidation could impose pressure on our prices, reduce our potential client base and reduce demand for one or more of our offerings.

Many hospitals, imaging centers and third-party payors have consolidated to create larger healthcare enterprises with greater market and purchasing power. In addition, group purchasing organizations and managed care organizations could increase pressure on providers of healthcare related services to reduce prices. If this consolidation trend continues, it could reduce the size of our potential customer base and give the resulting enterprises greater bargaining or purchasing power, which may lead to erosion of the prices for our software or decreased margins for our offerings.

Our offerings may experience quality problems from time to time that can result in decreased sales, decreased operating margins and harm to our reputation.

We sell complex hardware and software products and services that may contain design and manufacturing defects. Sophisticated operating system software and applications, such as those sold by us, often contain “bugs” that can unexpectedly interfere with the software’s intended operation. Our online services may from time to time experience outages, service slowdowns, or errors. Defects may also occur in components and products we purchase from third parties. There can be no assurance we will be able to detect and fix all defects in the hardware, software and services third parties sell to us. Failure to do so could result in lost revenue, significant warranty and other expenses and harm to our reputation.

Risks related to our patient monitoring solutions, including our connectivity suite of NantOS, hardware and software

We rely on third-party manufacturers to manufacture our patient monitoring devices, such as HBox, GlowPack and GlowCap. Any failure by a third-party manufacturer to produce supplies for us may delay or impair our ability to provide our patient monitoring devices, which are an integral part of our learning ecosystem.

We rely upon third parties for the manufacture of our patient monitoring devices and intend to continue to do so in the future. We currently do not have any material agreements with third-party manufacturers for our patient monitoring devices. As demand for our products increase, we may seek to enter into long-term third-party manufacturing agreements. If our third-party manufacturers are unable to deliver sufficient quantities of products on a timely basis or we encounter difficulties in our relationships with these manufacturers, the manufacture and sale of our products may be disrupted, and our business, operating results and reputation could be adversely affected. If we are unable to arrange for third-party manufacturing sources, or unable to do so on commercially reasonable terms, we may not be able to deliver our products to clients in a timely manner, or at all.

Reliance on third-party manufacturers entails risks to which we would not be subject if we manufactured product candidates ourselves, including reliance on the third party to comply with applicable regulatory laws, the possibility of breach of the manufacturing agreement by the third party because of factors beyond our control and the possibility of termination or nonrenewal of the agreement by the third party, based on its own business priorities, at a time that is costly or damaging to us. In addition, the FDA and other regulatory authorities require that our patient monitoring devices be manufactured in compliance with Quality System Regulations, or QSR, and similar standards in foreign markets where we sell our products. Any failure by our third-party manufacturers to comply with QSR or failure to scale up manufacturing processes as needed, including any failure to deliver sufficient quantities of products in a timely manner, could have a material adverse effect on our business, financial condition, operating results and cash flows. In addition, such failure could be the basis for action by the FDA to withdraw approvals for product candidates previously granted to us and for other regulatory action.

Our patient monitoring devices, including our connectivity suite, or NantOS, hardware and software may experience design or manufacturing defects from time to time that can result in reduced network effects to NantHealth solutions and component Systems Infrastructure and platforms, including NantOS and NantOS apps, which could materially and adversely affect our business.

We sell patient monitoring devices, including our connectivity suite, or NantOS, hardware and software that could contain design or manufacturing defects in their materials, hardware, or software. These defects could include defective materials or components, or "bugs" that can unexpectedly interfere with the products' intended operations or result in inaccurate data. Failure to detect, prevent, or fix defects could result in a variety of consequences, including returns of products, regulatory proceedings, product recalls, and litigation, which could harm our revenue and operating results. If our products fail to provide accurate measurements and data to users, then the network effects of our adaptive clinical learning system may be materially and adversely impacted.

Our patient monitoring devices, including our connectivity suite, NantOS, hardware and software could give rise to product liability claims and product recall events that could materially and adversely affect our financial condition and results of operations.

The development, manufacturing and sale of medical devices expose us to significant risk of product liability claims, product recalls and, occasionally, product failure claims. We face an inherent business risk of financial exposure to product liability claims if the use of our patient monitoring devices, including our connectivity suite, NantOS, hardware and software results in personal injury or death. Substantial product liability litigation currently exists within the medical device industry. Some of our patient monitoring devices may become subject to product liability claims and/or product recalls. Future product liability claims and/or product recall costs may exceed the limits of our insurance coverages or such insurance may not continue to be available to us on commercially reasonable terms, or at all. In addition, a significant product liability claim or product recall could significantly damage our reputation for producing safe, reliable and effective products, making it more difficult for us to market and sell our products in the future. Consequently, a product liability claim, product recall or other claim could have a material adverse effect on our business, financial condition, operating results and cash flows.

The sale of medical device products in the United States is subject to government regulations and we may not be able to obtain certain necessary clearances or approvals.

The design, manufacturing, labeling, distribution and marketing of medical devices in the United States are subject to extensive and rigorous regulation by the FDA. Unless an exemption applies, we or our collaborative partners must obtain prior clearance or approval from the FDA for medical devices we intend to commercialize, which can be expensive and uncertain and can cause lengthy delays before we can begin selling our products. We cannot be sure that:

- we or any collaborative partner will make timely filings with the FDA;
- the FDA will act favorably or quickly on these submissions;
- we or any collaborative partner will not be required to submit additional information;
- we or any collaborative partner will not be required to submit an application for premarket approval, rather than a 510(k) premarket notification submission as described below; or
- other significant difficulties and costs related to obtaining FDA clearance or approval will not be encountered.

The FDA may impose strict labeling or other requirements as a condition of its clearance or approval, any of which could limit our ability to market our products. Further, if we or our collaborative partners wish to modify a product after FDA clearance of a premarket notification or approval of a premarket approval application, including changes in indications or other modifications that could affect safety and efficacy, additional clearances or approvals will be required from the FDA. Any request by the FDA for additional data, or any requirement by the FDA that we or our collaborative partners conduct clinical studies or submit to the more rigorous and lengthier premarket approval process, could result in substantial expenses and significant delays in bringing our products to market. Similarly, any labeling or other conditions or restrictions imposed by the FDA on the marketing of our products could hinder our ability to effectively market our products. Any of the above actions by the FDA could delay or prevent altogether our ability to market and distribute our products. Further, there may be new FDA policies or changes in FDA policies that could be adverse to us.

Even if we obtain clearance or approval to sell medical device products, we are subject to ongoing requirements and inspections that could lead to the restriction, suspension or revocation of our clearance.

Ongoing compliance with applicable regulatory requirements will be strictly enforced in the United States through periodic inspections by state and federal agencies, including the FDA, and in international jurisdictions by comparable regulatory authorities. In the past, we have conducted investigations designed to determine whether we meet such regulatory requirements and have identified non-conformances and areas that need improvement. Though we strive to comply with such regulations, there can be no guarantee that the applicable regulators will find that we are in compliance with such regulations in the future. Failure to comply with these regulatory requirements could result in, among other things, warning letters, fines, injunctions, civil penalties, recall or seizure of products, total or partial suspension of production, failure to obtain premarket clearance or premarket approval for devices, withdrawal of approvals previously obtained, and criminal prosecution. The restriction, suspension or revocation of regulatory clearances and approvals or any other failure to comply with regulatory requirements would limit our ability to operate and could increase our costs.

Risks related to our relationships with other companies

Our ability to achieve profitability is dependent upon the success of NantOmics.

We currently secure all of our rights to our sequencing and molecular analysis solutions, including GPS Cancer, from NantOmics. The prospects for these offerings depend in part on the expertise and financial strength of NantOmics, which is controlled by Dr. Patrick Soon-Shiong, our Chairman and Chief Executive Officer. We will rely on NantOmics to handle certain aspects of our sequencing and molecular analysis solutions, including GPS Cancer, including but not limited to:

- acquiring appropriate and cost-efficient supplies to produce our sequencing and molecular analysis solutions;
- delivering our sequencing and molecular analysis solutions in a timely manner to us;
- continuing to keep our sequencing and molecular analysis solutions up to date and on pace with current clinical and market developments;
- filing, prosecuting and maintaining patents that cover our sequencing and molecular analysis solutions;
- complying with CLIA regulations and maintaining a CLIA license and all other applicable state laboratory licenses, including through periodic inspections; and
- hiring qualified personnel experienced in completing highly complex laboratory tests.

We are responsible for various aspects of delivering our sequencing and molecular analysis solutions, including but not limited to communications with patients and providers such as providing interpretations of the GPS Cancer reports and resolving any disputes, ensuring customer satisfaction, billing and collections and patient and physician engagement. We recorded a $29.8 million non-cash impairment charge related to our investment in NantOmics during the year ended December 31, 2016. The estimated decline in the fair value of NantOmics was primarily caused by a change in the risk profile of our financial projections for NantOmics resulting from the delay in our GPS revenue growth. If NantOmics is unable to successfully handle its aspects of our sequencing and molecular analysis solutions or we are unable to successfully handle our aspects of delivering our sequencing and molecular analysis solutions, our business will be adversely affected.

If we are unable to renew our agreement with NantOmics or locate a suitable replacement upon expiration of such agreement at comparable prices, our business would be materially and adversely affected.

Our second amended and restated exclusive reseller agreement with NantOmics, or the Reseller Agreement, expires on December 31, 2020, subject to three potential three-year renewal options if we complete specified projected GPS Cancer test thresholds. Although NantOmics generally does not have the right to terminate prior to that date, we may be unable to renew such agreement or execute a new arrangement at comparable favorable prices to provide us with molecular profiling tests. In addition, we may not be able to achieve our projected renewal thresholds. Furthermore, NantOmics currently has what we believe is the most comprehensive and clinically validated CAP- and CLIA-certified whole genome and quantitative proteomics laboratory. If we were unable to fulfill our delivery requirements for our sequencing and molecular analysis solutions to our clients, our business would be materially and adversely affected.

Additionally, through our agreement with NantOmics, we purchase our sequencing and molecular analysis solutions, including GPS Cancer, at a discount to market price. We also receive revenue from our sale of NantOmics' whole genome sequencing and proteomic analysis. If we are reimbursed at an amount equal to or less than a certain threshold, our GPS Cancer solution will not be profitable and our business will be materially and adversely affected. Since we expect that pricing pressure from government and third party payors, increasing competition from companies and others offering whole genome sequencing and reductions in the costs of providing whole genome sequencing as technologies mature, will combine to drive the price of whole genome sequencing down, we cannot guarantee that the price we are able to charge for our GPS Cancer solution will continue to yield a profit under the terms of the exclusive reseller agreement.

We rely on third-party computer hardware and software that may be difficult to replace or which could cause errors or failures of our service which could damage our reputation, harm our ability to attract and maintain clients and decrease our revenue.

We rely on computer hardware purchased or leased and software licensed from third parties in order to offer our service. These licenses are generally commercially available on varying terms, however it is possible that this hardware and software may not continue to be available on commercially reasonable terms, or at all. Any loss of the right to use any of this hardware or software could result in delays in providing NantHealth solutions, NantOS, NantOS apps and GPS Cancer until equivalent technology is either developed by us, or, if available, is identified, obtained and integrated, which could harm our business. Any errors or defects in third-party hardware or software could result in errors or a failure of our service which could damage our reputation, harm our ability to attract and maintain clients and decrease our revenue.

We are heavily dependent on our senior management, particularly Dr. Patrick Soon-Shiong, and a loss of a member of our senior management team in the future could harm our business.

If we lose members of our senior management, we may not be able to find appropriate replacements on a timely basis, and our business could be adversely affected. Our existing operations and continued future development depend to a significant extent upon the continued performance and active participation of certain key individuals, including Dr. Patrick Soon-Shiong, our Chairman, Chief Executive Officer and our principal stockholder. Although we expect Dr. Patrick Soon-Shiong will continue to devote on average at least 20 hours per week to our company, he will continue to primarily focus on NantKwest, Inc., or NantKwest, a publicly-traded, clinical-stage immunotherapy company, of which he is Chairman and Chief Executive Officer. Dr. Patrick Soon-Shiong will also devote time to other companies operating under NantWorks, a collection of multiple companies in the healthcare and technology space that Dr. Patrick Soon-Shiong founded in 2011. We do not believe Dr. Patrick Soon-Shiong has any material conflicting obligations as a result of his involvement with other companies. Additionally, we are dependent on commercial relationships with various other parties affiliated with NantWorks and with Dr. Patrick Soon-Shiong, including NantOmics, as described in Note 8 of the accompanying notes to the Consolidated and Combined Financial Statements, and we may enter into additional relationships in the future. If Dr. Patrick Soon-Shiong was to cease his affiliation with us or with NantWorks, these entities may be unwilling to continue these relationships with us on commercially reasonable terms, or at all. The risks related to our dependence upon Dr. Patrick Soon-Shiong are particularly acute given his ownership percentage and role in our company. If we were to lose Dr. Patrick Soon-Shiong, we may not be able to find appropriate replacements on a timely basis and our financial condition and results of operations could be materially adversely affected. We have not entered into, nor do we intend to enter into, an employment agreement with Dr. Patrick Soon-Shiong.

We face significant competition for employees from other healthcare-related companies, which include both publicly-traded and privately-held companies, and we may not be able to hire new employees quickly enough to meet our needs. To induce valuable employees to remain at our company, in addition to salary and cash incentives, we have provided equity incentives that vest over time and, in some cases, upon the occurrence of certain events. The value to employees of these equity incentives that vest over time may be significantly affected by movements in our stock price that are beyond our control, and may at any time be insufficient to counteract more lucrative offers from other companies. Although we have employment agreements with certain of our key employees, these employment agreements provide for at-will employment, which means that any of our employees could leave our employment at any time, with or without notice. We do not maintain "key man" insurance policies on the lives of these individuals or the lives of any of our other employees.

If we and NantOmics are unable to support demand for our sequencing and molecular analysis solutions, including GPS Cancer, including ensuring that we have adequate capacity to meet increased demand, or we or NantOmics are unable to successfully manage the evolution of its molecular information platform, our business could suffer.

As our volume grows, we and NantOmics will need to increase capacity and improve processes to support growing demand. Our sequencing and molecular analysis solutions will need additional certified laboratory scientists and other scientific and technical personnel to process higher volumes of our molecular information products. Portions of our process are not automated and will require additional personnel to scale. We and NantOmics will also need to purchase additional equipment, some of which can take several months or more to procure, setup and validate, and will need to increase our software and computing capacity to meet increased demand. There is no assurance that any of these increases in scale, expansion of personnel, equipment, software and computing capacities, or process enhancements will be successfully implemented.

As additional products are commercialized, including molecular profiling solutions for additional disease indications, we and NantOmics will need to incorporate new equipment, implement new technology systems and laboratory processes, and hire new personnel with different qualifications. Failure to manage growth or a transition to new technologies or processes could result in turnaround time delays, higher product costs, declining product quality, deteriorating customer service, and slower responses to competitive challenges. A failure in any one of these areas could make it difficult for us to meet market expectations for our products, and could damage our reputation and the prospects for our business.

Risks related to our business generally

We have in the past and may in the future acquire other companies or technologies, which could divert our management's attention, result in dilution to our stockholders and otherwise disrupt our operations and adversely affect our operating results.

Part of our business model is the acquisition of technologies and businesses that promote our transformational vision for personalized healthcare. We have in the past and may in the future seek to acquire or invest in additional businesses, applications, services and/or technologies that we believe complement or expand our offerings, enhance our technical capabilities or otherwise offer growth opportunities. The pursuit of potential acquisitions may divert the attention of management and cause us to incur various expenses in identifying, investigating and pursuing suitable acquisitions, whether or not they are consummated.

For example, in January 2016 we acquired NaviNet to bolster our payor platform. Realizing the benefits of this acquisition will depend upon the successful integration into our existing operations, and we may not be able to integrate the acquired personnel, operations and technologies successfully, or effectively manage the combined business following the acquisition. We also may not realize the anticipated benefits from any acquired business due to a number of factors, including:

- inability to integrate or benefit from acquired technologies or services in a profitable manner;
- unanticipated costs or liabilities associated with the acquisition;
- difficulty integrating the accounting systems, operations and personnel of the acquired business;
- difficulties and additional expenses associated with supporting legacy products and hosting infrastructure of the acquired business;
- difficulty converting the customers of the acquired business onto our platform and contract terms, including disparities in the revenue, licensing, support or professional services model of the acquired company;
- difficulty in cross-selling our existing solutions and offerings to the acquired business' customers;
- diversion of management's attention from other business concerns;
- adverse effects to our existing business relationships with business partners and customers as a result of the acquisition;
- the potential loss of key employees;
- use of resources that are needed in other parts of our business; and
- use of substantial portions of our available cash to consummate the acquisition.

In addition, a significant portion of the purchase price of companies we acquire may be allocated to acquired goodwill and other intangible assets, which must be assessed for impairment at least annually. As of December 31, 2016, the value of our goodwill and intangible assets, net of accumulated amortization was $131.1 million and $119.1 million, respectively. If our acquisitions do not yield expected returns, we have in the past, and may in the future, be required to take charges to our operating results based on this impairment assessment process, which could adversely affect our results of operations.

Acquisitions could also result in dilutive issuances of equity securities or the incurrence of debt, which could adversely affect our operating results. In addition, if an acquired business fails to meet our expectations, our operating results, business and financial position may suffer.

We cannot assure you that we will be successful in integrating certain assets of NaviNet or other businesses or technologies we may acquire. The failure to successfully integrate these businesses could have a material adverse effect on our business, financial condition, or results of operations.

Business disruptions could seriously harm our future revenue and financial condition and increase our costs and expenses.

Our operations, and those of our contractors and consultants, could be subject to earthquakes, power shortages, telecommunications failures, water shortages, floods, hurricanes, typhoons, fires, extreme weather conditions, medical epidemics, acts of terrorism, acts of war and other natural or man-made disasters or business interruptions, for which we are predominantly self-insured. Our corporate headquarters are in Culver City, California near major earthquake faults and fire zones. We attempt to mitigate these risks through various means including redundant infrastructure, disaster recovery plans, separate test systems and change control and system security measures, but our precautions will not protect against all potential problems. If our clients' access is interrupted because of problems in the operation of our facilities, we could be exposed to significant claims by clients or their patients, particularly if the access interruption is associated with problems in the timely delivery of funds due to clients or medical information relevant to patient care. The occurrence of any of these business disruptions could seriously harm our operations and financial condition and increase our costs and expenses.

As of the date of this Annual Report on Form 10-K, we serve our clients primarily from third-party data hosting facilities. We do not control the operation of these third-party facilities, and they are vulnerable to damage or interruption from earthquakes, floods, fires, power loss, telecommunications failures and similar events. They are also subject to break-ins, sabotage, intentional acts of vandalism and similar misconduct. Despite precautions taken at these facilities, the occurrence of a natural disaster or a crime, a decision to close the facilities without adequate notice or other unanticipated problems at these facilities could result in lengthy interruptions in our service. Even with the disaster recovery arrangements, our service could be interrupted.

We are planning to transition most of our data hosting to NantCloud Services, LLC, or NantCloud Services, our recently acquired cloud business and NaviNet, our recently acquired payor-provider collaboration platform. In connection with these transitions, we will be moving, transferring or installing some of our equipment, data and software to and in other facilities. Despite precautions taken during this process, any unsuccessful transfers may impair the delivery of our one or more of our offerings. Further, any damage to, or failure of, our systems generally could result in interruptions in one or more of our offerings. Interruptions in our service may reduce our revenue, cause us to issue credits or pay penalties, may cause clients to terminate one or more of our offerings and may adversely affect our renewal rates and our ability to attract new clients. Our business may also be harmed if our clients and potential clients believe one or more of our offerings are unreliable.

If we fail to develop widespread brand awareness, our business may suffer.

We believe that developing and maintaining widespread awareness of our brand is critical to achieving widespread adoption of our offering and attracting new customers. Brand promotion activities may not generate customer awareness or increase revenue, and even if they do, any increase in revenue may not offset the expenses we incur in building our brand. If we fail to successfully promote and maintain our brand, or incur substantial expenses in doing so, we may fail to attract or retain customers necessary to realize a sufficient return on our brand-building efforts, or to achieve the widespread brand awareness that is critical for broad customer adoption of our offerings.

Our marketing efforts depend significantly on our ability to receive positive references from our existing customers.

Our marketing efforts depend significantly on our ability to call on our current customers to provide positive references to new, potential customers. Given our limited number of long-term customers, the loss or dissatisfaction of any customer could substantially harm our brand and reputation, inhibit the market adoption of our offerings and impair our ability to attract new customers and maintain existing customers. Any of these consequences could have a material adverse effect on our business, financial condition and results of operations.

If we become subject to product liability or other litigation, we may incur substantial liabilities and may be required to limit commercialization of our current and any future products.

We are from time to time subject to legal proceedings and claims that arise in the ordinary course of business, such as claims brought by our clients in connection with commercial disputes and employment claims made by our current or former employees. For example, two of our former employees filed a complaint against us alleging they were terminated in violation of Florida's Whistleblower Act, which was recently settled. Litigation, regardless of merit, may result in substantial costs and may divert management's attention and resources, which may harm our business.

Our services, some of which involve recommendations and advice to healthcare providers regarding complex business and operational processes, regulatory and compliance issues and patient treatment options, may give rise to liability claims by our members or by third parties who bring claims against us. In addition, third parties, including former employees, have in the past, and may in the future, file lawsuits alleging non-compliance with government regulations. Investigating and defending such claims, even if they lack merit, may require significant time and resources and could damage our reputation and harm our business.

In addition, our home healthcare services business, which includes a skilled nursing facility, employs healthcare providers in the home care setting. Healthcare providers in the home care setting increasingly are the subject of litigation, and we cannot assure you that we would not also be the subject of such litigation based on our offerings. In addition, the marketing, sale and use of our offering could lead to the filing of product liability claims were someone to allege that one or more of our offerings identified inaccurate or incomplete information regarding the genomic alterations of the tumor or malignancy analyzed, reported inaccurate or incomplete information concerning the available therapies for a certain type of cancer, or otherwise failed to perform as designed. We may also be subject to liability for errors in, a misunderstanding of, or inappropriate reliance upon, the information we provide in the ordinary course of our business activities. A product liability claim could result in substantial damages and be costly and time-consuming for us to defend.

We maintain product and other insurance, but this insurance may not fully protect us from the financial impact of defending against product liability or other claims. Any product liability or other claim brought against us, with or without merit, could increase our insurance rates or prevent us from securing insurance coverage in the future. Additionally, any product liability lawsuit could damage our reputation, or cause current clients to terminate existing agreements and potential clients to seek other vendors, any of which could impact our results of operations.

We are subject to changes in and interpretations of financial accounting matters that govern the measurement of our performance, one or more of which could adversely affect our business.

Based on our reading and interpretations of relevant guidance, principles or concepts issued by, among other authorities, the American Institute of Certified Public Accountants, the Financial Accounting Standards Board and the Securities and Exchange Commission, or SEC, we believe our current sales and licensing contract terms and business arrangements have been properly reported. However, this guidance involves interpretations, and there continue to be issued interpretations and guidance for applying the relevant standards to a wide range of sales and licensing contract terms and business arrangements that are prevalent in the software industry. For example, we must apply significant judgment to determine whether revenue should be recognized on a gross or net basis for our reseller arrangements, including revenue under our reseller agreement with NantOmics. Disagreement with the regulators as to our current interpretations and any future changes by the regulators of existing accounting standards or changes in our business practices could result in changes in our revenue recognition and/or other accounting policies and practices that could adversely affect our business.

Failure to manage our growth effectively could increase our expenses, decrease our revenue and prevent us from implementing our business strategy.

We have been experiencing a period of growth. To manage our anticipated future growth effectively, we must continue to maintain and may need to enhance our information technology infrastructure, financial and accounting systems and controls and manage expanded operations in geographically-diverse locations. We also must attract, train and retain a significant number of qualified sales and marketing personnel, professional services personnel, software engineers, technical personnel and management personnel. Failure to manage our rapid growth effectively could lead us to over invest or under invest in technology and operations, could result in weaknesses in our infrastructure, systems or controls, could give rise to operational mistakes, losses, loss of productivity or business opportunities, and could result in loss of employees and reduced productivity of remaining employees. Our growth could require significant capital expenditures and may divert financial resources from other projects, such as the development of new services. If our management is unable to effectively manage our growth, our expenses may increase more than expected, our revenue could decline or may grow more slowly than expected, and we may be unable to implement our business strategy.

Our estimates of market opportunity and forecasts of market growth may prove to be inaccurate, and even if the market in which we compete achieves the forecasted growth, our business could fail to grow at similar rates, if at all.

Our market opportunity estimates and growth forecasts are subject to significant uncertainty and are based on assumptions and estimates that may not prove to be accurate. Our estimates and forecasts regarding the size and expected growth of the healthcare information technology and molecular analysis markets may prove to be inaccurate. Even if the markets in which we compete meet our size estimates and forecasted growth, our business could fail to grow at similar rates, if at all.

The industry-and market-related estimates we rely upon are based on various assumptions and may prove to be inaccurate.

Industry-and market-related estimates we rely upon, including, without limitation, estimates related to our market size and industry data, are subject to uncertainty and are based on assumptions which may not prove to be accurate. This may have negative consequences, such as us overestimating our potential market opportunity.

We are exposed to risks related to our international operations and failure to manage these risks may adversely affect our operating results and financial condition.

We are a global company with operations both inside and outside the United States. For example, we have foreign wholly owned subsidiaries, including NantHealth UK Ltd., NantHealth Singapore Pte Ltd., NantHealth Canada, Inc. and NantHealth Technologies India Private Ltd. As a result, a portion of our operations are conducted by and/or rely on entities outside the United States. We may therefore be denied access to our customers or suppliers as a result of economic, legislative, political and military conditions in such countries.

International operations are subject to a number of other inherent risks, and our future results could be adversely affected by a number of factors, including:

- requirements or preferences for domestic products or solutions, which could reduce demand for our products;
- differing existing or future regulatory and certification requirements;
- management communication and integration problems resulting from cultural and geographic dispersion;
- greater difficulty in collecting accounts receivable and longer collection periods;
- difficulties in enforcing contracts;
- difficulties and costs of staffing and managing non-U.S. operations;
- the uncertainty of protection for intellectual property rights in some countries;
- tariffs and trade barriers, export regulations and other regulatory and contractual limitations on our ability to sell our products;
- greater risk of a failure of foreign employees to comply with both U.S. and foreign laws, including export and antitrust regulations, the FCPA and any trade regulations ensuring fair trade practices;
- heightened risk of unfair or corrupt business practices in certain geographies and of improper or fraudulent sales arrangements that may impact financial results and result in restatements of, or irregularities in, financial statements;
- potentially adverse tax consequences, including multiple and possibly overlapping tax structures; and
- political and economic instability, political unrest and terrorism.

In addition, the expansion of our existing international operations and entry into additional international markets has required, and will continue to require, significant management attention and financial resources. These factors and other factors could harm our ability to gain future revenues and, consequently, materially impact our business, financial condition and results of operations.

The United Kingdom's vote to leave the European Union will have uncertain effects and could adversely affect us.

On June 23, 2016, a referendum was held on the UK's membership in the European Union, or the EU, the outcome of which was a vote in favor of leaving the EU, or the Brexit. Negotiations are expected to commence shortly to determine the future terms of the UK's relationship with the EU, including the terms of trade between the UK and the EU and the rest of the world. Article 50 of the Treaty of the European Union, or Article 50, allows a member state to decide to withdraw from the European Union in accordance with its own constitutional requirements. The formal process for leaving the European Union will be triggered only when the United Kingdom delivers an Article 50 notice to the European Council, although informal negotiations around the terms of any exit may be held before such notice is given. On February 1, 2017, the UK Parliament voted in favor of allowing the UK to start the process of leaving the European Union and authorized the filing an Article 50 notice to that end. The UK Prime Minister has stated that the UK will deliver an Article 50 notice by the end of March 2017. While it is unclear whether it will be possible for the UK Government to meet the desired timeline, the Prime Minister has indicated that it remains her intention to do so. Delivery of the Article 50 notice will start a two-year period for the United Kingdom to exit from the European Union, although this period can be extended with the unanimous agreement of the European Council. Without any such extension (and assuming that the terms of withdrawal have not already been agreed), the United Kingdom's membership in the European Union would end automatically on the expiration of that two-year period. The effects of Brexit will depend on agreements the UK makes to retain access to EU markets either during a transitional period or more permanently. Brexit creates an uncertain political and economic environment in the UK and potentially across other EU member states for the foreseeable future, including during any period while the terms of Brexit are being negotiated and such uncertainties could impair or limit our ability to transact business in the member EU states. Further, Brexit could adversely affect European and worldwide economic or market conditions and could contribute to instability in global financial markets, and the value of the Pound Sterling currency or other currencies, including the Euro. We are exposed to the economic, market and fiscal conditions in the UK and the EU and to changes in any of these conditions. Depending on the terms reached regarding Brexit, it is possible that there may be adverse practical and/or operational implications on our business. A significant amount of the regulatory regime that applies to us in the UK is derived from EU directives and regulations. For so long as the UK remains a member of the EU, those sources of legislation will (unless otherwise repealed or amended) remain in effect. However, Brexit could change the legal and regulatory framework within the UK where we operate and is likely to lead to legal uncertainty and potentially divergent national laws and regulations as the UK determines which EU laws to replace or replicate. Consequently, no assurance can be given as to the impact of Brexit and, in particular, no assurance can be given that our operating results, financial condition and prospects would not be adversely impacted by the result.

Risks related to intellectual property

We may be unable to adequately protect, and we may incur significant costs in enforcing, our intellectual property and other proprietary rights.

Our success depends in part on our ability to enforce our intellectual property and other proprietary rights. We rely upon a combination of trademark, trade secret, copyright, patent and unfair competition laws, as well as license and access agreements and other contractual provisions, to protect our intellectual property and other proprietary rights. In addition, we attempt to protect our intellectual property and proprietary information by requiring certain of our employees and consultants to enter into confidentiality, noncompetition and assignment of inventions agreements. However, we do not have any written contractual agreements with respect to any intellectual property and technology that relate to our business developed in the future by our Chairman and Chief Executive Officer, Dr. Patrick Soon-Shiong. In the event we are unable to protect our intellectual property and proprietary information, including in particular with respect to such property or information created by Dr. Patrick Soon-Shiong, our business would be adversely affected. In addition, our attempts to protect our intellectual property may be challenged by others or invalidated through administrative process or litigation.

We have developed and acquired numerous patents and patent applications and we possess substantial know-how and trade secrets relating to the development and commercialization of healthcare technology products and services. In July 2015, we completed the acquisition of certain assets of Harris Corporation which provide clinical systems integration. In January 2016, we acquired NaviNet, a leading payor-provider collaboration platform. As part of these acquisitions, we acquired patents and other intellectual property. As of March 30, 2017, our patent portfolio consists of the following matters relating to our proprietary technology and inventions: (i) six issued U.S. patents, of which five are U.S. utility patents and one is a U.S. design patent; (ii) 24 pending U.S. patent applications; (iii) one issued patent outside the United States; and (iv) two patent application pending in jurisdictions outside the United States.

If any patents are issued in the future, they may not provide us with any competitive advantages, or may be successfully challenged by third parties. Agreement terms that address non-competition are difficult to enforce in many jurisdictions and may not be enforceable in any particular case. To the extent that our intellectual property and other proprietary rights are not adequately protected, third parties might gain access to our proprietary information, develop and market products or services similar to ours, or use trademarks similar to ours, each of which could materially harm our business. Existing United States federal and state intellectual property laws offer only limited protection. Moreover, the laws of other countries in which we now, or may in the future, conduct operations or contract for services may afford little or no effective protection of our intellectual property. Further, our platforms incorporate open source software components that are licensed to us under various public domain licenses. While we believe we have complied with our obligations under the various applicable licenses for open source software that we use, there is little or no legal precedent governing the interpretation of many of the terms of certain of these licenses and therefore the potential impact of such terms on our business is somewhat unknown. The failure to adequately protect our intellectual property and other proprietary rights could materially harm our business.

The patent application process, also known as patent prosecution, is expensive and time consuming, and we and any future licensors and licensees may not be able to prepare, file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. It is also possible that we or any future licensors or licensees, will fail to identify patentable aspects of inventions made in the course of development and commercialization activities before it is too late to obtain patent protection on them. Moreover, in some circumstances, we may not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the patents, covering technology that we license from or license to third parties and are therefore reliant on our licensors or licensees. Therefore, these and any of our patents and applications may not be prosecuted and enforced in a manner consistent with the best interests of our business. Defects of form in the preparation or filing of our patents or patent applications may exist, or may arise in the future, for example, with respect to proper priority claims, inventorship, and the like, although we are unaware of any such defects that we believe are of material importance. If we or any future licensors or licensees, fail to establish, maintain or protect such patents and other intellectual property rights, such rights may be reduced or eliminated. If any future licensors or licensees are not fully cooperative or disagree with us as to the prosecution, maintenance or enforcement of any patent rights, such patent rights could be compromised. If there are material defects in the form, preparation or prosecution of our patents or patent applications, such patents or applications may be invalid and unenforceable. Any of these outcomes could impair our ability to prevent competition from third parties, which may have an adverse impact on our business.

The strength of patent rights involves complex legal and scientific questions and can be uncertain. This uncertainty includes changes to the patent laws through either legislative action to change statutory patent law or court action that may reinterpret existing law or rules in ways affecting the scope or validity of issued patents. The patent applications that we own may fail to result in issued patents in the United States or foreign countries with claims that cover our products or services. Even if patents do successfully issue from the patent applications that we own, third parties may challenge the validity, enforceability or scope of such patents, which may result in such patents being narrowed, invalidated or held unenforceable. Any successful challenge to our patents could deprive us of exclusive rights necessary for the successful commercialization of our products and services. Furthermore, even if they are unchallenged, our patents may not adequately protect our products and services, provide exclusivity for our products and services, or prevent others from designing around our claims. If the breadth or strength of protection provided by the patents we hold or pursue with respect to our products and services is challenged, it could dissuade companies from collaborating with us to develop, or threaten our ability to commercialize, our products and services.

Patents have a limited lifespan. In the United States, the natural expiration of a utility patent is generally 20 years after its effective filing date and the natural expiration of a design patent is generally 14 years after its issue date, unless the filing date occurred on or after May 13, 2015, in which case the natural expiration of a design patent is generally 15 years after its issue date. Various extensions may be available; however, the life of a patent, and the protection it affords, is limited. Without patent protection for our products and services, we may be open to competition. Further, if we encounter delays in our development efforts, the period of time during which we could market our products and services under patent protection would be reduced.

In addition to the protection afforded by patents, we also rely on trade secret protection to protect proprietary know-how that may not be patentable or that we elect not to patent, processes for which patents may be difficult to obtain or enforce, and any other elements of our products and services that involve proprietary know-how, information or technology that is not covered by patents. However, trade secrets can be difficult to protect. If the steps taken to maintain our trade secrets are deemed inadequate, we may have insufficient recourse against third parties for misappropriating any trade secrets. Misappropriation or unauthorized disclosure of our trade secrets could significantly affect our competitive position and may have a material adverse effect on our business. Furthermore, trade secret protection does not prevent competitors from independently developing substantially equivalent information and techniques and we cannot guarantee that our competitors will not independently develop substantially equivalent information and techniques.

Obtaining and maintaining our patent protection depends on compliance with various procedural, documentary, fee payment and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

The United States Patent and Trademark Office, or USPTO, and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent prosecution process. Periodic maintenance fees and various other governmental fees on any issued patent and/or pending patent applications are due to be paid to the USPTO and foreign patent agencies in several stages over the lifetime of a patent or patent application. We have systems in place to remind us to pay these fees, and we employ an outside firm and rely on our outside counsel to pay these fees. While an inadvertent lapse may sometimes be cured by payment of a late fee or by other means in accordance with the applicable rules, there are many situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. If we fail to maintain the patents and patent applications directed to our products and services, our competitors might be able to enter the market earlier than should otherwise have been the case, which would have a material adverse effect on our business.

Litigation or other proceedings or third-party claims of intellectual property infringement could require us to spend significant time and money and could prevent us from selling our products and services.

Third parties have asserted and may in the future assert that we are employing their proprietary technology without authorization. As we continue to commercialize our products and services in their current or updated forms, launch new products and services and enter new markets, we expect that competitors will claim that our products and services infringe their intellectual property rights as part of business strategies designed to impede our successful commercialization and entry into new markets. We occasionally receive letters from third parties inviting us to take licenses under, or alleging that we infringe, their patents or trademarks. Third parties may have obtained, and may in the future obtain, patents under which such third parties may claim that the use of our technologies constitutes patent infringement.

We could incur substantial costs and divert the attention of our management and technical personnel in defending ourselves against any of these claims. Any adverse ruling or perception of an adverse ruling in defending ourselves against these claims could have a material adverse impact on our business. Furthermore, parties making claims against us may be able to obtain injunctive or other relief, which could block our ability to develop, commercialize, and sell products or services, and could result in the award of substantial damages against us, potentially including treble damages and attorneys' fees if we are found to have willfully infringed a patent. In the event of a successful claim of infringement or misappropriation against us, we may be required to pay damages and obtain one or more licenses from third parties, or be prohibited from selling certain products or services, all of which could have a material adverse impact on our business.

In addition, we may be unable to obtain these licenses at a reasonable cost, if at all. We could therefore incur substantial costs related to royalty payments for licenses obtained from third parties, which could negatively affect our gross margins. Even if we were able to obtain a license, it could be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. Moreover, we could encounter delays in product or service introductions while we attempt to develop alternative products or services. Defense of any lawsuit or failure to obtain any of these licenses on favorable terms could prevent us from commercializing products and services, and the prohibition of sale of any of our products and services would materially affect our ability to grow and maintain profitability and have a material adverse impact on our business.

We may become involved in lawsuits to protect or enforce our patents or other intellectual property, which could be expensive, time consuming and ultimately unsuccessful.

Competitors may infringe our patents, trademarks, copyrights or other intellectual property. To counter infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time consuming and divert the time and attention of our management and scientific personnel. Any claims we assert against perceived infringers could provoke these parties to assert counterclaims against us alleging that we infringe their patents, in addition to counterclaims asserting that our patents are invalid or unenforceable, or both. In any patent infringement proceeding, there is a risk that a court will decide that a patent of ours is invalid or unenforceable, in whole or in part, and that we do not have the right to stop the other party from using the invention at issue. There is also a risk that, even if the validity of such patents is upheld, the court will construe the patent's claims narrowly or decide that we do not have the right to stop the other party from using the invention at issue on the grounds that our patent claims do not cover the invention. An adverse outcome in a litigation or proceeding involving our patents could limit our ability to assert our patents against those parties or other competitors, and may curtail or preclude our ability to exclude third parties from making and selling similar or competitive products. Any of these occurrences could adversely affect our competitive business position, business prospects and financial condition. Similarly, if we assert trademark infringement claims, a court may determine that the marks we have asserted are invalid or unenforceable, or that the party against whom we have asserted trademark infringement has superior rights to the marks in question. In this case, we could ultimately be forced to cease use of such trademarks.

Even if we establish infringement, the court may decide not to grant an injunction against further infringing activity and instead award only monetary damages, which may or may not be an adequate remedy. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during litigation. There could also be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a material adverse effect on the price of shares of our common stock. Moreover, there can be no assurance that we will have sufficient financial or other resources to file and pursue such infringement claims, which typically last for years before they are concluded. Even if we ultimately prevail in such claims, the monetary cost of such litigation and the diversion of the attention of our management and scientific personnel could outweigh any benefit we receive as a result of the proceedings.

We may not be able to protect our intellectual property rights throughout the world.

Third parties may attempt to commercialize competitive products or services in foreign countries where we do not have any patents or patent applications where legal recourse may be limited. This may have a significant commercial impact on our foreign business operations.

Filing, prosecuting and defending patents on our products and services in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States can be less extensive than those in the United States. The requirements for patentability may differ in certain countries, particularly developing countries. For example, Europe has a heightened requirement for patentability of software inventions. Thus, even in countries where we do pursue patent protection, there can be no assurance that any patents will issue with claims that cover our products. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as laws in the United States. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and services and further, may export otherwise infringing products and services to territories where we have patent protection, but enforcement on infringing activities is inadequate. These products or services may compete with ours, and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents and other intellectual property protection, which could make it difficult for us to stop the infringement of our patents or marketing of competing products in violation of our proprietary rights generally. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing, and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. In addition, certain countries in Europe and certain developing countries, including India and China, have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In those countries, we may have limited remedies if our patents are infringed or if we are compelled to grant a license to our patents to a third party, which could materially diminish the value of those patents. This could limit our potential revenue opportunities. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we own or license. Finally, our ability to protect and enforce our intellectual property rights may be adversely affected by unforeseen changes in foreign intellectual property laws.

Developments in U.S. patent law could have a negative impact on our business.

As is the case with other healthcare technology companies, our success is in part dependent on intellectual property, particularly on obtaining and enforcing patents. Obtaining and enforcing patents in the healthcare technology industry involves both technological and legal complexity, and therefore, is costly, time consuming, and inherently uncertain. In addition, the United States has recently enacted and has now implemented wide-ranging patent reform legislation. Further, recent United States Supreme Court rulings have either narrowed the scope of patent protection available in certain circumstances or weakened the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents once obtained.

For our United States patent applications containing a claim not entitled to priority before March 16, 2013, there is a greater level of uncertainty in the patent law. In September 2011, the Leahy-Smith America Invents Act, or the America Invents Act, or AIA, was signed into law. The AIA includes a number of significant changes to United States patent law, including provisions that affect the way patent applications will be prosecuted and enforced in any patent litigation. The USPTO developed regulations and procedures to govern administration of the AIA, and many of the substantive changes to patent law associated with the AIA. It is not clear what other, if any, impact the AIA will have on the operation of our business. Moreover, the AIA and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could have a material adverse effect on our business and financial condition.

An important change introduced by the AIA is that, as of March 16, 2013, the United States transitioned to a “first-to-file” system for deciding which party should be granted a patent when two or more patent applications are filed by different parties claiming the same invention. A third party that files a patent application in the USPTO on or after March 16, 2013 before us could therefore be awarded a patent covering an invention of ours even if we were the first to conceive of the invention. This will require us to be cognizant going forward of the time from invention to filing of a patent application. Furthermore, our ability to obtain and maintain valid and enforceable patents depends on whether the differences between our technology and the prior art allow our technology to be patentable over the prior art. Because patent applications in the United States and most other countries are confidential for a period of time after filing, we cannot be certain that we were the first to either file any patent application related to our products or services, or invent any of the inventions claimed in our patents or patent applications.

Among some of the other changes introduced by the AIA are changes that limit where a patentee may file a patent infringement suit and provide opportunities for third parties to challenge any issued patent in the USPTO. This applies to all of our United States patents, even those issued before March 16, 2013. Because of a lower evidentiary standard in USPTO proceedings necessary to invalidate a patent claim compared to the evidentiary standard in United States federal court, a third party could potentially provide evidence in a USPTO proceeding sufficient for the USPTO to hold a claim invalid even though the same evidence may be insufficient to invalidate the claim if first presented in a district court action.

Two cases, one involving diagnostic method claims and the other involving “gene patents” were decided by the Supreme Court. On March 20, 2012, the Supreme Court issued a decision in *Mayo Collaborative v. Prometheus Laboratories* , or Prometheus, a case involving patent claims directed to optimizing the amount of drug administered to a specific patient. According to that decision, Prometheus’ claims failed to incorporate sufficient inventive content above and beyond mere underlying natural correlations to allow the claimed processes to qualify as patent-eligible processes that apply natural laws. On June 13, 2013, the Supreme Court subsequently decided *Association for Molecular Pathology v. Myriad Genetics* , or Myriad, a case brought by multiple plaintiffs challenging the validity of patent claims held by Myriad Genetics, Inc. relating to the breast cancer susceptibility genes BRCA1 and BRCA2, holding that isolated genomic DNA that exists in nature, such as the DNA constituting the BRCA1 and BRCA2 genes, is not patentable subject matter, but that cDNA, which is an artificial construct created from RNA transcripts of genes, may be patent eligible.

On July 3, 2012, the USPTO issued a memorandum to patent examiners providing interim guidelines for examining process claims for patent eligibility in view of the Supreme Court decision in Prometheus. The guidance indicates that claims directed to a law of nature, a natural phenomenon, or an abstract idea that do not meet the eligibility requirements should be rejected as non-statutory subject matter.

Furthermore, a case involving financial software was even more recently decided by the Supreme Court. On June 19, 2014, the Supreme Court issued a decision in *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, or Alice, a case involving patent claims directed to methods of exchanging obligations as between parties so as to mitigate settlement risk in financial transactions, computer systems configured to carry out the method, and computer-readable media containing program code for performing the method. In Alice, the Court applied the analytic framework from Prometheus and extended its application to all types of claims. According to that decision, Alice Corp.’s claims failed to incorporate sufficient inventive content above and beyond the mere idea of intermediated transaction to allow the claimed processes to qualify as patent-eligible processes that apply the idea in a particular way to solve a problem.

On December 16, 2014, the USPTO issued interim guidelines for examining claims for patent eligibility in view of the Supreme Court decision in Alice. The guidance indicates that claims reciting an abstract idea that do not include significantly more than the idea itself should be rejected as non-statutory subject matter. We cannot assure you that our efforts to seek patent protection for our technology, products, and services will not be negatively impacted by the decision in Alice, rulings in other cases, or changes in guidance or procedures issued by the USPTO.

More specifically, we cannot fully predict what impact the Supreme Court’s decisions in Prometheus, Myriad and Alice may have on the ability of healthcare technology companies or other entities to obtain or enforce patents relating to genomic discoveries, diagnostic products and services or computer-implemented inventions in the future. Despite the USPTO’s guidance described above, these decisions are new and the contours of when certain claims allegedly directed to laws of nature, natural phenomenon or abstract ideas meet the patent eligibility requirements are not clear and may take many years to develop via interpretation in the courts.

There are many patents claiming diagnostic methods based on similar or related correlations that issued before Prometheus, and although some of these patents may be invalid under the standard set forth in Prometheus, until successfully challenged, these patents are presumed valid and enforceable, and certain third parties could allege that we infringe, or request that we obtain a license to, these patents. Whether based on patents issued prior to or after Prometheus, we could have to defend ourselves against claims of patent infringement, or choose to license rights, if available, under patents claiming such methods. Similarly, there are many patents claiming software and/or business methods that include an abstract idea that issued before Alice, and although some of these patents may be invalid under the standard set forth in Prometheus and Alice, until successfully challenged, these patents are presumed valid and enforceable, and certain third parties could allege that we infringe, or request that we obtain a license to, these patents. Whether based on patents issued prior to or after Alice, we could have to defend ourselves against claims of patent infringement, or choose to license rights, if available, under patents claiming such software or business methods. In any of the foregoing or in other situations involving third-party intellectual property rights, if we are unsuccessful in defending against claims of patent infringement, we could be forced to pay damages or be subjected to an injunction that would prevent us from utilizing the patented subject matter in question if we are unable to obtain a license on reasonable terms. Such outcomes could materially affect our ability to offer our products and have a material adverse impact on our business. Even if we are able to obtain a license or successfully defend against claims of patent infringement, the cost and distraction associated with the defense or settlement of these claims could have a material adverse impact on our business. Moreover, one or more of our pending United States patent applications may be rejected based on the changes in the law and the standards set forth in Prometheus, Myriad, Alice, or other cases. Our ability to secure United States patent rights could be impaired if we cannot overcome such rejections, which could have a material adverse impact on our business. In addition, one or more of our issued United States patents could be challenged on the basis of the law and the standards set forth in Prometheus, Myriad, Alice, or other cases, which could have a material adverse impact on our business. Further, on July 30, 2015, in response to the public comment on the Interim Eligibility Guidance, the USPTO issued an update pertaining to the Interim Eligibility Guidance. The Updated Eligibility Guidance includes additional examples from the case law and is intended to assist examiners in applying the Interim Eligibility Guidance during the patent examination process.

We may be subject to claims that our employees, consultants or independent contractors have wrongfully used or disclosed confidential information of third parties.

We have received confidential and proprietary information from third parties. In addition, we employ individuals who were previously employed at other healthcare companies. We may be subject to claims that we or our employees, consultants or independent contractors have inadvertently or otherwise improperly used or disclosed confidential information of these third parties or our employees' former employers. Further, we may be subject to ownership disputes in the future arising, for example, from conflicting obligations of consultants or others who are involved in developing our products and services. We may also be subject to claims that former employees, consultants, independent contractors or other third parties have an ownership interest in our patents or other intellectual property. Litigation may be necessary to defend against these and other claims challenging our right to and use of confidential and proprietary information. If we fail in defending any such claims, in addition to paying monetary damages, we may lose our rights therein. Such an outcome could have a material adverse effect on our business. Even if we are successful in defending against these claims, litigation could result in substantial cost and be a distraction to our management and employees.

We rely in part on trademarks to distinguish our products and services from those of other entities. Trademarks may be opposed or cancelled and we may be involved in lawsuits or other proceedings to protect or enforce our trademarks.

We rely on trademarks, in the United States and in certain foreign jurisdictions, to distinguish our products and services in the minds of our customers and our business partners from those of other entities. Third parties may challenge our pending trademark applications through opposition proceedings in the United States, or comparable proceedings in foreign jurisdictions, in which they seek to prevent registration of a mark. Our registered trademarks may be subject to cancellation proceedings in the United States, or comparable proceedings in foreign jurisdictions, in which a third party seeks to cancel an existing registration. To enforce our trademark rights, we may be involved in lawsuits or other proceedings which could be expensive, time-consuming and uncertain.

Our corporate name, NantHealth, and the names of our products and services have not been trademarked in each market where we operate and plan to operate. Our trademark applications for our corporate name or the name of our products and services may not be allowed for registration, and our registered trademarks may not be maintained or enforced. During trademark registration proceedings, we may receive rejections, which we may be unable to overcome in our responses. If we do not secure registrations for our trademarks, we may encounter more difficulty in enforcing them against third parties than we otherwise would.

Risks related to reimbursement and government regulation

If we fail to comply with applicable health information privacy and security laws and other state and federal privacy and security laws, we may be subject to significant liabilities, reputational harm and other negative consequences, including decreasing the willingness of current and potential customers to work with us.

We are subject to data privacy and security regulation by both the federal government and the states in which we conduct our business. HIPAA established uniform federal standards for certain "covered entities," which include certain healthcare providers, healthcare clearinghouses, and health plans, governing the conduct of specified electronic healthcare transactions and protecting the security and privacy of protected health information, or PHI. The Health Information Technology for Economic and Clinical Health Act, or HITECH Act, which became effective on February 17, 2010, makes HIPAA's security standards directly applicable to "business associates," which are independent contractors or agents of covered entities that create, receive, maintain, or transmit PHI in connection with providing a service for or on behalf of a covered entity. The HITECH Act also increased the civil and criminal penalties that may be imposed against covered entities, business associates and certain other persons, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce HIPAA's requirements and seek attorney's fees and costs associated with pursuing federal civil actions.

A portion of the data that we obtain and handle for or on behalf of our clients is considered PHI, subject to HIPAA. We are also required to maintain similar business associate agreements with our subcontractors that have access to PHI of our customers in rendering services to us or on our behalf. Under HIPAA and our contractual agreements with our HIPAA-covered entity health plan customers, we are considered a "business associate" to those customers, and are required to maintain the privacy and security of PHI in accordance with HIPAA and the terms of our business associate agreements with our clients, including by implementing HIPAA-required administrative, technical and physical safeguards. We have incurred, and will continue to incur, significant costs to establish and maintain these safeguards and, if additional safeguards are required to comply with HIPAA regulations or our clients' requirements, our costs could increase further, which would negatively affect our operating results. Furthermore, we cannot guarantee that such safeguards have been and will continue to be adequate. If we have failed, or fail in the future, to maintain adequate safeguards, or we or our agents or subcontractors use or disclose PHI in a manner prohibited or not permitted by HIPAA, our subcontractor business associate agreements, or our business associate agreements with our customers, or if the privacy or security of PHI that we obtain and handle is otherwise compromised, we could be subject to significant liabilities and consequences, including, without limitation:

- breach of our contractual obligations to clients, which may cause our clients to terminate their relationship with us and may result in potentially significant financial obligations to our clients;
- investigation by the federal and state regulatory authorities empowered to enforce HIPAA and other data privacy and security laws, which include the U.S. Department of Health and Human Services, or HHS, the Federal Trade Commission and state attorneys general, and the possible imposition of civil and criminal penalties;
- private litigation by individuals adversely affected by any misuse of their personal health information for which we are responsible; and
- negative publicity, which may decrease the willingness of current and potential future customers to work with us and negatively affect our sales and operating results.

Further, we publish statements to end users of our services that describe how we handle and protect personal information. If federal or state regulatory authorities or private litigants consider any portion of these statements to be untrue, we may be subject to claims of deceptive practices, which could lead to significant liabilities and consequences, including, without limitation, damage to our reputation and costs of responding to investigations, defending against litigation, settling claims and complying with regulatory or court orders.

Federal or state governmental authorities may impose additional data security standards or additional privacy or other restrictions on the collection, use, maintenance, transmission and other disclosures of health information. Legislation has been proposed at various times at both the federal and the state level that would limit, forbid or regulate the use or transmission of medical information outside of the United States. Such legislation, if adopted, may render our use of off-shore partners for work related to such data impracticable or substantially more expensive. Alternative processing of such information within the United States may involve substantial delay in implementation and increased cost.

If we fail to comply with federal and state healthcare laws and regulations, including those governing submission of false or fraudulent claims to government healthcare programs and financial relationships among healthcare providers, we may be subject to civil and criminal penalties or loss of eligibility to participate in government healthcare programs.

We are subject to certain federal and state laws and regulations designed to protect patients, governmental healthcare programs, and private health plans from fraudulent and abusive activities. These laws include anti-kickback restrictions and laws prohibiting the submission of false or fraudulent claims. These laws are complex and their application to our specific products, services and relationships may not be clear and may be applied to our business in ways that we do not anticipate. Federal and state regulatory and law enforcement authorities have recently increased enforcement activities with respect to Medicare and Medicaid fraud and abuse regulations and other reimbursement laws and rules. From time to time in the future, we may receive inquiries or subpoenas to produce documents in connection with such activities. We could be required to expend significant time and resources to comply with these requests, and the attention of our management team could be diverted to these efforts. Furthermore, third parties have in the past alleged, and may in the future allege that we have sought federal funding in a manner that may violate federal or state law. Though we dispute such allegations, if we are found to be in violation of any federal or state fraud and abuse laws, we could be subject to civil and criminal penalties, and we could be excluded from participating in federal and state healthcare programs such as Medicare and Medicaid. The occurrence of any of these events could significantly harm our business and financial condition.

Provisions in Title XI of the Social Security Act, commonly referred to as the federal Anti-Kickback Statute, prohibit the knowing and willful offer, payment, solicitation or receipt of remuneration, directly or indirectly, in cash or in kind, in return for or to reward the referral of patients or arranging for the referral of patients, or in return for the recommendation, arrangement, purchase, lease or order of items or services that are covered, in whole or in part, by a federal healthcare program such as Medicare or Medicaid. The definition of “remuneration” has been broadly interpreted to include anything of value such as gifts, discounts, rebates, waiver of payments or providing anything at less than its fair market value. Many states have adopted similar prohibitions against kickbacks and other practices that are intended to induce referrals which are applicable to all patients regardless of whether the patient is covered under a governmental health program or private health plan. We attempt to scrutinize our business relationships and activities to comply with the federal Anti-Kickback Statute and similar laws and we attempt to structure our sales and group purchasing arrangements in a manner that is consistent with the requirements of applicable safe harbors to these laws. We cannot assure you, however, that our arrangements will be protected by such safe harbors or that such increased enforcement activities will not directly or indirectly have an adverse effect on our business, financial condition or results of operations. Any determination by a state or federal agency that any of our activities or those of our vendors or customers violate any of these laws could subject us to civil or criminal penalties, monetary fines, disgorgement, individual imprisonment, contractual damages, reputational harm, diminished profits and future earnings and curtailment of our operations, could require us to change or terminate some portions of operations or business, could disqualify us from providing services to healthcare providers doing business with government programs and, thus, could have an adverse effect on our business.

Our business is also subject to numerous federal and state laws, including without limitation the civil False Claims Act, that forbid the knowing submission or “causing the submission” of false or fraudulent information or the failure to disclose information in connection with the submission and payment of claims for reimbursement to Medicare, Medicaid, federal healthcare programs or private health plans. Analogous state laws and regulations may apply to our arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors. Additionally, HIPAA also imposes criminal and civil liability for, among other things, executing a scheme to defraud any healthcare benefit program or making false statements relating to healthcare matters.

These laws and regulations may change rapidly, and it is frequently unclear how they apply to our business. Errors created by our products or consulting services that relate to entry, formatting, preparation or transmission of claim or cost report information may be determined or alleged to be in violation of these laws and regulations. Any failure of our products or services to comply with these laws and regulations could result in substantial civil or criminal liability, monetary fines, disgorgement, individual imprisonment, contractual damages, reputational harm, diminished profits and future earnings and curtailment of our operations, could adversely affect demand for our one or more of our offerings, could invalidate all or portions of some of our customer contracts, could require us to change or terminate some portions of our business, could require us to refund portions of our services fees, could cause us to be disqualified from serving clients doing business with government payors and could have an adverse effect on our business.

Our activities are also subject to state and federal self-referral laws, including the federal Physician Self-referral Law, commonly known as the Stark Law, which prohibits physicians from referring Medicare or Medicaid patients to providers of "designated health services" with whom the physician or a member of the physician's immediate family has an ownership interest or compensation arrangement, unless a statutory or regulatory exception applies, and similar state equivalents that may apply regardless of payor. In addition, our activities may also implicate state laboratory licensure laws, as well as the corporate practice of medicine prohibition in certain states that maintain such laws or regulations. Our failure to abide by these state and federal laws could result in substantial fines and penalties.

If commercial third-party payors or government payors fail to provide coverage or adequate reimbursement, or if there is a decrease in the amount of reimbursement for our sequencing and molecular analysis solutions, including GPS Cancer, or future products we develop, if any, our revenue and prospects for profitability would be harmed.

In both domestic and foreign markets, sales of our sequencing and molecular analysis solutions, including GPS Cancer, and other products and services we develop will depend, in large part, upon the availability of reimbursement from third-party payors. These third-party payors include government healthcare programs such as Medicare, managed care providers, private health insurers, and other organizations. In particular, we believe that obtaining a positive national coverage decision and favorable reimbursement rate from the Centers for Medicare and Medicaid Services, or CMS, for our sequencing and molecular analysis solutions, including GPS Cancer, will be a necessary element in achieving material commercial success. Physicians and patients may not order our sequencing and molecular analysis solutions unless commercial third-party payors and government payors pay for all, or a substantial portion, of the list price, and certain commercial third-party payors may not agree to reimburse our sequencing and molecular analysis solutions if CMS does not issue a positive coverage decision.

There is currently no national coverage decision that determines whether and how our sequencing and molecular analysis solutions, including GPS Cancer, are covered by Medicare. In the absence of a national coverage decision, local Medicare contractors, or MACs, that administer the Medicare program in various regions have some discretion in determining local coverage and therefore payment for tests. We do not currently receive any payment for our sequencing and molecular analysis solutions provided to patients covered by Medicare. If CMS or an applicable MAC does not issue a coverage decision with respect to our sequencing and molecular analysis solutions, or if CMS or an applicable MAC withdraws its coverage policies after reimbursement is obtained, reviews and adjusts the rate of reimbursement, or stops paying for our sequencing and molecular analysis solutions altogether, our revenue and results of operations would be adversely affected.

Commercial third-party payors and government payors are increasingly attempting to contain healthcare costs by demanding price discounts or rebates and limiting both coverage on which diagnostic products they will pay for and the amounts that they will pay for new molecular diagnostic products. Because of these cost-containment trends, commercial third-party payors and government payors that currently provide reimbursement for, or in the future cover, our sequencing and molecular analysis solutions, including GPS Cancer, may reduce, suspend, revoke, or discontinue payments or coverage at any time. Further, a payor's decision to provide coverage for a product or service does not imply that an adequate reimbursement rate will be approved. Additionally, one payor's determination to provide coverage does not assure that other payors will also provide coverage. Adequate third party reimbursement may not be available to enable us to maintain price levels sufficient to realize an appropriate return on our investment.

As a result, there is significant uncertainty surrounding whether the use of products that incorporate new technology, such as our sequencing and molecular analysis solutions, including GPS Cancer, will be eligible for coverage by commercial third-party payors and government payors or, if eligible for coverage, what the reimbursement rates will be for those products. The fact that a diagnostic product has been approved for reimbursement in the past, for any particular indication or in any particular jurisdiction, does not guarantee that such a diagnostic product will remain approved for reimbursement or that similar or additional diagnostic products will be approved in the future. Reimbursement of NGS-based cancer products by commercial third-party payors and government payors may depend on a number of factors, including a payor's determination that products enabled by our molecular profiling solution are:

- not experimental or investigational;

- medically necessary;
- appropriate for the specific patient;
- cost-effective;
- supported by peer-reviewed publications;
- included in clinical practice guidelines; and
- supported by clinical utility studies.

As a result, our efforts to receive reimbursement on behalf of patients will take a substantial amount of time and may require the development of clinical data to demonstrate the clinical utility of our products and improve patient outcomes, or commercial third-party payors and government payors may never cover or provide adequate payment for our sequencing and molecular analysis solutions, including GPS Cancer, or future molecular profiling tools we license or develop. Our strategy to achieve broad reimbursement coverage is focused on demonstrating the clinical utility and economic benefits of our sequencing and molecular analysis solutions, engaging with thought leaders, oncologists and other caregivers, patient advocacy groups and other key oncology stakeholders and thereby increasing demand. For example, in January 2016, a large health plan announced that it would provide insurance coverage for GPS Cancer, representing the nation's first such insurance coverage for a whole genome and proteome molecular diagnostic platform. Even in light of this announcement, however, there is no assurance that we will continue to succeed in any of these areas or that, even if we do succeed, we will receive favorable reimbursement decisions. If adequate third-party reimbursement is unavailable we may not be able to maintain price levels sufficient to realize an appropriate return on investment in product development. Furthermore, if a commercial third-party payor or government payor denies coverage, it may be difficult for us to collect from the patient, and we may not be successful.

In addition, we are generally considered a "non-contracting provider" by commercial third-party payors because we generally have not entered into specific contracts to provide GPS Cancer to their covered patients, and as a result we take on primary responsibility for obtaining reimbursement on behalf of patients. If we were to become a contracting provider with additional payors in the future, the amount of overall reimbursement we receive may decrease if we receive less revenue per product that is reimbursed at a contracted rate than at a non-contracted rate, which could have a negative impact on our revenue. Further, we may be unable to collect payments from patients beyond that which is paid by their coverage and will experience lost revenue as a result.

If we fail to comply with the way states and the FDA regulates tests that are developed, manufactured, validated and performed by laboratories like NantOmics, such failure could result in delay or additional expense in offering our tests and tests that we may develop in the future.

Several states require that we and NantOmics hold laboratory licenses to test specimens from patients in those states. Other states may have similar requirements or may adopt similar requirements in the future. We may be subject to regulation in foreign jurisdictions as we seek to expand international distribution of our offerings, which may require review of our offerings in order to offer our services or may have other limitations such as prohibitions on the export of tissue necessary for us to use our GPS Cancer solution that may limit our ability to distribute outside of the United States.

In addition, NantOmics is subject to the Clinical Laboratory Improvement Amendments of 1988, or CLIA, a federal law that regulates clinical laboratories that perform testing on specimens derived from humans for the purpose of providing information for the diagnosis, prevention, or treatment of disease. CLIA regulations mandate specific standards in the areas of personnel qualifications, administration, and participation in proficiency testing, patient test management, quality control, quality assurance, and inspections. NantOmics has a current certificate of accreditation under CLIA to conduct our genomic sequencing and molecular analyses through our accreditation by the College of American Pathologists, or CAP. To renew this certificate, NantOmics is subject to survey and inspection every two years. Moreover, CLIA inspectors may make random inspections of NantOmics' clinical reference laboratory.

Any sanction imposed under CLIA, its implementing regulations, or state or foreign laws or regulations governing licensure, or NantOmics' failure to renew a CLIA certificate, a state or foreign license, or accreditation, could have a material adverse effect on our business. Most CLIA deficiencies are not classified as "condition-level" deficiencies, and there are no adverse effects upon the laboratory operations as long as the deficiencies are corrected. Remediation of these deficiencies is a routine matter, with corrections occurring within several hours or weeks. More serious CLIA deficiencies could rise to the level of "condition-level" deficiencies, and CMS has the authority to impose a wide range of sanctions, including revocation of the CLIA certification along with a bar on the ownership or operation of a CLIA-certified laboratory by any owners or operators of the deficient laboratory. There is an administrative hearing procedure that can be pursued by the laboratory in the event of imposition of such sanctions, during which the sanctions are stayed, but the process can take a number of years to complete. If NantOmics was to lose its CLIA certification or CAP accreditation, we would not be able to offer our GPS Cancer solution services, which would result in material harm to our business and results of operations.

While the FDA currently exercises its enforcement discretion for LDTs by not enforcing its regulations, the FDA has stated that it has a mandate to regulate in this field and that it intends to address LDT regulation using a risk-based, phased-in approach similar to the existing *in vitro* diagnostic framework. Moreover, the FDA could disagree with our current assessment that NantOmics' sequencing services is a LDT, and could require us or NantOmics to seek clearance or approval for such sequencing services for clinical use. If the FDA requires us or NantOmics to seek clearance or approval to offer NantOmics' sequencing services for GPS Cancer or any of our future offerings for clinical use, we may not be able to obtain such approvals on a timely basis, or at all. Failure to comply with applicable regulatory requirements can result in enforcement action by the FDA, which may include any of the following sanctions: warning letters; fines; injunctions; civil or criminal penalties; recall or seizure of current or future products; operating restrictions; partial suspension or total shutdown of production; denial of applications; or challenges to clearances or approvals. We cannot provide any assurance that FDA regulation, including premarket review, will not be required for our GPS Cancer solution or any other molecular profiling solution we offer in the future. If premarket review is required, our business could be negatively impacted if we are required to stop selling our molecular profiling solution pending its clearance or approval or if such approval is delayed by new requirements.

Healthcare policy changes, including recently enacted legislation reforming the U.S. healthcare system, may have a material adverse effect on our financial condition, results of operations and cash flows.

In March 2010, the ACA was enacted in the United States, which made a number of substantial changes in the way healthcare is financed by both governmental and private insurers. Among other things, the ACA:

- requires each medical device manufacturer to pay an excise tax equal to 2.3% of the price for which such manufacturer sells its medical devices. This tax may apply to GPS Cancer and some or all of our products which are in development. The excise tax has been temporarily suspended for calendar years 2016 and 2017, but will be reinstated in 2018 without additional Congressional action.

- mandates a reduction in payments for clinical laboratory services paid under the Medicare Clinical Laboratory Fee Schedule of 1.75% for the years 2011 through 2015. In addition, a productivity adjustment is made to the fee schedule payment amount.

- creates initiatives to promote quality indicators in payment methodologies and the coordination and promotion of research on comparative clinical effectiveness of different technologies and procedures.

We cannot predict whether future healthcare initiatives will be implemented at the federal or state level, or how any future legislation or regulation may affect us. The taxes imposed by the new federal legislation and the expansion of government's role in the U.S. healthcare industry, as well as changes to the reimbursement amounts paid by payors for our current and future offerings or our medical procedure volumes, may reduce our profits and have a materially adverse effect on our business, financial condition, results of operations, and cash flows. Moreover, Congress has proposed on several occasions to impose a 20% coinsurance on patients for clinical laboratory tests reimbursed under the Medicare Clinical Laboratory Fee Schedule, which would require us to bill patients for these amounts. Because of the relatively low reimbursement for many clinical laboratory tests, in the event that Congress were to ever enact such legislation, the cost of billing and collecting for these tests would often exceed the amount actually received from the patient and effectively increase our costs of billing and collecting.

Further federal, state and foreign legislative and regulatory developments are likely, and we expect ongoing initiatives to increase pressure on pricing for certain products and services in the healthcare industry. Such reforms could have an adverse effect on our anticipated revenues.

We are subject to U.S. and foreign anti-corruption and anti-money laundering laws with respect to our operations and non-compliance with such laws can subject us to criminal and/or civil liability and harm our business.

We are subject to the U.S. Foreign Corrupt Practices Act of 1977, as amended, or the FCPA, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, the USA PATRIOT Act, and possibly other state and national anti-bribery and anti-money laundering laws in countries in which we conduct activities. Anti-corruption laws are interpreted broadly and prohibit companies and their employees, agents, third-party intermediaries, joint venture partners and collaborators from authorizing, promising, offering, or providing, directly or indirectly, improper payments or benefits to recipients in the public or private sector. We currently engage in business and sales with government and state-owned hospitals outside of the United States. In addition, we engage third-party intermediaries to promote and sell our products and solutions abroad and/or to obtain necessary permits, licenses, and other regulatory approvals. We or our third-party intermediaries may have direct or indirect interactions with officials and employees of government agencies or state-owned or affiliated entities. We can be held liable for the corrupt or other illegal activities of these third-party intermediaries, our employees, representatives, contractors, partners, and agents, even if we do not explicitly authorize or have actual knowledge of such activities.

We have adopted an anti-corruption policy that, mandates compliance with the FCPA and other anti-corruption laws applicable to our business throughout the world. However, we cannot assure you that our employees and third-party intermediaries will comply with this policy or such anti-corruption laws. Noncompliance with anti-corruption and anti-money laundering laws could subject us to whistleblower complaints, investigations, sanctions, settlements, prosecution, other enforcement actions, disgorgement of profits, significant fines, damages, other civil and criminal penalties or injunctions, suspension and/or debarment from contracting with certain persons, the loss of export privileges, reputational harm, adverse media coverage, and other collateral consequences. If any subpoenas, investigations, or other enforcement actions are launched, or governmental or other sanctions are imposed, or if we do not prevail in any possible civil or criminal litigation, our business, financial condition and results of operations could be materially harmed. In addition, responding to any action will likely result in a materially significant diversion of management's attention and resources and significant defense and compliance costs and other professional fees. In certain cases, enforcement authorities may even cause us to appoint an independent compliance monitor which can result in added costs and administrative burdens.

We are subject to governmental export and import controls that could impair our ability to compete in international markets due to licensing requirements and subject us to liability if we are not in compliance with applicable laws.

Our products and solutions are subject to export control and import laws and regulations, including the U.S. Export Administration Regulations, U.S. Customs regulations, and various economic and trade sanctions regulations administered by the U.S. Treasury Department's Office of Foreign Assets Controls. Exports of our products and solutions outside of the United States must be made in compliance with these laws and regulations. If we fail to comply with these laws and regulations, we and certain of our employees could be subject to substantial civil or criminal penalties, including the possible loss of export or import privileges, fines, which may be imposed on us and responsible employees or managers and, in extreme cases, the incarceration of responsible employees or managers.

In addition, changes in our products or solutions or changes in applicable export or import laws and regulations may create delays in the introduction, provision, or sale of our products and solutions in international markets, prevent customers from using our products and solutions or, in some cases, prevent the export or import of our products and solutions to certain countries, governments or persons altogether. Any limitation on our ability to export, provide, or sell our products and solutions could adversely affect our business, financial condition and results of operations.

We may be subject to fines, penalties or legal liability, if it is determined that we are practicing medicine without a license through our eviti or molecular analysis solutions.

State laws prohibit the practice of medicine without a license. Our eviti reports delivered to physicians provide information regarding FDA-approved therapies and clinical trials that oncologists may use in making treatment decisions for their patients, and our GPS Cancer reports provide detailed genomic and proteomic data about a patient and can make personalized therapy recommendations based on that data. We make members of our organization available to clinicians to discuss the information provided in the report. Our customer service representatives provide support to our clients, including assistance in interpreting the results of the eviti and GPS Cancer reports. A governmental authority or third party could allege that the identification of available therapies and clinical trials in our reports and the related customer service we provide constitute the practice of medicine. A state may seek to have us discontinue the inclusion of certain aspects of our reports or the related services we provide or subject us to fines, penalties, or licensure requirements. Any determination that we are practicing medicine without a license may result in significant liability to us and harm to our reputation and eviti and GPS Cancer businesses.

Errors or illegal activity on the part of our clients may result in claims against us.

We rely on our clients, and we contractually obligate them, to provide us with accurate and appropriate data and directives for our actions. We rely upon our clients, as users of our Systems Infrastructure and NantOS, for key activities to produce proper claims for reimbursement. Failure of clients to provide these data and directives or to perform these activities may result in claims against us that our reliance was misplaced.

Our services present the potential for embezzlement, identity theft or other similar illegal behavior by our employees or subcontractors with respect to third parties.

Our services also involve the use and disclosure of personal and business information that could be used to impersonate third parties or otherwise gain access to their data or funds. If any of our employees or subcontractors takes, converts or misuses such funds, documents or data, we could be liable for damages, and our business reputation could be damaged or destroyed.

Risks related to our convertible notes

Servicing our debt requires a significant amount of cash, and we may not have sufficient cash flow from our business to pay our substantial debt.

Our ability to make scheduled payments of the principal of, to pay interest on or to refinance our indebtedness, including the notes, depends on our future performance, which is subject to economic, financial, competitive and other factors beyond our control. Our business may not continue to generate cash flow from operations in the future sufficient to service our debt and make necessary capital expenditures. If we are unable to generate such cash flow, we may be required to adopt one or more alternatives, such as selling assets, restructuring debt or obtaining additional equity capital on terms that may be onerous or highly dilutive. Our ability to refinance our indebtedness will depend on the capital markets and our financial condition at such time. We may not be able to engage in any of these activities or engage in these activities on desirable terms, which could result in a default on our debt obligations.

We may pay any interest make-whole payment on our notes by delivering shares of our common stock, which could result in significant dilution to our stockholders.

On or after the date that is one year after the last date of original issuance of the notes, we will in certain circumstances make an interest make-whole payment to a converting holder, payable in cash or shares of our common stock. If we elect, or are deemed to have elected, to pay any interest make-whole payment by delivering shares of our common stock, the number of shares of common stock a converting holder of notes will receive will be the number of shares that have a value equal to the amount of the interest make-whole payment to be paid to such holder in shares of our common stock, divided by the product of (x) 95% and (y) the simple average of the daily VWAP of our common stock for the 10 trading days ending on and including the trading day immediately preceding the conversion date, which could result in significant dilution to our stockholders.

The accounting method for convertible debt securities that may be settled in cash, such as the notes, could have a material effect on our reported financial results.

In May 2008, the Financial Accounting Standards Board, which we refer to as FASB, issued FASB Staff Position No. APB 14-1, *Accounting for Convertible Debt Instruments That May Be Settled in Cash Upon Conversion (Including Partial Cash Settlement)*, which has subsequently been codified as *Accounting Standards Codification 470-20, Debt with Conversion and Other Options*, which we refer to as ASC 470-20. Under ASC 470-20, an entity must separately account for the liability and equity components of the convertible debt instruments (such as the notes) that may be settled entirely or partially in cash upon conversion in a manner that reflects the issuer's economic interest cost. The effect of ASC 470-20 on the accounting for the notes is that the equity component is required to be included in the additional paid-in capital section of stockholders' equity on our consolidated balance sheet, and the value of the equity component would be treated as original issue discount for purposes of accounting for the debt component of the notes. As a result, we will be required to record a greater amount of non-cash interest expense in current periods presented as a result of the amortization of the discounted carrying value of the notes to their face amount over the term of the notes. We will report lower net income in our financial results because ASC 470-20 will require interest to include both the current period's amortization of the debt discount and the instrument's coupon interest, which could adversely affect our reported or future financial results, the trading price of our common stock and the trading price of the notes.

In addition, under certain circumstances, convertible debt instruments (such as the notes) that may be settled entirely or partly in cash are currently accounted for utilizing the treasury stock method, the effect of which is that the shares issuable upon conversion of the notes are not included in the calculation of diluted earnings per share except to the extent that the conversion value of the notes exceeds their principal amount. Under the treasury stock method, for diluted earnings per share purposes, the transaction is accounted for as if the number of shares of common stock that would be necessary to settle such excess, if we elected to settle such excess in shares, are issued. We cannot be sure that the accounting standards in the future will continue to permit the use of the treasury stock method. If we are unable to use the treasury stock method in accounting for the shares issuable upon conversion of the notes, then our diluted earnings per share would be adversely affected.

Risks related to our common stock

Our Chairman and Chief Executive Officer, and entities affiliated with him, collectively own a significant majority of our common stock and will exercise significant influence over matters requiring stockholder approval, regardless of the wishes of other stockholders.

As of December 31, 2016, our Chairman and Chief Executive Officer, Dr. Patrick Soon-Shiong, and entities affiliated with him, collectively beneficially own approximately 58.1% of the voting power of our common stock. As a result, Dr. Patrick Soon-Shiong and his affiliates have significant influence over management and significant control over matters requiring stockholder approval, including the annual election of directors and significant corporate transactions, such as a merger or other sale of our company or assets, for the foreseeable future. This concentrated control will limit stockholders' ability to influence corporate matters and, as a result, we may take actions that our stockholders do not view as beneficial. As a result, the market price of our common stock could be adversely affected.

Dr. Patrick Soon-Shiong, our Chairman and Chief Executive Officer and our principal stockholder, has significant interests in other companies which may conflict with our interests.

Our Chairman and Chief Executive Officer, Dr. Patrick Soon-Shiong, is the founder of NantWorks. The various NantWorks companies are currently exploring opportunities in the immunotherapy, infectious disease and inflammatory disease fields. In particular, NantOmics provides us with its sequencing and molecular analysis solution for our GPS Cancer solution. NantWorks is the largest member of NantOmics, holding approximately 84% of the outstanding equity and approximately 99% of the outstanding voting equity as of December 31, 2016. As a result, they or other companies affiliated with Dr. Patrick Soon-Shiong may compete with us for business opportunities or, in the future, develop products that are competitive with ours. As a result Dr. Patrick Soon-Shiong's interests may not be aligned with the interests of our other stockholders, and he may from time to time be incentivized to take certain actions that benefit his other interests and that our other stockholders do not view as being in their interest as investors in our company. Moreover, even if they do not directly relate to us, actions taken by Dr. Patrick Soon-Shiong and the companies and charitable organizations with which he is involved could have a negative impact on our business.

Our certificate of incorporation contains a waiver of the corporate opportunities doctrine for NantWorks and its affiliates, which includes our Chairman and Chief Executive Officer, and therefore covered persons have no obligations to make opportunities available to us.

NantWorks, which is controlled by our Chairman and Chief Executive Officer, and its affiliates, beneficially own approximately 58.1% of the voting power of our common stock. Additionally, one of our other directors, Mark Burnett, is an affiliate of NantWorks by virtue of his appointment as a board member to NantBioScience, Inc., an entity controlled by NantWorks, in May 2016.

NantWorks and its affiliates engage in a broad spectrum of activities across the life science, biopharmaceutical, healthcare information technology and technology sectors. In the ordinary course of their business activities, NantWorks and its affiliates may from time to time acquire and hold interests in businesses that compete directly or indirectly with us. Our certificate of incorporation provides that none of NantWorks, any of its affiliates and all of their respective partners, principals, directors, officers, members, managers and/or employees, including any of the foregoing who serve as officers or directors of our company, to the fullest extent permissible by law, have any duty to bring business opportunities to our attention or to refrain from engaging, directly or indirectly, in the same business activities or similar business activities or lines of business in which we operate. NantWorks or its affiliates may also pursue acquisition opportunities that may be complementary to our business and, as a result, those acquisition opportunities may not be available to us. In addition, NantWorks may have an interest in pursuing acquisitions, divestitures and other transactions that, in its judgment, could enhance its investment, even though such transactions might involve risks to you.

We do not know whether an active, liquid and orderly trading market will develop for our common stock or what the market price of our common stock will be and as a result it may be difficult for you to sell your common stock.

Prior to our initial public offering in June 2016, there was no public market for our common stock. Although our common stock is listed on The NASDAQ Global Select Market, the market for our shares has demonstrated varying levels of trading activity. Further, because a significant amount of our common stock following our initial public offering is and is expected to continue to be held by our Chairman and Chief Executive Officer, Dr. Patrick Soon-Shiong, and entities affiliated with him, it may be more difficult for an active and liquid trading market for our common stock to develop. As a result of these and other factors, you may not be able to sell your common stock quickly or at or above the initial public offering price or at all. Further, an inactive market may also impair our ability to raise capital by selling additional common stock and may impair our ability to enter into strategic collaborations or acquire companies or products by using our common stock as consideration.

The trading price of our common stock has been and may continue to be volatile. This volatility may affect the price at which you could sell the notes and any common stock you receive upon conversion of your notes.

The trading price of our common stock has been and may continue to be volatile and could be subject to wide fluctuations in response to various factors. The trading price of the notes and our common stock may fluctuate widely in response to various factors, some of which are beyond our control, including:

- announcements by us or our competitors of new products, significant contracts, commercial relationships or capital commitments and the timing of these introductions or announcements;
- adverse regulatory or reimbursement announcements;
- announcements by us or our competitors of significant acquisitions, strategic collaborations, joint ventures or capital commitments;
- the results of our efforts to develop additional offerings;
- our dependence on our customers, partners and collaborators;
- regulatory or legal developments in the United States or other countries;
- reimbursement decisions regarding our future molecular profiling solutions, including GPS Cancer;
- developments or disputes concerning patent applications, issued patents or other proprietary rights;
- the recruitment or departure of key management or other personnel;
- our ability to successfully commercialize our future products;
- the level of expenses related to any of our products;
- actual or anticipated changes in estimates as to financial results, development timelines or recommendations by securities analysts;
- actual or anticipated quarterly variations in our financial results or those of our competitors;
- any change to the composition of the board of directors or key personnel;
- expiration of contractual lock-up agreements with our executive officers, directors and security holders;
- sales of common stock by us or our stockholders in the future, as well as the overall trading volume of our common stock;
- changes in the structure of healthcare payment systems;
- commencement of, or our involvement in, litigation, including claims by our equityholders pertaining to our conversion from a Delaware limited liability company into a Delaware corporation or the pending class action litigation;
- general economic, industry and market conditions and other factors that may be unrelated to our operating performance or the operating performance of our competitors, including changes in market valuations of similar companies; and
- the other factors described in this “Risk Factors” section.

In addition, the stock market in general, and the NASDAQ and the healthcare industry in particular, have from time to time experienced volatility that often has been unrelated to the operating performance of the underlying companies. These broad market and industry fluctuations may adversely affect the market price of our common stock or the notes, regardless of our operating performance. In several recent situations where the market price of a stock has been volatile, holders of that stock have instituted securities class action litigation against the company that issued the stock. If any of our stockholders were to bring a lawsuit against us, the defense and disposition of the lawsuit could be costly and divert the time and attention of our management and would harm our business operating results or financial condition.

We may pay any interest make-whole payment by delivering shares of our common stock, which could result in significant dilution to our stockholders.

On or after the date that is one year after the last date of original issuance of the notes, we will in certain circumstances make an interest make-whole payment, as described under "Description of notes-Conversion rights-Settlement upon conversion," to a converting holder, payable in cash or shares of our common stock. If we elect, or are deemed to have elected, to pay any interest make-whole payment by delivering shares of our common stock, the number of shares of common stock a converting holder of notes will receive will be the number of shares that have a value equal to the amount of the interest make-whole payment to be paid to such holder in shares of our common stock, divided by the product of (x) 95% and (y) the simple average of the daily VWAP of our common stock for the 10 trading days ending on and including the trading day immediately preceding the conversion date, which could result in significant dilution to our stockholders.

We have incurred and will continue to incur costs as a result of operating as a public company and our management has been and will be required to devote substantial time to public company compliance initiatives.

As a public company, listed in the United States, we have incurred and will continue to incur significant legal, accounting and other expenses due to our compliance with regulations and disclosure obligations applicable to us, including compliance with the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, as well as rules implemented by the SEC and the NASDAQ. The SEC and other regulators have continued to adopt new rules and regulations and make additional changes to existing regulations that require our compliance. In July 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act, or the Dodd-Frank Act, was enacted. There are significant corporate governance and executive compensation related provisions in the Dodd-Frank Act that have required the SEC to adopt additional rules and regulations in these areas. Stockholder activism, the current political environment, and the current high level of government intervention and regulatory reform may lead to substantial new regulations and disclosure obligations, which may lead to additional compliance costs and impact, in ways we cannot currently anticipate, the manner in which we operate our business. Our management and other personnel have and will continue to devote a substantial amount of time to these compliance programs and monitoring of public company reporting obligations and, as a result of the new corporate governance and executive compensation related rules, regulations, and guidelines prompted by the Dodd-Frank Act and further regulations and disclosure obligations expected in the future, we will likely need to devote additional time and costs to comply with such compliance programs and rules. These rules and regulations will cause us to incur significant legal and financial compliance costs and will make some activities more time-consuming and costly.

To continue to comply with the requirements of being a public company, we may need to undertake various activities, including implementing new internal controls and procedures and hiring new accounting or internal audit staff. The Sarbanes-Oxley Act requires that we maintain effective disclosure controls and procedures and internal control over financial reporting. We are continuing to develop and refine our disclosure controls and other procedures that are designed to ensure that information required to be disclosed by us in the reports that we file with the SEC is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms, and that information required to be disclosed in reports under the Securities Exchange Act of 1934, or the Exchange Act, is accumulated and communicated to our principal executive and financial officers. Our current controls and any new controls that we develop may become inadequate and weaknesses in our internal control over financial reporting may be discovered in the future. For example, in connection with our preparation of the Consolidated and Condensed Financial Statements for the year ended December 31, 2016, we identified one control deficiency that did not rise to the level of a material weakness, but did represent a significant deficiency in our internal control over financial reporting. A control deficiency is considered a significant deficiency if it represents a deficiency, or a combination of deficiencies, in internal control over financial reporting that is less severe than a material weakness, yet important enough to merit attention by those responsible for oversight of a company's financial reporting. The particular deficiency related to the effectiveness of our internal controls around financial reporting for complex, non-routine transactions such as business combinations

In December 2016, we identified a second control deficiency that did not rise to the level of a material weakness, but did represent a significant deficiency in our internal control over financial reporting. We believe this deficiency will result in a downward revenue adjustment of approximately $1.3 million to our previously reported revenue for the nine months ended September 30, 2016, which adjustment was reflected in our financial results for the fourth quarter and year ended December 31, 2016. This significant deficiency related to the need to timely engage sufficient and qualified accounting resources at our home healthcare services subsidiary, Assisteo. We believe the cumulative effect of the adjustment on revenue is immaterial. Additionally, in connection with the integration of NaviNet which we acquired in January 2016, we identified (i) a material weakness where the internal controls were not sufficiently complete and comprehensive to ensure that the accounting for unapplied cash was complete and accurate and (ii) a lack of other controls that should have prevented adjustments in revenues and capitalized software costs. We have taken preliminary steps to address the significant deficiencies and the material weakness, including seeking to hire additional finance staff solely dedicated to us to help oversee the accounting relating to our home healthcare services business and complex transactions, and the actions we plan to take are subject to ongoing senior management review and audit committee oversight.

We cannot assure you that the measures we have taken, or will take, to remediate the significant deficiencies or the material weakness will be effective or that we will be successful in implementing them. Moreover, we cannot assure you that we have identified all significant deficiencies or material weaknesses or that we will not in the future have additional significant deficiencies or material weaknesses, in particular as we seek to transition to a more developed internal control environment and continue to grow as a company in terms of size, complexity of business and potentially in connection with future strategic transactions. Our independent registered public accounting firm has not evaluated any of the measures we have taken, or that we propose to take, to address these significant deficiencies or the material weakness discussed above.

Any failure to develop or maintain effective controls could adversely affect the results of periodic management evaluations and annual independent registered public accounting firm attestation reports regarding the effectiveness of our internal control over financial reporting which we may be required to include in our periodic reports we will file with the SEC under Section 404 of the Sarbanes-Oxley Act, harm our operating results, cause us to fail to meet our reporting obligations, or result in a restatement of our prior period financial statements. In the event that we are not able to demonstrate compliance with the Sarbanes-Oxley Act, that our internal control over financial reporting is perceived as inadequate or that we are unable to produce timely or accurate financial statements, investors may lose confidence in our operating results and the price of our common stock could decline. In addition, if we are unable to continue to meet these requirements, we may not be able to remain listed on NASDAQ.

We are not currently required to comply with the SEC rules that implement Section 404 of the Sarbanes-Oxley Act, and are therefore not yet required to make a formal assessment of the effectiveness of our internal control over financial reporting for that purpose. Upon becoming a public company, we will be required to comply with certain of these rules, which will require management to certify financial and other information in our quarterly and annual reports and provide an annual management report on the effectiveness of our internal control over financial reporting commencing with our second annual report. This assessment will need to include the disclosure of any material weaknesses in our internal control over financial reporting identified by our management or our independent registered public accounting firm. We are just beginning the costly and challenging process of compiling the system and processing documentation needed to comply with such requirements. We may not be able to complete our evaluation, testing and any required remediation in a timely fashion. During the evaluation and testing process, if we identify one or more material weaknesses in our internal control over financial reporting, we will be unable to assert that our internal control over financial reporting is effective.

Our independent registered public accounting firm may not be required to formally attest to the effectiveness of our internal control over financial reporting until the later of our second annual report or the first annual report required to be filed with the SEC following the date we are no longer an “emerging growth company” as defined in the JOBS Act, depending on whether we choose to rely on certain exemptions set forth in the JOBS Act. We cannot assure you that there will not be material weaknesses or significant deficiencies in our internal controls in the future. If we are unable to assert that our internal control over financial reporting is effective, or if our independent registered public accounting firm is unable to express an opinion on the effectiveness of our internal control over financial reporting, we could lose investor confidence in the accuracy and completeness of our financial reports, which could have a material adverse effect on the price of our common stock.

Our ability to use our net operating loss carryforwards to offset future taxable income may be subject to certain limitations.

In general, under Section 382 of the Internal Revenue Code of 1986, as amended, or the Code, a corporation that undergoes an “ownership change” is subject to annual limitations on its ability to use its pre-change net operating loss carryforwards (“NOLs”) or other tax attributes, to offset future taxable income or reduce taxes. We believe that we have recently undergone one or more ownership changes and accordingly, our ability to use our NOLs may be limited.

We do not anticipate paying any cash dividends on our common stock in the foreseeable future.

We do not currently intend to pay any cash dividends on our common stock in the foreseeable future. We currently intend to retain all of our future earnings, if any, to finance the growth and development of our business. In addition, the terms of any future debt agreements may preclude us from paying dividends. As a result, capital appreciation, if any, of our common stock may be investors' sole source of gain for the foreseeable future.

We are an "emerging growth company," and the reduced disclosure requirements applicable to emerging growth companies could make our common stock less attractive to investors.

We are an "emerging growth company," as defined in the JOBS Act, and may remain an "emerging growth company" for up to five years following the completion of our initial public offering or December 31, 2021. We would cease to be an emerging growth company upon the earliest of: (i) the last day of the fiscal year following the fifth anniversary of the completion of our initial public offering; (ii) the last day of the fiscal year during which we have annual gross revenue of at least $1.0 billion; (iii) the date on which we are deemed to be a ''large accelerated filer'' under the Exchange Act (we will qualify as a large accelerated filer as of the first day of the first fiscal year after we have (a) more than $700.0 million in outstanding common equity held by our non-affiliates and (b) been public for at least 12 months; the value of our outstanding common equity will be measured each year on the last business day of our second fiscal quarter); or (iv) the date on which we have, during the previous three-year period, issued more than $1.0 billion in non-convertible debt securities. For as long as we remain an "emerging growth company," we are permitted and intend to rely on exemptions from certain disclosure requirements that are applicable to other public companies that are not "emerging growth companies." These exemptions include:

- being permitted to provide only two years of audited financial statements, in addition to any required unaudited interim financial statements, with correspondingly reduced "Management's Discussion and Analysis of Financial Condition and Results of Operations" disclosure;
- not being required to comply with the auditor attestation requirements in the assessment of our internal control over financial reporting;
- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements;
- reduced disclosure obligations regarding executive compensation; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

We have taken advantage of reduced reporting requirements in our public filings. In particular, we have provided only two years of audited financial statements and have not included all of the executive compensation related information that would be required if we were not an emerging growth company. In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards, delaying the adoption of these accounting standards until they would apply to private companies. We have irrevocably elected not to avail ourselves of this exemption and, as a result, we will adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies. We cannot predict whether investors will find our common stock less attractive as a result of our reliance on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and the market price of our common stock may be reduced or may be more volatile.

Because we are relying on the exemptions from corporate governance requirements as a result of being a "controlled company" within the meaning of the NASDAQ listing standards, you do not have the same protections afforded to stockholders of companies that are subject to such requirements.

Our Chairman and Chief Executive Officer, Dr. Patrick Soon-Shiong, and entities affiliated with him, control a majority of our common stock. As a result, we are a "controlled company" within the meaning of NASDAQ listing standards. Under these rules, a company of which more than 50% of the voting power is held by an individual, a group or another company is a "controlled company" and may elect not to comply with certain NASDAQ corporate governance requirements, including (1) the requirement that a majority of the board of directors consist of independent directors and (2) the requirement that we have a nominating and corporate governance committee that is composed entirely of independent directors with a written charter addressing the committee's purpose and responsibilities. We have elected to rely on certain of these exemptions, and do not have a nominating and corporate governance committee. Accordingly, you will not have the same protections afforded to stockholders of companies that are subject to all of the NASDAQ corporate governance requirements.

If securities or industry analysts do not publish research or publish inaccurate or unfavorable research about our business, our share price and trading volume could decline.

The trading market for our common stock will depend on the research and reports that securities or industry analysts publish about us or our business. We do not have any control over these analysts. There can be no assurance that analysts will cover us or provide favorable coverage. If one or more of the analysts who cover us downgrade our stock or change their opinion of our stock, our share price would likely decline. If one or more of these analysts cease coverage of our company or fail to regularly publish reports on us, we could lose visibility in the financial markets, which could cause our share price or trading volume to decline.

We are not subject to the provisions of Section 203 of the Delaware General Corporation Law, which could negatively affect your investment.

We elected in our amended and restated certificate of incorporation to not be subject to the provisions of Section 203 of the Delaware General Corporation Law, or Section 203. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner. A "business combination" includes a merger, asset sale or other transaction resulting in a financial benefit to the interested stockholder. An "interested stockholder" is a person who, together with affiliates and associates, owns (or, in certain cases, within three years prior, did own) 15% or more of the corporation's voting stock. Our decision not to be subject to Section 203 will allow, for example, Dr. Patrick Soon-Shiong, our Chairman and Chief Executive Officer (who, with entities affiliated with him, beneficially own approximately 58.1% of the voting power of our common stock, as of December 31, 2016), to transfer shares in excess of 15% of our voting stock to a third-party free of the restrictions imposed by Section 203. This may make us more vulnerable to takeovers that are completed without the approval of our board of directors and/or without giving us the ability to prohibit or delay such takeovers as effectively.

Some provisions of our charter documents and Delaware law may have anti-takeover effects that could discourage an acquisition of us by others, even if an acquisition would be beneficial to our stockholders, and may prevent attempts by our stockholders to replace or remove our current management.

Provisions in our amended and restated certificate of incorporation and amended and restated bylaws, as well as provisions of Delaware law, could make it more difficult for a third party to acquire us or increase the cost of acquiring us, even if doing so would benefit our stockholders. These provisions include:

- a requirement that special meetings of stockholders be called only by the board of directors, the president or the chief executive officer;
- advance notice requirements for stockholder proposals and nominations for election to our board of directors; and
- the authority of the board of directors to issue preferred stock on terms determined by the board of directors without stockholder approval and which preferred stock may include rights superior to the rights of the holders of common stock.

These anti-takeover provisions and other provisions in our amended and restated certificate of incorporation and amended and restated bylaws could make it more difficult for stockholders or potential acquirors to obtain control of our board of directors or initiate actions that are opposed by the then-current board of directors and could also delay or impede a merger, tender offer or proxy contest involving our company. These provisions could also discourage proxy contests and make it more difficult for you and other stockholders to elect directors of your choosing or cause us to take other corporate actions you desire. Any delay or prevention of a change of control transaction or changes in our board of directors could cause the market price of our common stock to decline.

Claims for indemnification by our directors and officers may reduce our available funds to satisfy successful third-party claims against us and may reduce the amount of money available to us.

Our amended and restated certificate of incorporation and amended and restated bylaws provide that we will indemnify our directors and officers, in each case to the fullest extent permitted by Delaware law. In addition, as permitted by Section 145 of the Delaware General Corporation Law, our amended and restated bylaws and our indemnification agreements that we have entered into with our directors and officers provide that:

- We will indemnify our directors and officers for serving us in those capacities or for serving other business enterprises at our request, to the fullest extent permitted by Delaware law. Delaware law provides that a corporation may indemnify such person if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the registrant and, with respect to any criminal proceeding, had no reasonable cause to believe such person's conduct was unlawful.
- We may, in our discretion, indemnify employees and agents in those circumstances where indemnification is permitted by applicable law.
- We are required to advance expenses, as incurred, to our directors and officers in connection with defending a proceeding, except that such directors or officers shall undertake to repay such advances if it is ultimately determined that such person is not entitled to indemnification.
- We will not be obligated pursuant to our amended and restated bylaws to indemnify a person with respect to proceedings initiated by that person against us or our other indemnitees, except with respect to proceedings authorized by our board of directors or brought to enforce a right to indemnification.
- The rights conferred in our amended and restated bylaws are not exclusive, and we are authorized to enter into indemnification agreements with our directors, officers, employees and agents and to obtain insurance to indemnify such persons.
- We may not retroactively amend our bylaw provisions to reduce our indemnification obligations to directors, officers, employees and agents.

To the extent that a claim for indemnification is brought by any of our directors or officers, it would reduce the amount of funds available for use in our business.

Our amended and restated certificate of incorporation designates the Court of Chancery of the State of Delaware as the sole and exclusive forum for certain types of actions and proceedings that may be initiated by our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or other employees.

Our amended and restated certificate of incorporation provides that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders, (iii) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law, our amended and restated certificate of incorporation or our amended and restated bylaws, or (iv) any action asserting a claim against us governed by the internal affairs doctrine. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock shall be deemed to have notice of and consented to the provisions of our amended and restated certificate of incorporation described above. This choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and other employees. Alternatively, if a court were to find these provisions of our amended and restated certificate of incorporation inapplicable to, or unenforceable in respect of, one or more of the specified types of actions or proceedings, we may incur additional costs associated with resolving such matters in other jurisdictions, which could adversely affect our business, financial condition or results of operations.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our corporate headquarters are located in Culver City, California, where we occupy facilities totaling approximately 8,000 square feet on a month-to-month basis pursuant to a Shared Services Agreement with NantWorks. We use these facilities for administration, sales and marketing, research and development, engineering, client support, and professional services. In addition, we have 10 U.S. locations across eight states and three international locations. Our key facilities include the following:

- United States
  - Boston, Massachusetts
  - Dallas, Texas
  - Rockville, Maryland
  - Mayfield Heights, Ohio
  - Melbourne, Florida
  - Panama City, Florida
  - Philadelphia, Pennsylvania
  - Phoenix, Arizona

- International
  - Belfast, Northern Ireland
  - London, United Kingdom
  - Hyderabad, India

We intend to procure additional space as we add employees and expand geographically. We believe that our facilities are adequate to meet our needs in the near term, and that, if needed, suitable additional space will be available to accommodate any such expansion of our operations.

The following table outlines our facilities location, square footage, and use:

City	State	Country	Sqft	Type	Business Nature/Use
Boston	MA	USA	68,070	Lease	Administrative, sales, client support, R&D, engineering, professional services
Panama City	FL	USA	51,288	Lease	Administrative, sales, client support, R&D, engineering, professional services
Belfast	NI	UK	15,500	Lease	R&D, engineering, administrative
Phoenix	AZ	USA	4,865	Lease	administrative, sales, client support, professional services
Dallas	TX	USA	15,371	Lease	Administrative, sales, client support, R&D, engineering, professional services
Melbourne	FL	USA	12,159	Lease	Administrative, sales, client support, R&D, engineering, professional services
Phoenix	AZ	USA	6,365	Lease	Administrative, sales, client support, R&D, engineering, professional services
Philadelphia	PA	USA	12,640	Lease	Administrative, sales, client support, R&D, engineering, professional services
Reading	BRK	UK	2,488	Lease	Administrative, sales, client support, R&D, engineering, professional services
Mayfield Heights	OH	USA	4,156	Lease	R&D, engineering
Hyderabad	TS	India	10,596	Lease	R&D, engineering, administrative
			203,498		

Item 3. Legal Proceedings

We are from time to time subject to claims and litigation that arise in the ordinary course of our business. We intend to defend vigorously any such litigation that may arise under all defenses that would be available to us. In the opinion of management, the ultimate outcome of proceedings of which management is aware, even if adverse to us, would not have a material adverse effect on our Consolidated and Combined Financial Condition or Results of Operations. Regardless of the outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors.

Securities Litigation

In March 2017, a number of putative class action securities complaints were filed in U.S. District Court for the Central District of California, naming as defendants the Company and certain of our executive officers and directors. The pending complaints are captioned Deora v. NantHealth, Inc., 2:17-cv-01825, Di Rienzo v. NantHealth, Inc., 2:17-cv-01912, and Shafik v. NantHealth, Inc., 2:17-cv-01940. Some of the complaints also name as defendants investment banks who were underwriters in our initial public offering. The complaints generally allege that defendants violated the federal securities laws by making material misstatements and omissions concerning NantHealth's business, operations, and results. In particular, the complaints refer to an article in alleging that defendants misrepresented NantHealth's business with the University of Utah and donations to the university by non-profit entities associated with our founder Dr. Soon-Shiong. The complaints seek unspecified damages and other relief on behalf of putative classes of persons who purchased or acquired NantHealth securities in the IPO or on the open market from the time of the initial public offering through early March 2017. We believe that the claims lack merit and intend to vigorously defend the litigation. The monetary and other impact of this action may remain unknown for substantial periods of time. The cost to defend, settle or otherwise resolve this matter may be significant and divert management's attention. We cannot assure you that we will prevail in this lawsuit. If we are ultimately unsuccessful in this matter, we could be required to pay substantial amounts which might materially adversely affect our business, operating results and financial condition.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Market Information for Common Stock

Our common stock began trading on the NASDAQ Global Select Market under the symbol "NH" on June 2, 2016. Prior to that date, there was no public trading market for our common stock. As a result, we have not set forth quarterly information with respect to the high and low prices for our common stock for the two most recent fiscal years.

The following table sets forth for the periods indicated the high and low sales prices per share of our common stock during each of the quarterly periods indicated, as reported on the NASDAQ Global Select Market:

	Price Range	
Year Ended December 31, 2016	**High**	**Low**
Second Quarter (beginning June 2, 2016)	$ 18.59	$ 12.50
Third Quarter	15.35	9.96
Fourth Quarter	13.69	9.71

Holders of Record

As of March 30, 2017, we had approximately 184 holders of record of our common stock. We believe the actual number of stockholders is greater than the number of record holders and includes stockholders who are beneficial owners but whose shares are held in street name by brokers and other nominees. This number of holders of record also does not include stockholders whose shares may be held in trust or by other entities.

Dividend Policy

No cash dividends were declared for our common stock during the fiscal years ended in 2016 and 2015. We currently intend to retain all available funds and any future earnings for use in the operation of our business and do not anticipate paying any dividends on our common stock in the foreseeable future. Any future determination to declare dividends will be made at the discretion of our board of directors and will depend on, among other factors, our financial condition, operating results, capital requirements, general business conditions and other factors that our board of directors may deem relevant.

Securities Authorized for Issuance Under Our Equity Compensation Plans

Information regarding our equity compensation plans is incorporated by reference to Item 12, "Security Ownership of Certain Beneficial Owners and Management" of Part III of this Annual Report on Form 10-K.

Recent Sales of Unregistered Securities

In December 2016, we entered into a purchase agreement (the "Purchase Agreement") with J.P. Morgan Securities LLC and Jefferies LLC, as representatives of the several initial purchasers named therein (collectively, the "Initial Purchasers"), to issue and sell $90,000,000 in aggregate principal amount of our 5.50% Convertible Senior Notes due 2021 (the "Convertible Notes") in a private placement to qualified institutional buyers pursuant to Rule 144A under the Securities Act of 1933, as amended (the "Securities Act") and to non-U.S. persons pursuant to Regulation S under the Securities Act. In December 2016, we entered into a purchase agreement (the "Cambridge Purchase Agreement") with Cambridge Equities, L.P., an entity affiliated with Dr. Patrick Soon-Shiong, the Company's Chairman and Chief Executive Officer ("Cambridge"), to issue and sell $10,000,000 in aggregate principal amount of the Convertible Notes in a private placement pursuant to an exemption from the registration requirements of the Securities Act afforded by Section 4(a)(2) of the Securities Act. In December 2016, pursuant to the exercise of the overallotment by the Initial Purchasers, we issued an additional $7,000,000 principal amount of the Convertible Notes. The total net proceeds from this offering were approximately $102.7 million, comprised of $9.9 million from Cambridge and $92.8 million from the Initial Purchasers, after deducting of Initial Purchasers' discount and debt issuance costs of $4.3 million in connection with the Convertible Notes offering.

Repurchases of Equity Securities by the Issuer

We did not make any stock repurchases during the three months ended December 31, 2016.

Use of Proceeds

Our initial public offering of 6,900,000 shares of common stock was effected through a registration statement on Form S-1 (File No. 333-211196), which was declared effective on June 1, 2016. Our initial public offering closed on June 7, 2016 and resulted in net proceeds of approximately $83.6 million, after deducting underwriting discounts and commissions of approximately $4.9 million and other offering expenses of approximately $8.1 million. No payments for such expenses were made directly or indirectly to (i) any of our officers or directors; (ii) any persons owning 10% or more of any class of our class of our equity securities; or (iii) any of our affiliates.

Jefferies LLC, Cowen and Company, LLC, First Analysis Securities Corporation, Canaccord Genuity Inc. and FBR Capital Markets & Co. acted as the underwriters. There has been no material change in the planned use of proceeds from our initial public offering as described in our final prospectus filed with the SEC on June 3, 2016 pursuant to Rule 424(b) of the Securities Act.

Stock Performance Graph

The following graph compares the cumulative total return to stockholders on our common stock relative to the cumulative total returns of the NASDAQ Composite Index and the NASDAQ Biotechnology Index for the period from June 2, 2016 (the date our common stock commenced trading on the NASDAQ Global Select Market) through December 31, 2016. An investment of $100 (with reinvestment of all dividends) is assumed to have been made in our common stock and in each index on June 2, 2016, the date our common stock began trading on the NASDAQ Global Select Market, and its relative performance is tracked through December 31, 2016. The returns shown are based on historical results and are not indicative of, or intended to forecast, future performance of our common stock or the index. This performance graph shall not be deemed "soliciting material" or be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or the Exchange Act, or otherwise subject to the liabilities under that Section, and shall not be deemed to be incorporated by reference into any filing of NantHealth, Inc. under the Securities Act of 1933, as amended, or the Securities Act, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.

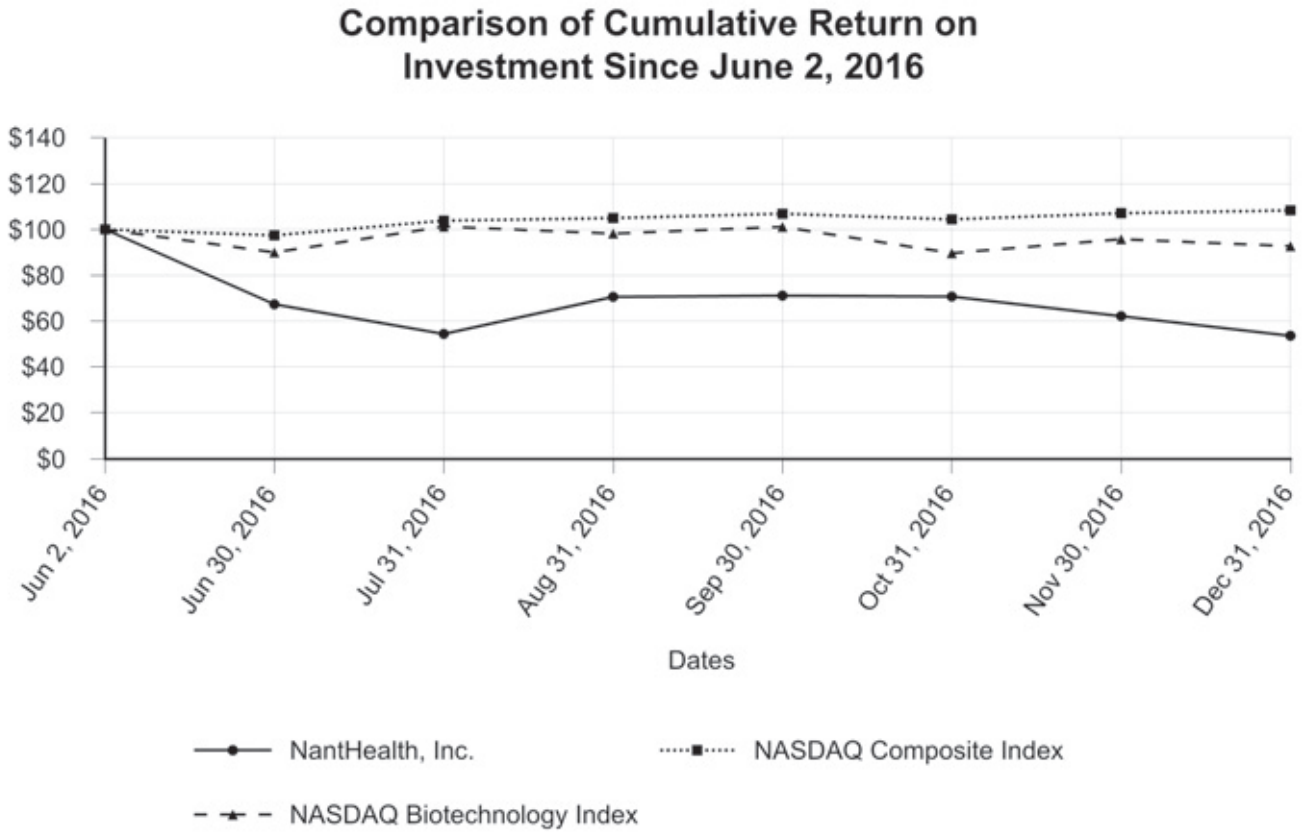


Chart information	Jun 2, 2016	Jun 30, 2016	Jul 31, 2016	Aug 31, 2016	Sep 30, 2016	Oct 31, 2016	Nov 30, 2016	Dec 31, 2016
NantHealth, Inc.	100.00	$ 67.24	$ 54.33	$ 70.52	$ 71.01	$ 70.63	$ 62.02	$ 53.47
NASDAQ Composite Index	100.00	$ 97.41	$103.84	$ 104.87	$ 106.85	$ 104.38	$ 107.09	$ 108.28
NASDAQ Biotechnology Index	100.00	$ 89.99	$101.18	$ 98.17	$ 101.14	$ 89.62	$ 95.70	$ 92.64

Item 6. Selected Financial Data

The following table sets forth selected consolidated financial data as of and for the periods indicated and should be read in conjunction with item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” the Consolidated and Combined Financial Statements and related notes, and other financial information included in this Annual Report on Form 10-K, or Annual Report. The statements do not include the historical results prior to the date of the acquisition of NaviNet, Inc., Healthcare Solutions (“HCS”) business and Net.Orange, Inc. ("NDO") on January 1, 2016, July 1, 2015 and June 18, 2014, respectively.

The Consolidated and Combined Statements of Operations Data for the years ended December 31, 2016, 2015 and 2014 and the Consolidated and Combined Balance Sheet Data as of December 31, 2016 and 2015 are derived from our audited Consolidated and Combined Financial Statements appearing in Item 8, “Financial Statements and Supplementary Data,” of this Annual Report on Form 10-K. Our historical results are not necessarily indicative of the results to be expected in the future.

Consolidated Statement of Operations Data:	**Year Ended December 31,**		
(Dollars in thousands, except per share data)	**2016**	**2015**	**2014**
Revenue:			
Software-related revenue	$ 66,601	$ 35,350	$ 18,150
Maintenance	14,238	10,452	5,345
Sequencing and molecular analysis	604	75	—
Other services	18,937	12,427	10,426
Total net revenue	$ 100,380	$ 58,304	$ 33,921
Cost of Revenue:			
Software-related cost of revenue	$ 26,547	$ 7,109	$ 9,051
Maintenance	2,750	1,874	438
Sequencing and molecular analysis	1,987	39	—
Other services	25,462	15,202	7,047
Amortization of developed technologies	15,588	10,585	7,694
Total cost of revenue	72,334	34,809	24,230
Gross profit	28,046	23,495	9,691
Operating Expenses:			
Amortization of software license and acquisition-related assets	$ 7,257	$ 1,542	$ 7,033
Impairment of intangible asset	—	—	24,150
Other operating expenses	182,290	92,856	63,188
Total operating expenses	$ 189,547	$ 94,398	$ 94,371
Loss from operations (2)	$ (161,501)	$ (70,903)	$ (84,680)
Interest expense, net	$ (6,340)	$ (627)	$ (980)
(Loss) income from related party equity method investments	$ (40,994)	$ (2,584)	$ 1,525
Loss before income taxes	$ (206,913)	$ (71,606)	$ (84,612)
Provision for (benefit from) income taxes (3)	$ (22,811)	$ 405	$ 5
Net loss (2) (3) (4)	$ (184,102)	$ (72,011)	$ (84,617)
Basic and diluted net loss per share - common stock (1)	$ (1.69)	$ (0.99)	$ (1.13)
Weighted average shares outstanding basic and diluted - common stock	111,600,650	88,970,842	74,505,127

Consolidated Balance Sheets Data: (Dollars in thousands)	December 31, 2016	2015	2014
Cash and cash equivalents and marketable securities	$ 160,353	$ 7,232	$ 225,570
Working capital (deficit)	128,330	(10,210)	146,221
Total assets	684,307	411,953	310,875
Long term notes payable	191,040	—	—
Total liabilities	272,713	60,906	96,074
Redeemable series F units	—	166,042	150,000
Accumulated deficit	(475,273)	(291,171)	(219,160)
Total stockholders' / members' equity	411,594	185,005	64,801
Total equity and redeemable stock	411,594	351,047	214,801

(1) The net loss per share and weighted-average shares outstanding have been computed to give effect to the LLC Conversion that occurred June 1, 2016 prior to our initial public offering. In conjunction with the LLC Conversion, (a) all of our outstanding units automatically converted into shares of common stock, based on the relative rights of our pre-IPO equityholders as set forth in the limited liability company agreement and (b) we adopted and filed a certificate of incorporation with the Secretary of State of the state of Delaware and adopted bylaws. We filed an amended certificate of incorporation to effect a 1-for-5.5 reverse stock split of our common stock on June 1, 2016. The net loss per share for the common stock for the years ended December 31, 2016 and 2015 reflects $4,958 and $16,042 in accretion value allocated to the redeemable common stock, respectively. The redeemable common stock contained a put right, which expired unexercised on June 20, 2016. As a result of and as of that date, the shares were no longer redeemable and were included in common stock.

(2) Loss from operations for the year ended December 31, 2016 included $54.1 million phantom units stock based compensation, which started to be recognized upon our Company's going IPO.

(3) Benefit from income taxes, net, in the amount of $8.7 million was recorded in 2016 arising from the deferred tax asset valuation allowance release due to the LLC conversion to a C corporation and forming a federal tax consolidated group. The deferred tax liability previously recorded in purchase accounting of NaviNet became a source of income for the valuation allowance release. Also benefit from income taxes, net, in the amount of $8.6 million was recorded in 2016 arising from recording a deferred tax expense in additional paid in capital due to the convertible debt bifurcation between equity and liability. We are required to record an income tax benefit in continuing operations as an offset to the deferred tax expense recorded in equity.

(4) Our net loss for the year ended December 31, 2016 included a $29.8 million non-cash impairment charge as a result of our determination that the fair value of our investment in NantOmics had declined below our carrying value as of December 31, 2016, and that this decline in value was other than temporary.

Non-GAAP Net Loss and Non-GAAP Net Loss Per Share

Adjusted net loss and adjusted net loss per share are financial measures that are not prepared in conformity with United States generally accepted accounting principles (U.S. GAAP). Our management believes that the presentation of Non-GAAP financial measures provides useful supplementary information regarding operational performance, because it enhances an investor’s overall understanding of the financial results for the Company’s core business. Additionally, it provides a basis for the comparison of the financial results for our core business between current, past and future periods. Other companies may define these measures in different ways. Non-GAAP financial measures should be considered only as a supplement to, and not as a substitute for or as a superior measure to, financial measures prepared in accordance with U.S. GAAP. All loss per share numbers are calculated based on one class of common stock and do not incorporate the effects, if any, of using the two-class method.

Adjusted net loss excludes the effects of (1) loss from equity method investments, (2) stock based compensation expense, (3) intangible amortization, (4) corporate restructuring expenses, (5) BP settlement other income, (6) acquisition related compensation expense, (7) acquisition-related sales incentives, which have been recorded as contra revenue, (8) change in fair value of derivatives liability, (9) non-cash interest expense related to convertible notes, and (10) benefit from (provision for) income taxes adjustment includes the impact of the conversion from a limited liability corporation to a corporation, the impact of convertible notes offering and the impact of intangibles amortization. Adjusted shares outstanding include Series F redeemable shares as if converted on January 1, 2014.

The following table reconciles Net loss to Net loss-Non-GAAP and Shares outstanding to Shares outstanding-Non-GAAP for the years ended December 31, 2016, 2015 and 2014. Please refer to Item 7, Management Discussion And Analysis a table reconciling Net Loss per share to Net Loss per share Non-GAAP for the years ended December 31, 2016, 2015, and 2014:

(Dollars in thousands, except per share amounts)	**Year Ended December 31,**		
	2016	**2015**	**2014**
Net loss attributed to NantHealth	$ (184,102)	$ (72,011)	$ (84,425)
Adjustments to GAAP net loss attributed to NantHealth:			
Loss (income) from related party equity method investments	40,994	2,584	(1,525)
Stock-based compensation expense	53,952	1,429	340
Corporate restructuring	2,794	1,905	839
BP settlement	(842)	—	—
Acquisition related compensation expense	4,814	—	—
Sales incentive	2,966	—	—
Long-lived assets impairment charges	—	—	24,150
Change in fair value of derivatives liability	(1,228)	—	—
Non-cash interest expense related to convertible notes	108	—	—
Intangible amortization	22,845	12,127	14,727
Provision for (benefit from) income taxes	(23,260)	403	5
Total adjustments to GAAP net loss attributed to NantHealth	103,143	18,448	38,536
Net loss - Non-GAAP	$ (80,959)	$ (53,563)	$ (45,889)
Weighted average shares outstanding	111,600,650	88,970,842	74,505,127
Weighted average Series F/redeemable stock	5,005,855	10,714,285	5,724,070
Shares outstanding - Non-GAAP	116,606,505	99,685,127	80,229,197
Net loss per share - Non-GAAP	**$ (0.69)**	**$ (0.54)**	**$ (0.57)**

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following is a discussion and analysis of our financial condition and the results of operations as of and for the periods presented below. The following discussion and analysis should be read in conjunction with the "Consolidated and Combined Financial Statements" and notes thereto included elsewhere in this Annual Report on Form 10-K, or Annual Report. This discussion contains forward-looking statements that are based on the beliefs, assumptions, and information currently available to our management, and are subject to known and unknown risks, uncertainties, and other factors that may cause our actual results to differ materially from those expressed or implied by such forward-looking statements. These risks, uncertainties, and other factors include, among others, those described in greater detail elsewhere in this Annual Report, particularly in Item 1A, "Risk Factors".

Overview

We are a leading next-generation, evidence-based, personalized healthcare company focused on enabling our clients to fundamentally change the diagnosis, treatment and pharmacoeconomics of cancer and other critical illnesses. We believe a molecular-driven, systems-based approach to making clinical treatment decisions based on large-scale, real time biometric and phenotypical data will become the standard of care initially for patients with cancer and, ultimately, other critical illnesses. We derive revenue from selling GPS Cancer (our Genomic Proteomic Spectrometry Cancer test, a unique, comprehensive molecular test and decision support solution that measures the proteins present in the patient's tumor tissue, combined with whole genomic and transcriptomic sequencing of tumor & normal samples), to which we obtained exclusive access from an affiliate, and NantOS and NantOS apps to healthcare providers and payors, self-insured employers and biopharmaceutical companies. NantOS and NantOS apps include proprietary methods and algorithms for enabling healthcare providers to make better treatment decisions to improve patient outcomes and lower the cost of care, and allow healthcare payors to ensure that their dependents receive high quality care in a cost-effective manner. We believe that as healthcare providers and payors migrate to value-based reimbursement models and implement advances in precision medicine, our offerings position us at the forefront of multiple significant market opportunities.

We market NantHealth solutions (which was originally introduced to the market as CLINICS) as a comprehensive integrated solution that includes GPS Cancer, NantOS and the NantOS apps. We also market our GPS Cancer, NantOS, individual NantOS apps and suites of NantOS apps as stand-alone solutions. To accelerate our commercial growth and enhance our competitive advantage, we continue to:

- introduce new marketing, education and engagement efforts and foster relationships across the oncology community to drive adoption of GPS Cancer;
- pursue reimbursement of GPS Cancer from regional and national third-party payors and government payors and self-insured employers;
- publish scientific and medical advances;
- strengthen our commercial organization to increase our NantHealth solutions client base and to broaden usage of our solutions by existing clients who currently use only NantOS, specific NantOS apps or suites of NantOS apps; and
- develop new features and functionality for NantHealth solutions to address the needs of current and future healthcare provider and payor, self-insured employer and biopharmaceutical company clients.

Since our inception, we have devoted substantially all of our resources to the development and commercialization of NantHealth solutions, including NantOS and the NantOS apps, as well as the commercial launch of our GPS Cancer business. To complement our internal growth and expertise, we have made several strategic acquisitions of companies, products and technologies. We have incurred significant losses since our inception, and as of December 31, 2016 our accumulated deficit was approximately $475.3 million. We expect to continue to incur operating losses over the near term as we drive adoption of GPS Cancer, expand our commercial operations, and invest further in NantHealth solutions.

We plan to (i) continue investing in our infrastructure, including but not limited to solution development, sales and marketing, implementation and support, (ii) continue efforts to make infrastructure investments within an overall context of maintaining reasonable expense discipline, (iii) add new clients through maintaining and expanding sales, marketing and solution development activities, (iv) expand our relationships with existing clients through delivery of add-on and complementary solutions and services and (v) continue our commitment of service in support of our client satisfaction programs. We believe that our growing client base using our NantOS and NantOS apps on a daily basis is a strategic asset, and we intend to expand sales of NantHealth solutions offerings towards this client base in order to leverage this strategic asset.

Recent Developments

On June 7, 2016, we completed our IPO, whereby we sold 6,500,000 shares of our common stock at a public offering price of $14.00 per share. Additionally, on June 9, 2016, the underwriters partially exercised their overallotment option to purchase an additional 400,000 shares of our common stock at $14.00 per share.

We received a total of $83.6 million in net proceeds from our IPO, after deducting underwriting discounts and commissions and offering costs of $13.0 million. The offering was registered under the Securities Act of 1933, as amended, on a registration statement on Form S-1 (Registration No. 333-211196), as amended.

In December 2016, we issued convertible notes to a related party and others for net proceeds of $9.9 million and $92.8 million, respectively, after deducting underwriting discounts and commissions and other offering costs of $4.2 million. Please see Note 12 of the Notes to Consolidated and Combined Financial Statements included in Item 8 of this Annual Report on Form 10-K for further discussion of these convertible notes.

Recent Acquisitions and Investments

We have made several significant acquisitions and investments in 2014, 2015 and 2016, which have expanded the features and functionality of NantHealth solutions, including the following:

- **NDO** In June 2014, we acquired NDO, which provides healthcare interoperability and informatics solutions through its cOS platform to address population health issues. Our results of operations include the impact of the NDO acquisition as of June 2014.

- **NantOmics** In June 2015, we invested a substantial portion of our available capital in NantOmics, a majority owned subsidiary of NantWorks. Our investment represents approximately 14.3% of the issued and outstanding membership interests of NantOmics. Our relationship with NantOmics provides us with access to what we believe is the nation's only CAP- and CLIA-certified whole genome and quantitative proteomics laboratory.

- **Healthcare Solutions ("HCS")** In July 2015, we acquired certain assets related to HCS business from Harris Corporation. We believe the acquired assets will help complex healthcare delivery organizations achieve better patient outcomes, clinical and administrative workflow efficiency and stronger collaboration across the continuum of care.

- **NaviNet** In January 2016, we acquired NaviNet, which provides a secure collaboration network connecting approximately 36 health plans and which is estimated to be utilized in more than 70% of the nation's physicians' offices during the fourth quarter of 2016. NaviNet Open will serve as a nationwide scalable and secure web-based portal for patients and providers.

Non-GAAP Net Loss and Non-GAAP Net Loss Per Share

Adjusted net loss and adjusted net loss per share are financial measures that are not prepared in conformity with United States generally accepted accounting principles (U.S. GAAP). Our management believes that the presentation of Non-GAAP financial measures provides useful supplementary information regarding operational performance, because it enhances an investor's overall understanding of the financial results for our core business. Additionally, it provides a basis for the comparison of the financial results for our core business between current, past and future periods . Other companies may define these measures in different ways. Non-GAAP financial measures should be considered only as a supplement to, and not as a substitute for or as a superior measure to, financial measures prepared in accordance with U.S. GAAP. All loss per share numbers contained in this Annual Report on Form 10-K are calculated based on one class of common stock and do not incorporate the effects, if any, of using the two-class method.

Adjusted net loss excludes the effects of (1) loss from equity method investments, (2) stock based compensation expense, (3) intangible amortization, (4) corporate restructuring expenses, (5) BP settlement other income, (6) acquisition related compensation expense, (7) acquisition-related sales incentives, which have been recorded as contra revenue, (8) change in fair value of derivatives liability, (9) non-cash interest expense related to convertible notes, and (10) Benefit for (provision from) income taxes adjustment includes the impact of the conversion from a limited liability corporation to a corporation, the impact of convertible notes offering and the impact of intangibles amortization.

Adjusted shares outstanding include Series F redeemable shares as if converted on January 1, 2014.

The following table reconciles Net loss to Net loss per share - Non-GAAP and Shares outstanding to Shares outstanding-Non-GAAP for the years ended December 31, 2016, 2015 and 2014:

(Dollars in thousands, except per share amounts)	**Year Ended December 31,**		
	2016	**2015**	**2014**
Net loss attributed to NantHealth	$ (184,102)	$ (72,011)	$ (84,425)
Adjustments to GAAP net loss attributed to NantHealth:			
Loss (income) from related party equity method investments	40,994	2,584	(1,525)
Stock-based compensation expense	53,952	1,429	340
Corporate restructuring	2,794	1,905	839
BP settlement	(842)	—	—
Acquisition related compensation expense	4,814	—	—
Sales incentive	2,966	—	—
Long-lived assets impairment charges	—	—	24,150
Change in fair value of derivatives liability	(1,228)	—	—
Non-cash interest expense related to convertible notes	108	—	—
Intangible amortization	22,845	12,127	14,727
Provision for (benefit from) income taxes	(23,260)	403	5
Total adjustments to GAAP net loss attributed to NantHealth	103,143	18,448	38,536
Net loss - Non-GAAP	$ (80,959)	$ (53,563)	$ (45,889)
Weighted average shares outstanding (1)	111,600,650	88,970,842	74,505,127
Weighted average Series F/redeemable stock (1) (2)	5,005,855	10,714,285	5,724,070
Shares outstanding - Non-GAAP (1)	116,606,505	99,685,127	80,229,197
Net loss per share - Non-GAAP (1)	**$ (0.69)**	**$ (0.54)**	**$ (0.57)**

The following table reconciles Net loss per share to Net loss per share Non-GAAP for the years ended December 31, 2016, 2015, and 2014:

	Year Ended December 31,		
	2016	2015	2014
Net loss per common share - GAAP	$ (1.69)	$ (0.99)	$ (1.13)
Adjustments to GAAP net loss per common share:			
Loss (income) from related party equity method investments	0.37	0.03	(0.02)
Stock-based compensation expense	0.48	0.02	—
Corporate restructuring	0.03	0.02	0.01
BP settlement	(0.01)	—	—
Acquisition related compensation expense	0.04	—	—
Sales incentive	0.03	—	—
Long-lived assets impairment charges	—	—	0.32
Change in fair value of derivatives liability	(0.01)	—	—
Non-cash interest expense related to convertible notes	—	—	—
Intangible amortization	0.20	0.14	0.20
Provision for (benefit from) income taxes	(0.21)	—	—
Accretion to redemption value of Series F/redeemable common stock	0.04	0.18	—
Dilution from Series F/redeemable common stock	0.04	0.06	0.05
Total adjustments to GAAP net loss per common share	1.00	0.45	0.56
Net loss per share - Non-GAAP	**$ (0.69)**	**$ (0.54)**	**$ (0.57)**

(1) The net loss per share - non-GAAP, weighted-average shares outstanding, weighted average Series F units/ redeemable stock and shares outstanding - non-GAAP, have been computed to give effect to the LLC conversion that occurred June 1, 2016 prior to our initial public offering. In conjunction with the LLC Conversion, (a) all of our outstanding units automatically converted into shares of common stock, based on the relative rights of our pre-IPO equityholders as set forth in the limited liability company agreement and (b) we adopted and filed a certificate of incorporation with the Secretary of State of the state of Delaware and adopted bylaws. We filed an amended certificate of incorporation to effect a 1-for-5.5 reverse stock split of our common stock on June 1, 2016. Please see Note 18 to our audited financial statements included in Item 8 of this Annual Report on Form 10-K for additional information related to the LLC conversion and related transactions.

(2) The weighted-average shares outstanding have been further adjusted to account for the redeemable Series F units (converted to common stock in conjunction with the LLC conversion), whose put right expired on June 20, 2016. Prior to June 20, 2016, these units/shares of common stock were classified as redeemable members'/stockholders' equity in the balance sheet, and as such, were not included in the weighted-average shares outstanding prior to June 20, 2016. The put right expired June 20, 2016, and the shares were no longer redeemable and are included in shareholders' equity as of December 31, 2016. The weighted-average shares are adjusted to include the redeemable common stock in the weighted-average shares outstanding for the entire period. Please see Note 18 to our audited financial statements included in Item 8 of this Annual Report on Form 10-K for additional information related to the LLC conversion and related transactions.

Components of Our Results of Operations

Revenue

We generate our revenue from the sale of licensed software, maintenance, software-as-a-service, hardware and services. Our Systems Infrastructure and platforms support the delivery of both personalized comprehensive sequencing and molecular analysis and the implementation of value-based care models across the healthcare continuum. We generate revenue from the following sources:

Software, middleware and hardware - Software, middleware and hardware revenue is generated from the sale of NantOS and NantOS apps software on either a perpetual or term license basis, and the sale of our hardware. The software is installed on the client's site or the client's designated vendor's site and is not hosted by us or by a vendor contracted by us. We also generate revenue from the resale of third-party software and hardware to our clients. Our software and hardware solutions sold include components of our NantOS, including FusionFX, cOS, DeviceConX and HBox.

Software-as-a-service - Software-as-a-service, or SaaS, revenue is generated from our clients' access to and usage of our hosted software solutions on a subscription basis for a specified contract term, which is typically annually. In our SaaS arrangements, the client cannot take possession of the software during the term of the contract and generally only has the right to access and use the software and receive any software upgrades published during the subscription period. Solutions sold under a SaaS model include our eviti platform solutions,NantOS and NantOS apps. SaaS revenue may include hosting of our software solutions on behalf of the client.

Maintenance - Maintenance revenue includes ongoing post-contract client support, or PCS, or maintenance during the paid PCS term. Additionally, PCS includes ongoing development of software updates and upgrades provided to the client on a when and if available basis. We sell NantOS, including DeviceConX and FusionFX, with maintenance contracts.

Sequencing and molecular analysis - Sequencing and molecular analysis revenue is generated by the process of performing sequencing and analysis of whole genome DNA, RNA and proteomic results, including GPS Cancer. We recognize revenue upon the delivery of the analysis and reporting of the results to the client or on a cash basis when it cannot conclude that the fees are fixed and determinable and collectability is reasonably assured.

Other services - Other services revenue includes revenue from professional services we provide that are generally complementary to our software solutions and may or may not be required for the solution to function as desired by the client. When associated with software, there services are generally provided in the form of training and implementation services during the software license period and do not include PCS. Other services revenue also includes revenue related to nursing and therapy services provided to patients in a home care setting and any other services not included in the preceding revenue sources.

We have established VSOE for PCS on certain of our software solutions. We have not yet established VSOE of fair value for any element other than PCS for a portion of our arrangements. In situations where VSOE of fair value exists for PCS but not a delivered element, the residual method is used to allocate revenue to the undelivered element equal to our VSOE value with the remainder allocated to the delivered elements. In situations where our services are essential to the functionality of our software and VSOE of fair value for PCS does not exist, we defer revenue and costs until we have delivered all elements of the arrangement and amortize revenue and costs over the initial PCS period. For our contracts with multiple elements, we defer revenue until only one undelivered element remains and then recognize the revenue following the pattern of delivery of the final undelivered element. The timing and pattern of this revenue recognition can cause variations in revenue from period-to-period.

Cost of Revenue

Cost of revenue consists primarily of personnel-related costs for associates providing services to our clients and supporting our revenue-generating platform infrastructure, including salaries, benefits and bonuses. Additional expenses include consultant costs, direct reimbursable travel expenses and other direct engagement costs associated with the design, development, sale and installation of our solutions, including system support and maintenance services. Our cost of revenue associated with each of our revenue sources is as follows:

- ***Software, middleware and hardware*** - Software and hardware cost of revenue includes third-party software and hardware costs directly associated with our solutions.

- ***Software-as-a-service*** - SaaS cost of revenue includes personnel-related, amortization of deferred implementation costs and other direct costs associated with the delivery and hosting of NantOS and NantOS apps, including eviti, our cancer-decision support solution, and NaviNet on a subscription basis.

- ***Maintenance*** - Maintenance cost of revenue includes personnel-related and other direct costs associated with the ongoing support or maintenance we provide for our clients.

- ***Sequencing and molecular analysis*** - Sequencing and molecular analysis cost of revenue includes internal costs associated with these services and amounts due to NantOmics under our Reseller Agreement for the sequencing and analysis of whole genome, DNA, RNA and proteomic results.

- ***Other services*** - Other services cost of revenue includes personnel-related costs, amortization of deferred implementation costs and other direct costs associated with software training and implementation services provided to our clients as well as direct expenses relating to our nursing and therapy services provided to patients in a home care setting.

Cost of revenue also includes amortization of our developed technologies used to generate revenue. We plan to continue to expand our capacity to support our growth, which will result in higher cost of revenue in absolute dollars. We expect cost of revenue to decrease as a percentage of revenue over time as we expand NantHealth solutions and realize economies of scale.

Operating Expenses

Our operating expenses consist of selling, general and administrative, research and development, and amortization of software license and acquisition-related assets.

Selling, general and administrative

Selling, general and administrative expense consists primarily of shared service fees from NantWorks, personnel-related expenses for our sales and marketing, finance, legal, human resources, and administrative associates, stock based compensation, and advertising and marketing promotions of NantHealth solutions. It also includes trade show and event costs, sponsorship costs, point of purchase display expenses and related amortization as well as legal costs, consulting and professional fees, insurance and other corporate and administrative costs.

With the exception of stock based compensation, we expect our selling, general and administrative expense to increase in absolute dollars as we continue to invest in our sales and marketing activities to attract new clients, broaden usage of our solutions by existing clients, and expand our brand. Additionally, we expect to incur additional costs for legal, accounting, insurance, investor relations and other costs associated with operating as a public company. These increases include additional costs we expect to incur associated with compliance with the Sarbanes-Oxley Act and other regulations governing public companies as well as increased costs for directors' and officers' liability insurance and an enhanced investor relations function. However, we expect our selling, general and administrative expense to decrease as a percentage of revenue over the long term as our revenue increases and we realize economies of scale.

Research and development

Research and development expenses consist primarily of personnel-related costs for associates working on development of solutions, including salaries, benefits and stock based compensation. Also included are non-personnel costs such as consulting and professional fees to third-party development resources.

Substantially all of our research and development expenses are related to developing new software solutions and improving our existing software solutions. To date, research and development expenses have been expensed as incurred as the period between achieving technological feasibility and the release of software solutions for sale has been short and development costs qualifying for capitalization have been insignificant.

With the exception of stock based compensation, we expect our research and development expenses to continue to increase in absolute dollars and as a percentage of revenue in the short term as we continue to make significant investments in developing new solutions and enhancing the functionality of our existing solutions. However, we expect our research and development expenses to decrease as a percentage of revenue over the long term as we realize economies of scale from our developed technology.

Amortization of Software License and Acquisition Related Assets

Amortization of software license and acquisition related assets consists of non-cash amortization expense related to our non-revenue generating technology as well as amortization expense that we recognize on intangible assets that we acquired through our investments.

Interest Expense, net

Interest expense, net primarily consists of interest expense associated with our outstanding borrowings offset by interest income earned on our cash and cash equivalents and marketable securities.

Other Income (Expense), net

Other income (expense), net consists primarily of unrealized and realized gains (losses) on and dividends received from our marketable securities and other non-recurring items.

Income (Loss) from Equity Method Investments

Income (Loss) from equity method investments consists of our pro rata share of income and losses of a company that we own an ownership interest in and account for under the equity method of accounting.

We regularly evaluate our investments, which are not carried at fair value, for other than temporary impairment in accordance with U.S. GAAP.

Provision for (Benefit from) Income Taxes

Provision for income taxes consists of U.S. federal and state and foreign income taxes. To date, we have no significant U.S. federal, state and foreign cash income taxes because of our LLC status prior to June 1, 2016 and current and accumulated net operating losses.

We record a valuation allowance when it is more likely than not that some portion or all of a deferred tax asset will not be realized. In making such a determination, we consider all the available positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, and ongoing prudent and feasible tax planning strategies in assessing the amount of the valuation allowance. When we establish or reduce the valuation allowance against the deferred tax assets, our provision for income taxes will increase or decrease, respectively, in the period such determination is made.

Results of Operations

The following table sets forth our Consolidated and Combined Statements of Operations data for each of the periods indicated:

(Dollars in thousands except per share amounts)	Year Ended December 31,		
	2016	2015	2014
Revenue:			
Software and hardware	$ 8,242	$ 14,616	$ 8,372
Software–as-a-service	58,359	20,734	9,778
Total software-related revenue	66,601	35,350	18,150
Maintenance	14,238	10,452	5,345
Sequencing and molecular analysis	604	75	—
Other services	18,937	12,427	10,426
Total net revenue	100,380	58,304	33,921
Cost of Revenue:			
Software and hardware	1,834	90	1,025
Software-as-a-service	24,713	7,019	8,026
Total software-related cost of revenue	26,547	7,109	9,051
Maintenance	2,750	1,874	438
Sequencing and molecular analysis	1,987	39	—
Other services	25,462	15,202	7,047
Amortization of developed technologies	15,588	10,585	7,694
Total cost of revenue	72,334	34,809	24,230
Gross profit	28,046	23,495	9,691
Operating Expenses:			
Selling, general and administrative	120,653	69,021	46,209
Research and development	61,637	23,835	16,979
Amortization of software license and acquisition-related assets	7,257	1,542	7,033
Impairment of intangible asset	—	—	24,150
Total operating expenses	189,547	94,398	94,371
Loss from operations	(161,501)	(70,903)	(84,680)
Interest expense, net	(6,340)	(627)	(980)
Other income (expense), net	1,922	2,508	(477)
(Loss) income from related party equity method investments	(40,994)	(2,584)	1,525
Loss before income taxes	(206,913)	(71,606)	(84,612)
Provision for (benefit from) income taxes	(22,811)	405	5
Net loss	(184,102)	(72,011)	(84,617)
Less: Net loss attributed to non-controlling interests	—	—	(192)
Net loss attributed to NantHealth	$ (184,102)	$ (72,011)	$ (84,425)
Net income (loss) per share (1):			
Basic and diluted - common stock	$ (1.69)	$ (0.99)	$ (1.13)
Basic and diluted - redeemable common stock	$ 0.99	$ 1.50	N/A
Weighted average shares outstanding (1):			
Basic and diluted - common stock	111,600,650	88,970,842	74,505,127
Basic and diluted - redeemable common shares	5,005,855	10,714,285	N/A

(1) The net income (loss) per share and weighted-average shares outstanding have been computed to give effect to the LLC Conversion that occurred June 1, 2016 prior to our initial public offering. In conjunction with the LLC Conversion, (a) all of our outstanding units automatically converted into shares of common stock, based on the relative rights of our pre-IPO equityholders as set forth in the limited liability company agreement and (b) we adopted and filed a certificate of incorporation with the Secretary of State of the state of Delaware and adopted bylaws. We filed an amended certificate of incorporation to effect a 1-for-5.5 reverse stock split of our common stock on June 1, 2016.

(2) The net income (loss) per share for the common stock for the years ended December 31, 2016 and 2015 reflects $4,958 and $16,042 in accretion value allocated to the redeemable common stock, respectively. The redeemable common stock contained a put right, which expired unexercised on June 20, 2016. As a result of and as of that date, the shares were no longer redeemable and were included in common stock.

The following table sets forth our Consolidated and Combined Statements of Operations data as a percentage of revenue for each of the periods indicated:

	Year Ended December 31,		
	2016	2015	2014
Revenue:			
Software and hardware	8.2%	25.1%	24.7%
Software–as-a-service	58.1%	35.5%	28.8%
Total software-related revenue	66.3%	60.6%	53.5%
Maintenance	14.2%	17.9%	15.8%
Sequencing and molecular analysis	0.6%	0.1%	0.0%
Other services	18.9%	21.4%	30.7%
Total net revenue	100.0%	100.0%	100.0%
Cost of Revenue:			
Software and hardware	1.8%	0.2%	3.0%
Software-as-a-service	24.6%	12.0%	23.7%
Total software-related cost of revenue	26.4%	12.2%	26.7%
Maintenance	2.7%	3.2%	1.3%
Sequencing and molecular analysis	2.0%	0.1%	0.0%
Other services	25.4%	26.1%	20.8%
Amortization of developed technologies	15.6%	18.1%	22.6%
Total cost of revenue	72.1%	59.7%	71.4%
Gross profit	27.9%	40.3%	28.6%
Operating Expenses:			
Selling, general and administrative	120.2%	118.4%	136.2%
Research and development	61.4%	40.9%	50.1%
Amortization of software license and acquisition-related assets	7.2%	2.6%	20.7%
Impairment of intangible asset	0.0%	0.0%	71.2%
Total operating expenses	188.8%	161.9%	278.2%
Loss from operations	(160.9%)	(121.6%)	(249.6%)
Interest expense, net	(6.3%)	(1.1%)	(2.9%)
Other income (expense), net	1.9%	4.3%	(1.4%)
(Loss) income from equity method investments	(40.8%)	(4.4%)	4.5%
Loss before income taxes	(206.1%)	(122.8%)	(249.4%)
Provision for (benefit from) income taxes	22.7%	(0.7%)	(0.1%)
Net loss	(183.4%)	(123.5%)	(249.5%)
Less: Net loss attributed to non-controlling interests	0.0%	0.0%	0.6%
Net loss attributed to NantHealth	(183.4%)	(123.5%)	(248.9%)

Comparison of the years ended December 31, 2014, 2015 and 2016

Revenue

(Dollars in thousands)

	Year Ended December 31,			Period-To-Period Change			
	2016	2015	2014	2016 vs. 2015		2015 vs. 2014	
	Amount	Amount	Amount	Amount	Percentage	Amount	Percentage
Software and hardware	$ 8,242	$ 14,616	$ 8,372	$ (6,374)	-43.6%	$ 6,244	74.6%
Software–as-a-service	58,359	20,734	9,778	37,625	181.5%	10,956	112.0%
Total software-related revenues	66,601	35,350	18,150	31,251	88.4%	17,200	94.8%
Maintenance	14,238	10,452	5,345	3,786	36.2%	5,107	95.5%
Sequencing and molecular analysis	604	75	—	529	705.3%	75	-
Other services	18,937	12,427	10,426	6,510	52.4%	2,001	19.2%
Total net revenue	$100,380	$ 58,304	$ 33,921	$ 42,076	72.2%	$ 24,383	71.9%

Comparison of the years ended December 31, 2015 and 2016

Total revenue increased $42.1 million or 72.2% from $58.3 million for the year ended December 31, 2015 to $100.4 million for the year ended December 31, 2016. Our total revenue growth was driven primarily by our acquisition of HCS assets in July 2015 and from our acquisition of NaviNet in January 2016. Our acquisition of certain assets of HCS resulted in the contribution of $19.2 million in primarily maintenance, SaaS, and other services revenue for the year ended December 31, 2016, compared to approximately $4.6 million in the year ended December 31, 2015. Our acquisition of NaviNet resulted in the contribution of $40.8 million mainly in SaaS revenue in the year ended December 31, 2016. We believe that a significant opportunity exists to expand sequencing and molecular analysis revenue as we expand both the number of GPS profiles delivered as well as obtaining additional insurance reimbursement for our GPS profile.

Total software-related revenue was $66.6 million for the year ended December 31, 2016 compared to $35.4 million for the year ended December 31, 2015, an increase of $31.3 million or 88.4%. Our total software-related revenue growth was driven primarily by our acquisition of HCS assets in July 2015 and from the acquisition of NaviNet in January 2016. We also experienced growth in our Nant OS cancer decision support revenue from expansion in our customer base for those products. These increases were partially offset by a $11.6 million decrease in software and hardware revenue recognized from completed implementations of our DeviceConX, as well as decreases in our NantOS Interoperability (formerly cOS) platforms compared to the same period in the prior year. Software related revenue in the prior year ended December 31, 2015 included recognition of revenue from certain large DeviceConX arrangements which had been previously deferred pending completion of implementation.

Software and hardware revenue decreased $6.4 million or 43.6% for the year ended December 31, 2016 compared to the prior year, primarily attributed to a decreased amount of completed DeviceConX implementations. Software and hardware revenue attributed to NantOS DeviceConX is recognized upon the completion of each implementation. A decline of $7.2 million was attributable to a reduction in the number of completed large implementations during the year ended December 31, 2016, compared to 2015. This decrease was offset by a $1.0 million incremental increase as a result of the HCS acquisition. In 2015, there were more projects in excess of $1.0 million dollars in contract value completed compared with to 2016. We believe opportunities exist to grow software and hardware revenue through completion of both existing implementations as well as executing new sales bookings from our pipeline of opportunities.

SaaS revenue was $58.4 million for the year ended December 31, 2016, an increase of $37.6 million or 181.5% from $20.7 million compared to the prior year. This increase was primarily driven by increased NantOS revenue including $1.0 million of FusionFX revenue acquired with the acquisition of HCS assets in July 2015 and revenue of $41.0 million from the acquisition of NaviNet in January 2016 in connection with SaaS revenue. In addition, revenue from our NantOS cancer decision support (formerly Eviti) platform solutions increased $1.5 million, partially offset by a $5.7 million decrease in revenue from other NantOS Interoperability platforms.

Maintenance revenue increased $3.8 million or 36.2% from $10.5 million in the year ended December 31, 2015 to $14.2 million for the year ended December 31, 2016. This increase was primarily driven by the acquisition of HCS assets in July 2015. Acquired NantOS (formerly Harris HCS) maintenance customers contributed to an increase of $3.9 million in maintenance revenue for the year ended December 31, 2016.

Sequencing and molecular analysis revenue during the period included revenue recognized for GPS profiles for which fees are fixed and determinable under a payor agreement as well as what was recognized on a cash basis due to uncertainty over reimbursement. For the year ended December 31, 2016, we recorded $0.6 million in sequencing and molecular analysis revenue. There are significant opportunities going forward as we gain momentum in gaining coverage in the US with commercial health plans and self-insured employers and globally with supplemental benefits insurers, while at the same time building GPS adoption among oncologists, including the community and academic institutions.

We are aggressively expanding our sales efforts by adding seasoned sales and account management professionals in 2017. The commercial team's efforts are focused around the development of pilots with commercial insurance payers who would agree to pay for a certain number of GPS profiles, aligned with designated provider groups who will order the GPS test, and reimbursement is recognized. The pipeline of pilot opportunities going into 2017 is in excess of $10.0 million dollars. Our pipeline of self-insured employers includes opportunities with many companies listed on Fortune's 100, as well as an alliance of 50 of the largest employers in the US. Most recently, we announced a partnership with the International Association of Firefighters, which is significant not only because of its size, but because its incidence of cancer is much greater than the average population, and in 37 states, there are presumptive laws around job related cancer for firefighters, which has opened discussions for us related to worker's compensation as well.

Other services revenue increased $6.5 million or 52.4% from $12.4 million in 2015 to $18.9 million for the year ended December 31, 2016. This was primarily driven by the completion of a large NantOS Interoperability (formerly Harris HCS) software related services project which contributed to NantOS interoperability services revenue growth of $8.6 million for the year ended December 31, 2016, and incremental growth of $0.2 million from the NaviNet acquisition. These increases were partially offset by a $2.1 million decrease of NantOS DeviceConX solutions due to a decline in the number of completed large projects.

We believe that significant opportunities exist for expanded cross-sell opportunities of our suite of solutions across our existing customer base, including the recently acquired HCS FusionFX and NaviNet customer bases. We are also integrating the cOS, FusionFX and NaviNet product solutions, within our NantOS platform, and believe that opportunities exist to cross-sell this combination of solutions to existing former HCS, FusionFX and NaviNet customers as well as to new customers. We also believe that our customer base and our product solutions provide unique opportunities to expand the volume of GPS sequencing analysis reporting to our customer base. Maintaining our current customer base will be important to our future maintenance and SaaS recurring revenue streams.

Comparison of the years ended December 31, 2014 and 2015

Total revenue increased $24.4 million, or 71.9%, from $33.9 million for the year ended December 31, 2014 to $58.3 million for the year ended December 31, 2015. Our total revenue growth came in all of our revenue categories and was driven primarily by growth in our existing solutions including NantOS (DeviceConX and cOS), eviti and sequencing and molecular analysis, as well as our acquisition of HCS assets in July 2015. Our acquisition of certain assets of HCS resulted in the contribution of $1.0 million, $1.1 million and $2.9 million in SaaS, maintenance and other services revenue, respectively, for the year ended 2015.

Our total software-related revenue (including software, hardware, and SaaS) increased to $35.4 million for 2015 from $18.2 million for 2014, an increase of $17.2 million, or 94.8%. This growth came primarily from growth in revenue from our NantOS (DeviceConX and cOS) and eviti solutions, as well as our acquisition of HCS assets in July 2015.

Software and hardware revenue increased to $14.6 million for 2015 from $8.4 million for the year ended 2014, an increase of $6.2 million, or 74.6%. This growth was primarily driven by an increased amount of completed NantOS component DeviceConX implementations. Software and hardware revenue attributed to DeviceConX is recognized upon the completion of each implementation.

SaaS revenue increased to $20.7 million for 2015 from $9.8 million for the year ended 2014, an increase of $11.0 million, or 112.0%. This increase was primarily driven by increased NantOS sales (including our Fusion family of products, or Fusion), revenue acquired with the acquisition of HCS assets in July 2015 and eviti platform revenue. eviti platform revenue grew to approximately $13.9 million for 2015 from $8.9 million for 2014, an increase of $5.0 million, or 56%. eviti revenue growth was primarily driven by an expansion in volume with our existing payor customer base. cOS revenue included under SaaS was positively impacted by the recognition of $4.7 million in previously deferred revenue related to a client arrangement which ended in 2015. Finally, we recognized approximately $0.9 million in acquired Fusion SaaS revenue for 2015.

Maintenance revenue increased to $10.5 million for 2015 from $5.3 million for 2014, an increase of $5.1 million, or 95.5%. Maintenance revenue growth was primarily driven by both an increase in customer base of DeviceConX as a result of completed implementations as well as acquired Fusion maintenance customers which contributed approximately $1.1 million in maintenance revenue for 2015.

The increase in other services revenue of $2.0 million for December 31, 2014 compared to the year ended December 31, 2015 was primarily driven by both the increase in the number of completed DeviceConX implementations as well as higher volume in our home healthcare business, or Assisteo. Our Assisteo home healthcare business benefited from an expanded relationship with a skilled nursing facility in 2015.

We expected to launch our commercial sequencing and molecular analysis solution, or GPS Cancer, in the second quarter of 2016. In January 2015, we entered into an agreement to provide certain research related sequencing services to a research institution. The agreement provides that the institution pay us $10.0 million in exchange for our providing sequencing services through our reseller agreement with NantOmics. In 2015, we provided $6.2 million of services, which has been recorded as a deemed capital contribution instead of revenue. At the institution's request, certain non-profit organizations provided partial funding for the sequencing and related bioinformatics costs associated with the project. Our Chairman and Chief Executive Officer serves as a member of the board of directors of, and may have significant influence or control over, these organizations. The institution was not contractually or otherwise required to use our molecular profiling solution or any of our other products or services as part of the charitable gift. In 2016, we completed another $3.8 million in services, which was recorded as deemed capital contributions.

We believe that significant opportunities exist for expanded cross-sell opportunities of our suite of solutions across our existing customer base including the recently acquired HCS and Fusion customer bases. We are also integrating the cOS, Fusion and NaviNet and believe that opportunities exist to cross sell this to existing Fusion and NaviNet customers as well as to new customers. We also believe that our customer base and our product solutions provide unique opportunities to expand the volume of GPS sequencing analysis reporting to our customer base. Maintaining our current customer base will be important to our future maintenance and SaaS recurring revenue streams.

Cost of Revenue

	Year Ended December 31,			Period-To-Period Change			
	2016	2015	2014	2016 vs. 2015		2015 vs. 2014	
	Amount	Amount	Amount	Amount	Percentage	Amount	Percentage
Software and hardware	$ 1,834	$ 90	$ 1,025	$ 1,744	1,937.8%	$ (935)	-91.2%
Software–as-a-service	24,713	7,019	8,026	17,694	252.1%	(1,007)	-12.5%
Total software-related cost of revenue	26,547	7,109	9,051	19,438	273.4%	(1,942)	-21.5%
Maintenance	2,750	1,874	438	876	46.7%	1,436	327.9%
Sequencing and molecular analysis	1,987	39	—	1,948	4,994.9%	39	0.0%
Other services	25,462	15,202	7,047	10,260	67.5%	8,155	115.7%
Amortization of developed technologies	15,588	10,585	7,694	5,003	47.3%	2,891	37.6%
Total cost of revenue	$ 72,334	$ 34,809	$ 24,230	$ 37,525	107.8%	$ 10,579	43.7%

Comparison of the years ended December 31, 2015 and 2016

Cost of revenue increased $37.5 million, or 107.8% from $34.8 million in the year ended December 31, 2015 to $72.3 million for the year ended December 31, 2016. Cost of revenue increased across all categories primarily as a result of acquisitions of HCS and NaviNet ($22.9 million). Additionally, we incurred $8.4 million of stock compensation expenses in the year period ended December 31, 2016 compared to zero in 2015.

Total software-related cost of revenue increased $19.4 million or 273.4% from $7.1 million in 2015 to $26.5 million for the year ended December 31, 2016. The primary drivers were the acquisitions of HCS and NaviNet which contributed increases of $0.7 million and $13.9 million respectively. Additionally, the Company has incurred $4.5 million of stock compensation expenses in the year ended December 31, 2016 versus zero in the same period last year.

Sequencing and molecular analysis increased $1.9 million or 4,994.9% from $0.04 million in 2015 compared to $2.0 million in 2016. We record the cost of revenue expense upon delivery of the GPS report to our clients. As a result, there will be a timing difference between the revenue recorded and the cost of revenue recorded. In addition, the cost of revenue is recorded as defined by the applicable contract with our clients and as outlined in the amended and restated Reseller Agreement for genomic and proteomic sequencing services and related bioinformatics and analysis services with NantOmics.

We believe that there are significant opportunities going forward to grow the volume of sequencing and molecular analysis activity which would increase the associated costs of delivering such revenue. We record the cost of revenue expense upon delivery of the GPS report to our clients. There may be a timing difference between the revenue recorded and the cost of revenue recorded in the event that revenue recognition is delayed. Sequencing and molecular analysis revenue in the current period was limited to what could be recognized on a cash basis due to uncertainty over reimbursement for the GPS profiles delivered in the period. As we gain additional insurance coverage and reimbursement experience, we expect to be able to reduce the portion of GPS revenue which is recognized on a cash basis.

Other services cost of revenue increased $10.3 million or 67.5% from $15.2 million in 2015 to $25.5 million for the year ended December 31, 2016. The primary drivers were an incremental increase of $8.0 million as a result of the acquisition of HCS as well as an increase of $4.4 million in our NantOS Interoperability and Home Health Services lines of businesses. These increases were offset by a decrease of $1.4 million in cost of revenue associated with sequencing services provided to a research institution, as well as a decrease of $0.7 million in DeviceConX solutions due to a decline in the number of completed large projects.

Comparison of the year ended December 31, 2014 and 2015

Total cost of revenue increased $10.6 million, or 43.7%, from $24.2 million for the year ended December 31, 2014 to $34.8 million for the year ended December 31, 2015. This increase was primarily the result of an $8.2 million increase in our other services cost of revenue and a $2.9 million increase in our amortization of developed technologies, compared to 2014. The increase in total cost of revenue was partially offset by a decline in costs for software-related revenue of $1.9 million.

The $8.2 million increase in other services cost of revenue referenced above was primarily due to $3.7 million in amounts owed to NantOmics related to sequencing and molecular analysis performed for a research institution, incremental costs associated with the newly-acquired Fusion product revenue, and costs related to business expansion of our home health business for the year ended 2015. The increase in the amortization of developed technologies cost of revenue is due to incremental costs associated with the acquisition of HCS and full calendar year of amortization in 2015 versus a partial year of amortization in 2014 for the acquisition of NDO.

The $1.9 million reduction in total software-related cost of revenue for the year ended December 31, 2015 compared to the year ended December 31, 2014 was primarily the result of a reduction in costs associated with certain cOS projects in 2015 versus 2014 as well as a reduction in certain hardware costs for the year ended December 31, 2015.

Selling, General and Administrative

	Year Ended December 31,			Period-To-Period Change			
	2016	2015	2014	2016 vs. 2015		2015 vs. 2014	
	Amount	Amount	Amount	Amount	Percentage	Amount	Percentage
Selling, general and administrative	$120,653	$ 69,021	$ 46,209	$ 51,632	74.8%	$ 22,812	49.4%

Comparison of the years ended December 31, 2015 and 2016

For the year ended December 31, 2016, selling, general and administrative expenses increased $51.6 million or 74.8% from $69.0 million in 2015 to $120.7 million in 2016. This increase was primarily due to $27.7 million increase in stock compensation expenses in connection with the vesting of phantom units upon consummation of our IPO and an increase of $9.0 million in personnel related expenses, a $6.3 million increase in professional services as well as selling and marketing expenses in connection with the growth of the business, $4.9 million due to increased investments in information technology and depreciation and amortization expenses as we invest in assets to support future growth. The balance is due to an increase in general overhead expenses as well as acquisition related expenses. We expect to continue to invest in opportunities to grow our molecular sequencing and analysis and other solutions which includes increased investments in sales and marketing activities.

Comparison of the years ended December 31, 2014 and 2015

Selling, general and administrative expenses increased $22.8 million, or 49.4%, from $46.2 million for the year ended December 31, 2014 to $69.0 million for the year ended December 31, 2015. This increase was driven in part by a $8.1 million increase in personnel-related expenses due to a higher headcount, including increased costs associated with severance pay, bonus accruals and stock-based compensation expense. In addition, in 2015, we experienced an increase of an additional $9.6 million of expenses related to the acquisition of HCS (of which approximately $1.5 million was one-time in nature), a $3.6 million increase in professional services and internal information technology resources related expenses, and $1.5 million increase in other expenses, including a donation to support an academic cancer research center in the United Kingdom.

Research and Development

	Year Ended December 31,			Period-To-Period Change			
	2016	2015	2014	2016 vs. 2015		2015 vs. 2014	
	Amount	Amount	Amount	Amount	Percentage	Amount	Percentage
Research and development	$ 61,637	$ 23,835	$ 16,979	$ 37,802	158.6%	$ 6,856	40.4%

Comparison of the years ended December 31, 2015 and 2016

Research and development expenses increased $37.8 million or 158.6%, from $23.8 million in 2015 to $61.6 million in 2016. This increase was driven by an increase of $16.4 million in stock compensation expense in connection with the vesting of equity awards upon the consummation of our IPO and Series C/restricted stock vesting, as well as the inclusion of research and development expenses of HCS and NaviNet. Specifically, we had $16.3 million due to an increase in personnel related expenses, and a $3.2 million increase in investments in information technology as we invest in assets to support future growth. In addition, we saw a $1.2 million increase in professional services expenses in connection with the growth of the business. Finally, we saw a $0.7 million increase in research and development general overhead expenses due to timing of certain research and development projects as well as the inclusion of research and development expenses of NaviNet. We expect to continue to invest in opportunities to leverage our solutions towards growth in our molecular sequencing and analysis and other solutions revenue.

Comparison of the years ended December 31, 2014 and 2015

Research and development expenses increased $6.9 million, or 40.4%, from $17.0 million for the year ended December 31, 2014 to $23.8 million for the year ended December 31, 2015. The increase was primarily driven by $4.7 million of expense related to the HCS acquisition in July 2015, and a $2.1 million increase due to higher headcount and associated personnel-related expenses as we invested in the development of our software and hardware solutions.

Interest Expense, Net

	Year Ended December 31,			Period-To-Period Change			
	2016	2015	2014	2016 vs. 2015		2015 vs. 2014	
	Amount	Amount	Amount	Amount	Percentage	Amount	Percentage
Interest expense, net	$ (6,340)	$ (627)	$ (980)	$ (5,713)	911.2%	$ 353	(36.0)%

In December 2016, we issued an aggregate principal amount of $107 million of our 5.5% convertible senior notes due 2021 (the "Convertible Notes") in a private placement offering to qualified institutional buyers pursuant to Rule 144A under the Securities Act of 1933, as amended and to non-U.S. persons pursuant to Regulation S under the Securities Act, of which $10 million were issued to related party. The Convertible Notes will mature on December 15, 2021 unless earlier converted, redeemed or repurchased in accordance with the terms of the Convertible Notes. Please see the section entitled "Liquidity and Capital Resources" below and Note 12 to our audited financial statements included in Item 8 of this Annual Report on Form 10-K for further discussion of the Convertible Notes.

In January 2016, we executed a demand promissory note with NantCapital (the "NantCapital Note"), a personal investment vehicle for Dr. Patrick Soon-Shiong, our Chairman and Chief Executive Officer, and a promissory note with NantOmics (the "NantOmics Note"). Through December 31, 2016, the total advances made by NantCapital and NantOmics to us pursuant to each applicable note amounted to approximately $112.7 million and $40.0 million, respectively. We can request additional advances subject to NantCapital and NantOmics approval. Each note bears interest at a per annum rate of 5.0% compounded annually and computed on the basis of the actual number of days in the year.

In May 2016, the NantCapital Note was amended and restated to provide that all outstanding principal and accrued and unpaid interest was due and payable on June 30, 2021, and not on demand. On December 15, 2016, in connection with the offering of the Convertible Notes, we entered into a Second Amended and Restated Promissory Note which amends and restates the Amended and Restated Promissory Note, dated May 9, 2016, between us and NantCapital, to extend the maturity date of the Promissory Note to June 30, 2022 and to subordinate the Promissory Note in right of payment to the Convertible Notes. In addition, in May 2016, the NantOmics Note was amended and restated to provide that all outstanding principal and accrued and unpaid interest would be converted into shares of our common stock at the IPO price at the time of pricing of the IPO. Later in May 2016, the NantOmics Note was further amended and restated to remove the automatic conversion feature and to provide that all outstanding principal and accrued and unpaid interest is due and payable on June 30, 2021, and not on demand. In June 2016, the NantOmics Note was further amended and restated to provide that all outstanding principal and accrued and unpaid interest will be converted into shares of our common stock at the IPO price after the pricing of the IPO and after the LLC Conversion. The NantOmics Note and all related accrued interest was converted on June 1, 2016 into 2,899,297 shares of our common stock in connection with our IPO. As a result, as of December 31, 2016, there were no unpaid amounts related to the advances on the NantOmics Note. Please see the section entitled "Liquidity and Capital Resources" below and Note 19 to our audited financial statements included in Item 8 of this Annual Report on Form 10-K for further discussion of these notes.

Comparison of the years ended December 31, 2015 and 2016

Interest expense, net, increased by $5.7 million, from $0.6 million for the year ended December 31, 2015 to $6.3 million for the year ended December 31, 2016. This increase in interest expense, net, was due to the accrual of interest under the Convertible Notes, the NantOmics Note and the NantCapital Note.

Comparison of the years ended December 31, 2014 and 2015

Interest expense, net decreased $0.4 million, or 36.0%, from $1.0 million during the year ended December 31, 2014 to $0.6 million during the year ended December 31, 2015. This decrease was primarily attributable to the repayment of related party promissory notes on June 30, 2015.

Other Income (Expense), net

	Year Ended December 31,			Period-To-Period Change			
	2016	2015	2014	2016 vs. 2015		2015 vs. 2014	
	Amount	Amount	Amount	Amount	Percentage	Amount	Percentage
Other income (expense), net	$ 1,922	$ 2,508	$ (477)	$ (586)	-23.4%	$ 2,985	-625.8%

Comparison of the years ended December 31, 2015 and 2016

Other income (expense), net, decreased by $0.6 million, from $2.5 million other income for the year ended December 31, 2015 to $1.9 million other expense for the year ended December 31, 2016. In the year ended December 31, 2015, other income of $2.5 million was primarily derived from the dividend income and fair value adjustment from marketable securities. These marketable securities were liquidated or transferred to fund acquisitions and business operations. Additionally, during the year ended December 31, 2015, we wrote off a short term note of $0.5 million with a vendor. There were no comparable write offs during the year ended December 31, 2016. The remaining balance was primarily due to expenses related to currency fluctuations.

During the year ended December 31, 2016 we recorded a reduction in fair value of derivatives liability of $1.2 million, related to the convertible notes interest make-whole issued in December 2016. Also in November 2016, as one of the claimants in a class action lawsuit against BP p.l.c., and its related entities ("BP") regarding the Deepwater Horizon Incident, we entered into a settlement agreement with B.P. Exploration & Production, Inc. whereby in exchange for a $1.0 million monetary settlement we released BP from claims relating to the Deepwater Horizon Incident. In January 2017, the final distribution sheet was received and executed from BP's counsel in Alabama including information related to the gross $1.0 million settlement amount mentioned above and total $0.2 million expenses incurred related to the settlement agreement, resulting in a net settlement receivable of $0.8 million booked as Other income on our Consolidated and Combined Statements of Operations.

Comparison of the years ended December 31, 2014 and 2015

Other income (expense), net increased $3.0 million, from expense of $0.5 million during the year ended December 31, 2014 to income of $2.5 million during the year ended December 31, 2015. This change was primarily attributable to the $2.3 million of dividend and interest income received from our marketable securities, $0.5 million from the write-off of short term notes payable and $0.2 million reimbursement from NantWorks for services provided by NantHealth associates in 2015.

Income (Loss) from Related Party Equity Method Investments

	Year Ended December 31,			Period-To-Period Change			
	2016	2015	2014	2016 vs. 2015		2015 vs. 2014	
	Amount	Amount	Amount	Amount	Percentage	Amount	Percentage
Income (loss) from related party equity method Investments	$(40,994)	$ (2,584)	$ 1,525	$(38,410)	1,486.5%	$ (4,109)	(269.4)%

Comparison of the years ended December 31, 2015 and 2016

For the year ended December 31, 2016, loss from equity method investments increased $38.4 million compared with the same period of the prior year, from 2.6 million during the year ended December 31, 2015 to $41.0 million during the year ended December 31, 2016. Our loss from equity investments in the year ended December 31, 2016 included a $29.8 million non-cash impairment charge as a result of our determination that the fair value of our investment in NantOmics had declined below our carrying value as of December 31, 2016, and that this decline in value was other than temporary. The decline in the fair value of our investment in NantOmics was primarily caused by a change in the risk profile of our financial projections for NantOmics resulting from the delay in our GPS revenue growth.

The increase in loss from equity method investments was due to the impairment mentioned above, our pro rata share of losses from our investment in NantOmics, and the amortization of the basis difference in the investment. We report our share of NantOmics' loss and the amortization of basis difference using a one quarter lag.

Comparison of the years ended December 31, 2014 and 2015

Income (loss) from equity method investments decreased $4.1 million, from income of $1.5 million during the year ended December 31, 2014 to a loss of $2.6 million during the year December 31, 2015. In 2014, we had income primarily attributable to an increase in our pro rata share of income from our investment in NantPharma LLC, or NantPharma, of $1.7 million. We sold our interest in NantPharma during May 2014. In 2015, we recorded pro rata share of losses from our investment in NantOmics.

Provision for (Benefits from) Income taxes

	Year Ended December 31,			Period-To-Period Change			
	2016	2015	2014	2016 vs. 2015		2015 vs. 2014	
	Amount	Amount	Amount	Amount	Percentage	Amount	Percentage
Provision for (benefit from) income taxes	$(22,811)	$ 405	$ 5	$(23,216)	(5,732.3)%	$ 400	8,000.0%

Comparison of the years ended December 31, 2015 and 2016

For the year ended December 31, 2016, the benefit from income taxes was $22.8 million, compared with a $0.4 million provision for income taxes during the year ended December 31, 2015.

In 2016, the Company recorded a benefit from income taxes in the amount of $8.7 million arising from a deferred tax asset valuation allowance release due to the LLC conversion to a C corporation and forming a federal tax consolidated group. The deferred tax liability previously recorded in purchase accounting of NaviNet became a source of income for the valuation allowance release.

We also recorded in 2016 an income tax benefit in the amount of $8.6 million, arising from the recording of a deferred tax expense in additional paid in capital due to the convertible notes conversion option recorded to equity. The remaining income tax benefit mainly results from amortization of purchase accounting intangibles.

Comparison of the years ended December 31, 2014 and 2015

For the year ended December 31, 2015, the provision for income taxes was $0.4 million, compared to $0.01 million income tax expense during the year ended December 31, 2014.

Liquidity and Capital Resources

Sources of Liquidity

As of December 31, 2016, we had cash and cash equivalents and marketable securities of $160.4 million, compared to $7.2 million as of December 31, 2015, of which $3.0 million and $0.6 million , respectively, related to foreign subsidiaries. We believe that our existing cash, cash equivalents, marketable securities, and our ability to borrow from affiliated entities, will be sufficient to fund our operations through at least the next 12 months. If these sources are insufficient to satisfy our liquidity requirements, we may seek to sell additional equity, through one or more follow-on public offerings or in separate financings, or sell additional debt securities or obtain a credit facility. Further, because of the risk and uncertainties associated with the commercialization of our existing products as well as products in development, we may need additional funds to meet our needs sooner than planned. To date, our primary sources of capital were private placements of preferred stock, debt financing agreements, including the NantCapital Note, our IPO and the Convertible Senior Notes due 2021 ("the Convertible Notes").

Convertible Notes

In December 2016, we entered into a purchase agreement (the “Purchase Agreement”) with J.P. Morgan Securities LLC and Jefferies LLC, as representatives of the several initial purchasers named therein (collectively, the “Initial Purchasers”), to issue and sell $90.0 million in aggregate principal amount of our 5.50% Convertible Senior Notes due 2021 (the “Convertible Notes”) in a private placement to qualified institutional buyers pursuant to Rule 144A under the Securities Act of 1933, as amended (the “Securities Act”) and to non-U.S. persons pursuant to Regulation S under the Securities Act. In December 2016, we entered into a purchase agreement (the “Cambridge Purchase Agreement”) with Cambridge Equities, L.P., an entity affiliated with Dr. Patrick Soon-Shiong, our Chairman and Chief Executive Officer (“Cambridge”), to issue and sell $10.0 million in aggregate principal amount of the Convertible Notes in a private placement pursuant to an exemption from the registration requirements of the Securities Act afforded by Section 4(a)(2) of the Securities Act. In December 2016, pursuant to the exercise of the overallotment by the Initial Purchasers, we issued an additional $7.0 million principal amount of the Convertible Notes. The total net proceeds from this offering were approximately $102.7 million, comprised of $9.9 million from Cambridge and $92.8 million from the Initial Purchasers, after deducting of Initial Purchasers’ discount and debt issuance costs of $4.3 million in connection with the Convertible Notes offering.

On December 21, 2016, we entered into an Indenture, relating to the issuance of the Convertible Notes (the "Indenture"), by and between us and U.S. Bank National Association, as trustee (the "Trustee"). The interest rates are fixed at 5.50% per year, payable semi-annually on June 15 and December 15 of each year, beginning on June 15, 2017. The Convertible Notes will mature on December 15, 2021, unless earlier repurchased by us or converted pursuant to their terms. The initial conversion rate of the Convertible Notes is 82.3893 shares of common stock per $1 thousand principal amount of Convertible Notes (which is equivalent to an initial conversion price of approximately $12.14 per share). Prior to the close of business on the business day immediately preceding September 15, 2021, the Convertible Notes will be convertible only under the following circumstances: (1) during any calendar quarter commencing after March 31, 2017 (and only during such calendar quarter), if, for at least 20 trading days (whether or not consecutive) during the 30 consecutive trading day period ending on the last trading day of the immediately preceding calendar quarter, the last reported sale price of our common stock on such trading day is greater than or equal to 120% of the conversion price on such trading day; (2) during the five business day period after any five consecutive trading day period in which, for each day of that period, the trading price per $1 thousand principal amount of the Convertible Notes for such trading day was less than 98% of the product of the last reported sale price of the Company's common stock and the conversion rate on such trading day; or (3) upon the occurrence of specified corporate transactions. Upon conversion, the Convertible Notes will be settled in cash, shares of the Company's common stock or any combination thereof at our option.

Upon the occurrence of a fundamental change (as defined in the Indenture), holders may require us to purchase all or a portion of the Convertible Notes in principal amounts of $1 thousand or an integral multiple thereof, for cash at a price equal to 100% of the principal amount of the Convertible Notes to be purchased plus any accrued and unpaid interest to, but excluding, the fundamental change purchase date. The conversion rate will be subject to adjustment upon the occurrence of certain specified events.

NantCapital Note

In January 2016, we issued the NantCapital Note to NantCapital, a personal investment vehicle for Dr. Patrick Soon-Shiong, our Chairman and CEO, and the NantOmics Note to NantOmics. As of March 31, 2016, the total advances made by NantCapital and NantOmics to us pursuant to each applicable note were approximately $112.7 million and $40.0 million, respectively. In May 2016, the NantCapital Note was amended and restated to provide that all outstanding principal and accrued and unpaid interest is due and payable on June 30, 2021, and not on demand. In May 2016, the NantCapital Note was amended and restated to provide that all outstanding principal and accrued and unpaid interest is due and payable on June 30, 2021, and not on demand. On December 15, 2016, in connection with the offering of the Convertible Notes, we entered into a Second Amended and Restated Promissory Note which amends and restates the Amended and Restated Promissory Note, dated May 9, 2016, between us and NantCapital, to, among other things, extend the maturity date of the Promissory Note and to subordinate the Promissory Note in right of payment to the Convertible Notes. We can request additional advances subject to NantCapital approval, and the NantCapital Note bears interest at a per annum rate of 5.0% compounded annually and computed on the basis of the actual number of days in the year. NantCapital has the option, but not the obligation, to require us to repay any such amount in cash, Series A-2 units of NantOmics (based on a per unit price of $1.484) held by us, shares of our common stock based on a per share price of $18.6126 (if such equity exists at the time of repayment), or any combination of the foregoing at the sole discretion of NantCapital.

If we raise additional funds by issuing equity securities or securities convertible into equity, our stockholders could experience dilution. Additional debt financing, if available, may involve covenants restricting our operations or our ability to incur additional debt. Any additional debt financing or additional equity that we raise may contain terms that are not favorable to us or our stockholders and require significant debt service payments, which diverts resources from other activities. Additional financing may not be available at all, or in amounts or on terms acceptable to us. If we are unable to obtain additional financing, we may be required to delay the development, commercialization and marketing of our products and scale back our business and operations.

Cash Flows

The following table sets forth our primary sources and uses of cash for the periods indicated:

	Year Ended December 31,		
	2016	2015	2014
Cash provided by (used in):			
Operating activities	$ (70,634)	$ (74,000)	$ (42,135)
Investing activities	(88,765)	(95,262)	(230,077)
Financing activities	313,594	171,688	258,845
Effect of exchange rate changes on cash and cash equivalents	169	(136)	49
Net increase (decrease) in cash and cash equivalents	$ 154,364	$ 2,290	$ (13,318)

To date, our operations have been primarily financed through the proceeds from related party promissory notes and through equity issuances, including net cash proceeds from our IPO and net cash proceeds from our Convertible Notes private placement. In June 2016, we sold 6,900,000 shares of common stock at a price of $14.00 per share, which includes 400,000 shares sold to the underwriter upon exercise of their overallotment option to purchase additional shares of our Company. We raised net proceeds of $83.6 million from our IPO, after underwriting fees, discounts and commissions of $4.9 million and other offering costs of $8.1 million. In December 2016 we issued Convertible Notes to related party and others for net proceeds of $102.7 million, $9.9 million from Cambridge and $92.8 million from others, respectively, after deducting underwriting discounts and commissions and offering costs of $4.3 million.

Operating Activities

Our cash flows from operating activities have been driven by rate of revenue, billings, and collections, the timing and extent of spending to support product development efforts, and enhancements to existing services, and the timing of general and administrative expenses as we grow our administrative infrastructure, and the continuing market acceptance of our solution. In addition, our net loss in the year ended December 31, 2016 has been significantly greater than our use of cash for operating activities due to the inclusion of substantial non-cash charges.

Cash used in operating activities of $70.6 million in the year ended December 31, 2016 was a result of our continued significant investments in research and development, sales and marketing, and increased expenses incurred as we became a public company, including costs associated with public company reporting and corporate governance requirements, and other expenses incurred to grow our business. In the year ended December 31, 2016, $102.6 million, or 56% of our net loss of $184.1 million consisted of non-cash items, including a $54.0 million in stock-based compensation, $30.9 million of depreciation and amortization, a $41.0 million equity in net loss of a related party investment, a $0.5 million provision for accounts receivable bad debts, a $0.5 million inventory provision, and other non-cash expenses of $0.1 million. The non-cash expenses were partially offset by non-cash income related to a deferred income tax benefit of $23.4 million.

Cash used in operating activities in the year ended December 31, 2016 included a $6.0 million increase in deferred implementation costs due to an increase in business activity associated with the growth of our business, $5.6 million in payments to vendors, and a $0.3 million increase in related party receivables, net. The cash used in operating activities was offset by a $8.1 million decrease in accounts receivable, net attributable to the receipt of payments from our clients, a decrease in prepaid expenses and other current assets of $3.5 million, a $3.9 million increase in deferred revenue due to increased billings during the year ended December 31, 2016, a $3.8 million increase in accrued expenses, and an increase in $4.2 million in related party payables, net.

Cash used in operating activities of $74.0 million during the year ended December 31, 2015 was a result of spending on selling, administrative structure, and research and development efforts. In the year ended December 31, 2015, $20.4 million, or 28%, of our net loss of $72.0 million consisted of non-cash items, including $15.8 million of depreciation and amortization, $1.4 million in stock-based compensation, and $0.3 million of changes in fair value of marketable securities. Cash used in operating activities during the year ended December 31, 2015 included a $21.2 million decrease in deferred revenue, a $4.7 million decrease in related party payables, net, a $4.2 million increase in prepaid expenses and other assets, and a $4.2 million increase in deferred implementation costs, which were partially offset by an increase of $7.2 million in accounts payable and accrued expenses, a $3.6 million decrease in accounts receivable, net and, a decrease of $1.0 million in inventory, and a decrease of $0.2 million in related party receivables, net.

For the year ended December 31, 2014, our net cash used in operating activities of $42.1 million consisted of a net loss of $84.6 million, primarily attributable to an increase in spending on selling, general and administrative expense and research and development efforts, and $1.0 million of cash used to fund changes in working capital, partially offset by $43.5 million in adjustments for non-cash items. Changes in working capital consisted primarily of an increase in related party payables of $7.6 million, and an increase in accounts payable of $1.6 million offset by a decrease in accrued expenses of $4.6 million, a decrease in other liabilities of $2.9 million, a decrease in deferred revenue of $0.9 million, an decrease in inventory of $2.3 million and an increase in accounts receivable of $0.5 million. Adjustments for non-cash items primarily consisted of $24.2 million of intangible assets impairment as we realized a non-cash charge for the impairment of certain of our acquired intangible assets, $16.2 million of depreciation and amortization, $3.7 million of unrealized changes in fair value of our marketable securities, and $0.3 million of stock-based compensation expense.

Investing Activities

Our primary investing activities have consisted of acquisitions to expand our features and functionality of NantHealth solutions and capital expenditures to develop our software as well as to purchase computer equipment and furniture and fixtures in support of expanding our infrastructure.

We used $88.8 million of cash in investing activities in the year ended December 31, 2016, primarily comprised of $78.7 million related to our acquisition of NaviNet, $15.8 million of purchases of equipment and investments in our capitalized software, partially offset by consideration received related to acquisitions of $4.4 million, proceeds from sale of marketable securities of $1.3 million and proceeds from sale of equipment of $0.1 million.

We used $95.3 million of cash in investing activities in the year ended December 31, 2015, primarily comprised of investments in NantOmics of $150.8 million, acquisition of HCS of $48.1 million, investments in our capitalized software and purchase of computer equipment and furniture and fixtures of approximately $8.2 million, purchase of intangible asset of $5.0 million, and $1.8 million purchase of IOBS, partially offset by the proceeds of the sale of the marketable securities for $136.3 million.

For the year ended December 31, 2014, net cash used in investing activities was $230.1 million, which primarily consisted of investments in marketable securities of $251.7 million as we invested our cash raised in mutual funds, purchase of intangible asset of $4.0 million, investment in unconsolidated related parties of $3.3 million, $7.6 million in capital expenditures and $2.3 million in cash spent on acquisitions of businesses. These were offset in part by $26.1 million in proceeds from sales of our marketable securities as we liquidated our investments as needed to provide for working capital and $12.8 million from the sale of businesses and equity method investments.

Financing Activities

Cash provided by financing activities in the year ended December 31, 2016 of $313.6 million was primarily due to $152.7 million in proceeds from the issuance of related party promissory notes, $83.6 million of proceeds from our initial public offering, net of underwriting discounts and commissions and offering expenses, as well as $9.9 million and $92.8 million, respectively of proceeds from the sale of convertible notes to a related party and others, net of underwriting discounts and commissions and offering expenses. In addition, cash provided by financing activities was also due to $3.8 million in deemed capital contribution from our Chairman and CEO. These proceeds were partially offset by $23.3 million of reductions in notes payable related to the NaviNet acquisition, and $5.8 million payment to tax authorities on the employee's behalf to satisfy withholding requirements on income earned from vested shares.

Cash provided by financing activities of $171.7 million in the year ended December 31, 2015 was primarily due to $200.0 million in proceeds from an issuance of equity interests to Allscripts in addition to deemed capital contribution from our Chairman and CEO of $6.2 million. These proceeds were partially offset by $34.5 million payments of related party promissory notes.

For the year ended December 31, 2014, net cash provided by financing activities of $258.8 million consisted of $260.5 million in proceeds from the issuance of membership interests and $5.9 million in proceeds from related party promissory note offset in part by a $2.0 million in payments of notes payable.

Contractual Obligations, Commitments and Contingencies

Our principal commitments consist of obligations under our outstanding debt obligations, non-cancellable leases for our office space and certain equipment and vendor contracts to provide research services, and purchase obligations under license agreements and reseller agreements. The following table summarizes these contractual obligations as of December 31, 2016 in thousands:

	Payments Due by Period				
Contractual Obligations	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Purchasing obligations	$ 385,720	$ 2,985	$ 5,735	$ 27,000	$ 350,000
Long term debt obligations:					
Related party promissory note	154,685	—	—	—	154,685
Related party convertible notes	10,000	—	—	10,000	—
Other convertible notes	97,000	—	—	97,000	—
Operating leases and capital leases obligations (1)	10,392	6,026	3,508	858	—
Total Obligations	$ 657,797	$ 9,011	$ 9,243	$ 134,858	$ 504,685

(1) Including capital lease obligation in an amount of $89 thousand for payment prior to one year subsequent to December 31, 2016.

In September 2016, we entered into a Second Amended and Restated Reseller Agreement, ("Reseller Agreement"), for genomic and proteomic sequencing services and related bioinformatics and analysis services with NantOmics, with an effective date of June 19, 2015. The Reseller Agreement has a contract period from June 2015 through December 31, 2020, subject to three potential three-year renewal options if we meet certain GPS Cancer thresholds. We agreed to pay NantOmics non-cancellable annual minimum fees of $2.0 million for each of the calendar years from 2016 through 2020, and subject to us exercising at least one of our renewal options, we are required to pay annual minimum fees to NantOmics of $25.0 million for each of the calendar years from 2021 through 2023 and $50.0 million per year for each of the calendar years from 2024 through 2029. We have the ability to terminate this agreement without cause. The Reseller Agreement permits us to use vendors other than NantOmics to provide any or all of the services that are currently being provided by NantOmics and clarifies that we are responsible for order fulfillment and branding.

On September 29, 2015, we entered into an exclusive license agreement with NorthShore University Health System, or NorthShore, to further develop their Health Heritage software platform, or Health Heritage, and to license the software to customers. As part of the agreement, we will pay NorthShore a one-time license fee of $5.0 million and minimum annual royalties of $750,000 for the first four years of the agreement. We will have no obligation to pay any additional royalties after seven years or once aggregate royalties reach $5.0 million.

Securities Litigation

In March 2017, a number of putative class action securities complaints were filed in U.S. District Court for the Central District of California, naming as defendants the Company and certain of our executive officers and directors. The pending complaints are captioned Deora v. NantHealth, Inc., 2:17-cv-01825, Di Rienzo v. NantHealth, Inc., 2:17-cv-01912, and Shafik v. NantHealth, Inc., 2:17-cv-01940. Some of the complaints also name as defendants investment banks who were underwriters in our initial public offering. The complaints generally allege that defendants violated the federal securities laws by making material misstatements and omissions concerning NantHealth's business, operations, and results. In particular, the complaints refer to an article in alleging that defendants misrepresented NantHealth's business with the University of Utah and donations to the university by non-profit entities associated with our founder Dr. Soon-Shiong. The complaints seek unspecified damages and other relief on behalf of putative classes of persons who purchased or acquired NantHealth securities in the IPO or on the open market from the time of the initial public offering through early March 2017. We believe that the claims lack merit and intend to vigorously defend the litigation. The monetary and other impact of this action may remain unknown for substantial periods of time. The cost to defend, settle or otherwise resolve this matter may be significant and divert management's attention. We cannot assure you that we will prevail in this lawsuit. If we are ultimately unsuccessful in this matter, we could be required to pay substantial amounts which might materially adversely affect our business, operating results and financial condition.

New Accounting Pronouncements

See Note 2, "Summary of Significant Accounting Policies" of accompanying Notes to Consolidated and Combined Financial Statements for a discussion of new accounting standards.

Off-Balance Sheet Arrangements

During the periods presented, we did not have any off-balance sheet arrangements.

Related Party Transactions

See Note 21 of accompanying notes to Consolidated and Combined Financial Statements for a discussion of related party transactions.

Critical Accounting Policies and Significant Judgments and Estimates

This Management's Discussion and Analysis of our Financial Condition and Results of Operations is based on our Consolidated and Combined Financial Statements, which we have prepared in accordance with accounting principles generally accepted in the United States. The preparation of our financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of our financial statements, as well as the reported revenues and expenses during the reported periods. We evaluate these estimates and judgments on an ongoing basis. We base our estimates on historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

Stock-Based Compensation

We account for stock based compensation arrangements granted to employees in accordance with ASC 718 "*Compensation: Stock Compensation",* by measuring the grant date fair value of the award and recognizing the resulting expense over the period during which the employee is required to perform service in exchange for the award.

We account for stock based compensation arrangements issued to non-employees using the fair value approach prescribed by ASC 505-50 "*Equity-Based Payments to Non-Employees*". The value of non-employee stock based compensation is re-measured at the end of each reporting period until the award vests and is recognized as stock based compensation expense over the period during which the non-employee provides the services.

Stock based compensation expense for both employee and non-employee awards is recognized on a straight-line basis over the appropriate service period for awards that are only subject to service conditions and is recognized using the accelerated attribution method for awards that are subject to performance conditions. Stock based compensation expense is only recognized for awards subject to performance conditions if it is probable that the performance condition will be achieved.

We early adopted FASB ASU 2016-09, "*Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting*" ("ASU 2016-09") related to stock based compensation, beginning July 1, 2016, simplifying the accounting for employee share-based payment transactions, including the accounting for income taxes, forfeitures, and statutory withholding requirements, as well as the related classification in the statement of cash flows. Per ASU 2016-09, an entity can make an entity-wide accounting policy election to either estimate the number of awards that are expected to vest (current GAAP) or account for forfeitures when they occur. We have elected to account for forfeitures when they occur. Cash paid by us when directly withholding shares for tax withholding purposes should be classified as a financing activity in the Statement of Cash Flows.

Software Developed for Internal Use

We account for the costs of computer software obtained or developed for internal use in accordance with FASB ASC 350, "*Intangibles — Goodwill and Other* " ("ASC 350"). Computer software development costs are expensed as incurred, except for internal use software that qualify for capitalization as described below, and include employee related expenses, including salaries, benefits and stock-based compensation expenses; costs of computer hardware and software; and costs incurred in developing features and functionality. These capitalized costs are included in property and equipment on the Consolidated and Combined Balance Sheets. We expense costs incurred in the preliminary project and post implementation stages of software development and capitalizes costs incurred in the application development stage and costs associated with significant enhancements to existing internal use software applications. Software costs are amortized using the straight-line method over an estimated useful life of three years commencing when the software project is ready for its intended use.

Revenue Recognition

Revenue is recognized when persuasive evidence of an arrangement exists, services or products have been provided to the client, fees are fixed or determinable, and collectability is reasonably assured. While most of the our arrangements include short-term payment terms, we on occasion provide payment terms to clients in excess of one year from the date of contract signing. We do not recognize revenue for arrangements containing these extended payment terms until such payments become due. Certain of our customer arrangements allow for termination for convenience with advanced notice. Such termination rights do not allow for refunds other than prepaid PCS or other services. These provisions do not affect the recognition of revenue. We also have certain arrangements which allow for termination and refunds of fees in the event that software acceptance by the customer has not occurred. In these instances, we will defer all revenue until software acceptance has occurred.

The sequencing and molecular analysis revenue is primarily generated from payments received from commercial third-party payors, hospitals and other provider networks and patients. We report revenue from arrangements with these customers on a gross basis in accordance with FASB ASC No. 605-45, *Principal Agent Considerations*. We recognize revenue from these arrangements when all revenue recognition criteria have been met or on a cash basis when it cannot conclude that the fees are fixed or determinable and collectability is reasonably assured. We use judgment in our assessment of whether the fees are fixed or determinable and whether collectability is reasonably assured in determining when to recognize revenue in the future as it continues to gain payment experience with our customers. Accordingly, we expect to recognize revenue on a cash basis when we cannot conclude that the fees from a particular customer are fixed or determinable and collectability is reasonably assured until it has a sufficient history to reliably estimate payment patterns from such customer.

We engage in various multiple-element arrangements, which may generate revenue across any of the sources noted above. For multiple-element software arrangements that involve the sale of our proprietary software, PCS, and other software-related services, VSOE of fair value is required to allocate and recognize revenue for each element. VSOE of fair value is determined based on the price charged in which each deliverable is sold separately. We have established VSOE for PCS on certain of our software solutions using the Stated Renewal Method. In this instance, we have determined that our stated renewals are substantive and appropriate for use in the Stated Renewal Method. We have not yet established VSOE of fair value for any element other than PCS for our arrangements. In situations where VSOE of fair value exists for PCS but not a delivered element (typically the software license and services elements), the residual method is used to allocate revenue to the undelivered element equal to its VSOE value with the remainder allocated to the delivered elements. In situations in which VSOE of fair value does not exist for all of the undelivered software-related elements, revenue is deferred until only one undelivered element remains (typically the PCS element) and then recognized following the pattern of delivery of the final undelivered element. Our multiple element arrangements typically provide for renewal of PCS terms upon expiration of the original term. The amounts of these PCS renewals are recognized as revenue ratably over the specified PCS renewal period.

For non-software arrangements that include multiple elements, primarily consisting of our SaaS agreements, revenue recognition involves the identification of separate units of accounting after consideration of combining and/or segmenting contracts and allocation of the arrangement consideration to the units of accounting on the basis of their relative selling price. The selling price used for each deliverable is based on VSOE of fair value, if available, third party evidence, or TPE, of fair value if VSOE is not available, or our best estimate of selling price if neither VSOE nor TPE is available. In determining the units of accounting for these arrangements, we evaluate whether each deliverable has standalone value as defined in the Financial Accounting Standards Board's guidance. Our SaaS arrangements are treated as a single unit of accounting as the professional services do not have standalone value. As a result, we recognize initial system implementation and deployment fees ratably over a period of time from when the system implementation or deployment services are completed and accepted by the customer over the longer of the life of the agreement or the estimated customer life. SaaS revenue consists of revenue earned from clients (typically on a monthly basis) for use of our subscription or license-based solutions and services. We recognize revenue from such contracts ratably over the contract period.

If an arrangement to deliver software requires significant production, modification or customization of the licensed software, we account for the arrangement as a construction-type contract. Currently we recognize revenue for these arrangements using the completed-contract method as it does not currently have sufficient information to reliably estimate the percentage of completion for these projects. We consider these arrangements to be substantially complete upon the clients' acceptance of the software and related professional services and consistently apply this policy to all contract accounting arrangements.

Transaction processing fees are recognized on a monthly basis based on the number of transactions processed and the fee per transaction.

Revenue derived from reseller arrangements is recognized when the resellers, in turn, sell the software solution to their clients and installation of the software solution has occurred, provided all other revenue recognition criteria are met. This is commonly referred to as the sell-through method and we defer recognition until there is a sell-through by the reseller to an actual end user clients and acceptance by the end user has occurred.

Profits Interest Plan

On December 3, 2013, we adopted the Profits Interests Plan and reserved an aggregate of 63.8 million Series C units for issuance to our associates, consultants and contractors in consideration for bona fide services provided.

The Series C units were considered profits interests of us and did not entitle their holders (the "Series C members") to receive distributions if we were liquidated immediately after the grant. Instead, the Series C members were entitled to receive an allocation of a portion of our profits and losses arising after the date of the grant and, subject to vesting conditions, distributions made out of a portion of the our profits arising after the grant date of the Series C units. Grants of the Series C units were either fully vested, partially vested, or entirely unvested at the time of the grant as determined by the our Board of Directors.

Series C members were not entitled to receive any distributions until our aggregate distributions exceeded a hurdle amount applicable to those Series C units. The hurdle amount for each grant was determined by the Board of Directors at the date of issuance of such units. After all other members received their applicable hurdle amount, the Series C members were entitled to receive their percentage interest of such excess distributions.

Prior to the LLC Conversion on June 1, 2016, we had 3.5 million Series C units outstanding. Upon the LLC Conversion on June 1, 2016, we issued 28,973 shares of common stock to holders of vested Series C units and 10,462 shares of restricted stock to holders of unvested Series C units. The shares of restricted stock issued to holders of unvested profits interest are subject to forfeiture until becoming fully vested in accordance with the terms of the original Series C unit grant agreements.

Stock compensation expense for the Series C units/restricted stock issued to the nonemployees is calculated based on the fair value of the aware on each balance sheet date and the attribution of that cost is being recognized ratably over the vesting period.

Phantom Unit Plan

On March 31, 2015, we approved the Phantom Unit Plan. The maximum number of phantom units that may be issued under the Phantom Unit Plan is equal to 11.6 million minus the number of issued and outstanding Series C units. As of December 31, 2016, we had 4.3 million phantom units outstanding under the Phantom Unit Plan. Each grant of phantom units made to a participant under the Phantom Unit Plan vests over a defined service period, subject to completion of a liquidity event, and is subject to forfeiture upon termination of the participant’s continuous service to us for any reason. Our IPO satisfied the liquidity event condition, and the phantom units now entitle their holders to cash or non-cash payments in an amount equal to the number of vested units held by that participant multiplied by the fair market value of our common stock, as determined by our board of directors.

We intend to settle all vested phantom unit payments held by United States-based participants in shares of our common stock and classified these awards as equity awards in our Consolidated and Combined Balance Sheet. Awards held by participants who are based outside of the United States will be settled in cash and are classified within accrued expenses on our Consolidated and Combined Balance Sheet as of December 31, 2016. In order to satisfy payroll withholding tax obligations triggered by the issuance of shares of common stock to holders of vested phantom units, we issue recipients a net lower number of shares of common stock to satisfy tax withholding obligations, and remitted a cash payment for the related withholding taxes. During the year ended December 31, 2016, we issued 1.1 million shares of common stock, after withholding 0.5 million shares to satisfy tax withholding obligations. We made a cash payment of $5.8 million to cover employee withholding taxes and employer payroll taxes upon the settlement of these vested phantom units. We also paid $0.2 million to cash-settle 17 thousand vested phantom units held by participants of the Phantom Unit Plan based outside of the United States.

Utilization of Net Operating Loss Carryforwards

We had federal, state and foreign income tax NOL carryforwards of approximately $238.9 million, $169.8 million and $2.6 million, respectively, available to offset taxable income in tax year 2017 and thereafter. The federal NOL's will start to expire in year 2023.

Under Sections 382 and 383 of the Code, if a corporation undergoes an “ownership change” (generally defined as a greater than 50% change (by value) in its equity ownership over a three-year period), the corporation’s ability to use its pre-change net operating loss carry forwards and other pre-change tax attributes to offset its post-change income may be limited. We believe that we have recently undergone one or more ownership changes. The above NOL amounts do not include the NOLs expected to expire before they can be utilized under Section 382.

The occurrence of such ownership changes could limit our ability to utilize our NOLs and possibly other tax attributes. Limitations imposed on our ability to use NOLs and other tax attributes to offset future taxable income could cause us to pay U.S. federal income taxes earlier than we otherwise would if such limitations were not in effect. Any further ownership change also could cause such NOLs and other tax attributes to expire unused, thereby reducing or eliminating the benefit of such NOLs and other tax attributes to us and adversely affecting our future cash flows.

In addition, we may determine that varying state laws with respect to NOL utilization may result in lower limits, or an inability to utilize NOLs in some states altogether, which could result in us incurring additional state income taxes. In the event that state law results in lower limits, or an inability to utilize loss carryforwards, or we become subject to federal alternative minimum tax, this could adversely affect our future cash flows.

Business Combinations

We account for business combinations using the acquisition method of accounting. Under the acquisition method, assets acquired and liabilities assumed are recorded at their respective fair values as of the acquisition date. Any excess of the purchase price over the estimated fair values of the net assets acquired is recorded as goodwill. We routinely monitor the factors impacting the acquired assets and liabilities. Transaction related costs are expensed as incurred. The operating results of the acquired business are reflected in our consolidated and combined financial statements as of the acquisition date.

Goodwill and Intangible Assets

Goodwill acquired in a business combination and determined to have an indefinite useful life is not amortized but is tested for impairment annually as of October 1 or between annual tests when an impairment indicator exists. In the event there is a change in reporting units or segments, we will test for impairment at the reporting unit. A component of an operating segment is a reporting unit if the component constitutes a business for which discrete financial information is available and segment management regularly reviews the operating results of that component.

As part of the annual impairment test, we may conduct an assessment of qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. In a qualitative assessment, we would consider the macroeconomic conditions, including any deterioration of general conditions, industry and market conditions, including any deterioration in the environment where the reporting unit operates, increased competition, changes in the products/services and regulator and political developments; cost of doing business; overall financial performance, including any declining cash flows and performance in relation to planned revenues and earnings in past periods; other relevant reporting unit specific facts, such as changes in management or key personnel or pending litigation, and events affecting the reporting unit, including changes in the carrying value of net assets.

If an optional qualitative goodwill impairment assessment is not performed, we are required to determine the fair value of each reporting unit. If a reporting unit’s fair value is lower than its carrying value, we must determine the amount of implied goodwill that would be established if the reporting unit was hypothetically acquired on the impairment test date. If the carrying amount of a reporting unit’s goodwill exceeds the amount of implied goodwill, we would record an impairment loss equal to the excess.

The determination of fair value of a reporting unit is based on a combination of a market approach that considers benchmark company market multiples and an income approach that uses discounted cash flows for each reporting unit utilizing Level 3 inputs. Under the income approach, we determine the fair value based on the present value of the most recent income projections for each reporting unit and calculates a terminal value utilizing a terminal growth rate. The significant assumptions under this approach include, among others: income projections, which are dependent on sales to new and existing clients, new solution introductions, client behavior, competitor pricing, operating expenses, the discount rate and the terminal growth rate. The cash flows used to determine fair value are dependent on a number of significant management assumptions based on historical experience, expectations of future performance, and the expected economic environment. Estimates are subject to change given the inherent uncertainty in predicting future results. Additionally, the discount rate and the terminal growth rate are based on judgment of the rates that would be utilized by a hypothetical market participant.

Accounting guidance requires that definite-lived intangible assets be amortized over their respective estimated useful lives and reviewed for impairment whenever events or changes in circumstances indicate that their carrying amounts may not be recoverable. We estimate the useful lives of the intangible assets and ratably amortize the value over the estimated useful lives of those assets. If the estimates of the useful lives change, we will amortize the remaining book value over the remaining useful lives or, if an asset is deemed to be impaired, a write-down of the value of the asset to its fair value may be required at such time.

Investment in Related Party

Investment in and advances to a related party in which we have a substantial ownership interest of approximately 20% to 50%, or for which we exercise significant influence but not control over policy decisions, are accounted for by the equity method. An investment in a limited liability company that is similar to partnership is also accounted for under the equity method if more than minor influence over the operation of the investee exists (generally through more than 3-5% ownership). As part of that accounting, we recognize gains and losses that arise from the issuance of stock by a related party that results in changes in the proportionate share of the dollar amount of the related party's equity.

The investment in related party is assessed for possible impairment when events indicate that the fair value of the investment may be below the carrying value. When such a condition is deemed to be other than temporary, the carrying value of the investment is written down to its fair value, and the amount of the write-down is included in net loss. In making the determination as to whether a decline is other than temporary, the Company considers such factors as the duration and extent of the decline, the investee's financial performance, and our ability and intention to retain the investment for a period that will be sufficient to allow for any anticipated recovery in the investment's market value. The new cost basis of the investment is not changed for subsequent recoveries in fair value.

The fair value of its equity method investment would be determined using the income approach. The income approach utilizes a discounted cash flow model incorporating management's expectations for future revenue, operating expenses, and earnings before interest, taxes, depreciation and amortization, capital expenditures and an anticipated tax rate. The related cash flow forecasts are discounted using an estimated weighted-average cost of capital at the date of valuation.

Differences between the carrying value of an equity investment and its underlying equity in the net assets of the related party are assigned to the extent practicable to specific assets and liabilities based on our analysis of the various factors giving rise to the difference. When appropriate, our share of the related party's reported earnings is adjusted quarterly to reflect the difference between these allocated values and the related party's historical book values.

Change in fair value of derivative liability

We have classified the interest make-whole provision of our convertible notes due 2021 issued in December 2016 as a derivative liability that is recorded at fair value. This derivative liability is subject to re-measurement at each balance sheet date and we recognize any change in fair value in our Consolidated and Combined Statements of Operations and Comprehensive Loss as a change in fair value of the derivative liability. The change in the fair value of this derivative liability of $1.2 million for the year ended December 31, 2016 is due primarily to the change in the value of our common stock from the date of issuance of our convertible notes to December 31, 2016.

Income taxes

FASB ASC Topic 740 Income Taxes (“ Topic 740 ”) provides the accounting treatment for uncertainty in income taxes recognized in an enterprise’s financial statements. Topic 740 prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. Topic 740 also provides guidance on derecognizing, classification, interest and penalties, accounting in interim periods, disclosure and transition.

Significant management judgment is required in determining our provision for income taxes, our deferred tax assets and liabilities, tax contingencies, unrecognized tax benefits, and any required valuation allowance, including taking into consideration the probability of the tax contingencies being incurred. Management assesses this probability based upon information provided to us by our tax advisers, our legal advisers and similar tax cases. If at a later time our assessment of the probability of these tax contingencies changes, our accrual for such tax uncertainties may increase or decrease.

JOBS Act

On April 5, 2012, the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, was enacted. Section 107 of the JOBS Act provides that an “emerging growth company” can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act for complying with new or revised accounting standards. In other words, an “emerging growth company” can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have irrevocably elected not to avail ourselves of this extended transition period and, as a result, we adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies. Subject to certain conditions set forth in the JOBS Act, as an “emerging growth company,” we intend to rely on certain exemptions and reduced reporting requirements provided by the JOBS Act, including those relating to (i) providing an auditor’s attestation report on our system of internal control over financial reporting pursuant to Section 404(b) of the Sarbanes-Oxley Act and (ii) complying with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor’s report providing additional information about the audit and the financial statements, known as the auditor discussion and analysis. We will remain an “emerging growth company” until the earliest of (i) the last day of our first fiscal year in which we have total annual gross revenues of $1 billion or more, (ii) the date on which we are deemed to be a “large accelerated filer” under the rules of the SEC with at least $700 million of outstanding equity securities held by non-affiliates, (iii) the date on which we have issued more than $1 billion in non-convertible debt during the previous three years, or (iv) the last day of our fiscal year following the fifth anniversary of the date of the completion of our initial public offering.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Interest Rate Risk

As of December 31, 2016, we had $160.4 million in cash and cash equivalents and marketable securities which were held for working capital purposes. Our cash and cash equivalents and marketable securities are comprised primarily of mutual funds listed on active exchanges, U.S. treasury securities, money market funds, and cash held in FDIC - insured institutions. Our investments are made for capital preservation purposes. We do not enter into investments for trading or speculative purposes. All our investments are denominated in U.S. dollars. If overall interest rates had decreased by 10% during the periods presented, our interest income would not have been materially affected.

Credit Risk

Our cash equivalents and our portfolio of marketable securities are subject to market risk due to changes in interest rates. Fixed rate securities may have their market value adversely affected due to a rise in interest rates, while floating rate securities may produce less income than expected if interest rates fall. Due in part to these factors, our future investment income may fall short of expectations due to changes in interest rates or we may suffer losses in principal if we are forced to sell securities that decline in market value due to changes in interest rates.

Foreign Currency Risk

We maintain offices in the United Kingdom and India, and have selected clients in Canada, the United Kingdom, Western Europe, the Middle East and Southeast Asia. However, due to the low volume of activity outside the United States, the foreign currency risk is minimal. To date, we have not entered into any foreign currency hedging contracts although we may do so in the future. As our international operations grow, we will continue to reassess our approach to manage our risk relating to fluctuations in currency rates. If foreign currency exchange rates had changed by 10% during the periods presented, it would not have had a material impact on our financial position or results of operations.

Item 8. Consolidated and Combined Financial Statements and Supplementary Data

NantHealth, Inc.
Consolidated and Combined Financial Statements
Years Ended December 31, 2016, 2015 and 2014
(Dollars in thousands, except per share amounts)

NantOmics, LLC
Consolidated and Combined Financial Statements
Years Ended December 31, 2016, 2015 and 2014
(In thousands, except per unit amounts)

Report of Independent Registered Public Accounting Firm

The Board of Directors and Members of
NantHealth, Inc. and Subsidiaries

We have audited the accompanying consolidated and combined balance sheets of NantHealth, Inc. and Subsidiaries as of December 31, 2016 and 2015, and the related consolidated and combined statements of operations, comprehensive loss, stockholders' / members' equity and cash flows for each of the three years in the period ended December 31, 2016. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. We were not engaged to perform an audit of the Company's internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated and combined financial position of NantHealth, Inc. and Subsidiaries at December 31, 2016 and 2015, and the consolidated and combined results of their operations and their cash flows for each of the three years in the period ended December 31, 2016, in conformity with U.S. generally accepted accounting principles.

/s/ Ernst & Young LLP

Los Angeles, California
March 31, 2017

NantHealth, Inc.
Consolidated and Combined Balance Sheets
(Dollars in thousands, except per share amounts)

	December 31,	
	2016	2015
Assets		
Current assets		
Cash and cash equivalents	$ 160,353	$ 5,989
Marketable securities	—	1,243
Accounts receivable, net	13,728	11,472
Inventories	2,217	2,146
Deferred implementation costs	3,336	2,224
Related party receivables, net	899	1,245
Prepaid expenses and other current assets	5,046	8,707
Total current assets	185,579	33,026
Property, plant, and equipment, net	29,139	13,899
Deferred implementation costs, net of current	7,910	1,930
Goodwill	131,068	56,718
Intangible assets, net	119,126	54,971
Investment in related party	207,197	248,191
Related party receivable, net of current	1,971	1,300
Other assets	2,317	1,918
Total assets	$ 684,307	$ 411,953
Liabilities and Stockholders' / Members' Equity		
Current liabilities		
Accounts payable	$ 6,720	$ 6,447
Accrued and other current liabilities	25,231	15,967
Deferred revenue	17,216	10,656
Related party payables, net	8,082	10,166
Total current liabilities	57,249	43,236
Deferred revenue, net of current	17,238	17,312
Related party liabilities	5,612	—
Related party promissory note	112,666	—
Related party convertible note, net	7,564	—
Convertible notes, net	70,810	—
Deferred income taxes, net	754	—
Other liabilities	820	358
Total liabilities	272,713	60,906
Commitments and contingencies (Note 14)		
Redeemable Series F units: 53,580,996 units issued and outstanding at December 31, 2015	—	166,042
Stockholders' / members' equity		
Members' equity, 541,228,171 units issued and outstanding at December 31, 2015	—	476,263
Common stock, $0.0001 par value per share, 750,000,000 shares authorized; 121,250,437 shares issued and outstanding at December 31, 2016 (Including 6,976 restricted stock)	12	—
Preferred stock, $0.0001 par value per share, 20,000,000 shares authorized; no shares issued and outstanding at December 31, 2016	—	—
Additional paid-in capital	886,334	—
Accumulated deficit	(475,273)	(291,171)
Accumulated other comprehensive income (loss)	521	(87)
Total stockholders' / members' equity	411,594	185,005
Total liabilities and stockholders' / members' equity	$ 684,307	$ 411,953

The accompanying notes are an integral part of these Consolidated and Combined Financial Statements.

NantHealth, Inc.
Consolidated and Combined Statements of Operations
(Dollars in thousands, except per share amounts)

	Year Ended December 31,		
	2016	**2015**	**2014**
Revenue:			
Software and hardware	$ 8,242	$ 14,616	$ 8,372
Software–as-a-service	58,359	20,734	9,778
Total software-related revenue	66,601	35,350	18,150
Maintenance	14,238	10,452	5,345
Sequencing and molecular analysis	604	75	—
Other services	18,937	12,427	10,426
Total net revenue	100,380	58,304	33,921
Cost of Revenue:			
Software and hardware	1,834	90	1,025
Software-as-a-service	24,713	7,019	8,026
Total software-related cost of revenue	26,547	7,109	9,051
Maintenance	2,750	1,874	438
Sequencing and molecular analysis	1,987	39	—
Other services	25,462	15,202	7,047
Amortization of developed technologies	15,588	10,585	7,694
Total cost of revenue	72,334	34,809	24,230
Gross profit	28,046	23,495	9,691
Operating Expenses:			
Selling, general and administrative	120,653	69,021	46,209
Research and development	61,637	23,835	16,979
Amortization of software license and acquisition-related assets	7,257	1,542	7,033
Impairment of intangible asset	—	—	24,150
Total operating expenses	189,547	94,398	94,371
Loss from operations	(161,501)	(70,903)	(84,680)
Interest expense, net	(6,340)	(627)	(980)
Other income (expense), net	1,922	2,508	(477)
(Loss) income from related party equity method investments	(40,994)	(2,584)	1,525
Loss before income taxes	(206,913)	(71,606)	(84,612)
Provision for (benefit from) income taxes	(22,811)	405	5
Net loss	(184,102)	(72,011)	(84,617)
Less: Net loss attributed to non-controlling interests	—	—	(192)
Net loss attributed to NantHealth	$ (184,102)	$ (72,011)	$ (84,425)
Net income (loss) per share (1):			
Basic and diluted - common stock	$ (1.69) (2)	$ (0.99) (2)	$ (1.13)
Basic and diluted - redeemable common stock	$ 0.99	$ 1.50	N/A
Weighted average shares outstanding (1):			
Basic and diluted - common stock	111,600,650	88,970,842	74,505,127
Basic and diluted - redeemable common stock	5,005,855	10,714,285	N/A

The accompanying notes are an integral part of these Consolidated and Combined Financial Statements.

(1) The net income (loss) per share and weighted-average shares outstanding have been computed to give effect to the LLC Conversion (See Note 16) that occurred on June 1, 2016, prior to the Company's initial public offering ("IPO"). In conjunction with the LLC Conversion, (a) all of the Company's outstanding units automatically converted into shares of common stock, based on the relative rights of the Company's pre-IPO equityholders as set forth in the Company's limited liability company agreement and (b) the Company adopted and filed a certificate of incorporation with the Secretary of State of the state of Delaware and adopted bylaws. The Company adopted and filed an amendment to its certificate of incorporation with the Secretary of State of the state of Delaware to effect a 1-for-5.5 reverse stock split of its common stock on June 1, 2016. See Note 20 for the calculation of net income (loss) per share for common stock and redeemable common stock for the years ended December 31, 2016, 2015 and 2014.

(2) The net income (loss) per share for the common stock for the years ended December 31, 2016 and 2015 reflects $4,958 and $16,042 in accretion value allocated to the redeemable common stock, respectively. The redeemable common stock contained a put right, which expired unexercised on June 20, 2016. As a result of and as of that date, the shares were no longer redeemable and were included in common stock.

The accompanying notes are an integral part of these Consolidated and Combined Financial Statements.

NantHealth, Inc.
Consolidated and Combined Statements of Comprehensive Loss
(Dollars in thousands)

	Year Ended December 31,		
	2016	**2015**	**2014**
Net loss	$ (184,102)	$ (72,011)	$ (84,617)
Other comprehensive income (loss), net of reclassification adjustments and income taxes:			
Foreign currency translation gains (losses)	608	(136)	49
Net changes related to available for sale securities:			
Remeasurement of investment in NDO to fair value	—	—	172
Reclassification of losses to net income	—	—	332
Total net changes related to available for sale securities	—	—	504
Total other comprehensive income (loss)	608	(136)	553
Comprehensive loss	(183,494)	(72,147)	(84,064)
Less: Comprehensive loss attributed to non-controlling interests	—	—	(192)
Comprehensive loss attributed to NantHealth	$ (183,494)	$ (72,147)	$ (83,872)

The accompanying notes are an integral part of these Consolidated and Combined Financial Statements.

NantHealth, Inc.
Consolidated and Combined Stockholders' / Members' Equity
(Dollars in thousands)

	Members' Equity		Common Stock		Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (loss)	Total NantHealth Equity	Non-controlling interests	Total Equity
	Units	Amount	Shares	Amount						
Balance at December 31, 2013	425,782,531	$ 155,914	—	$ —	$ —	$ (134,735)	$ (504)	$ 20,675	$ (18)	$ 20,657
Issuance of membership interests	43,052,311	110,525	—	—	—	—	—	110,525	—	110,525
Acquisition of NDO	6,905,566	16,619	—	—	—	—	332	16,951	—	16,951
Sale of former subsidiary	—	5,439	—	—	—	—	—	5,439	—	5,439
Sale of related party equity method investment	—	102	—	—	—	—	—	102	—	102
Transactions with non-controlling interests	2,764,908	(4,892)	—	—	—	—	—	(4,892)	75	(4,817)
Stock-based compensation expense (pre LLC conversion)	2,519,362	205	—	—	—	—	—	205	135	340
Other comprehensive income	—	—	—	—	—	—	221	221	—	221
Net loss	—	—	—	—	—	(84,425)	—	(84,425)	(192)	(84,617)
Balance at December 31, 2014	481,024,678	283,912	—	—	—	(219,160)	49	64,801	—	64,801
Issuance of membership interests	59,367,813	200,774	—	—	—	—	—	200,774	—	200,774
Stock-based compensation expense (pre LLC conversion)	835,680	1,429	—	—	—	—	—	1,429	—	1,429
Deemed capital contributions from chairman and CEO (pre LLC conversion	—	6,190	—	—	—	—	—	6,190	—	6,190
Series F put right accretion (pre LLC conversion)	—	(16,042)	—	—	—	—	—	(16,042)	—	(16,042)
Other comprehensive income	—	—	—	—	—	—	(136)	(136)	—	(136)
Net loss	—	—	—	—	—	(72,011)	—	(72,011)	—	(72,011)
Balance at December 31, 2015	541,228,171	476,263	—	—	—	(291,171)	(87)	185,005	—	185,005
Issuance of membership interests	15,513,726	52,500	—	—	—	—	—	52,500	—	52,500
Stock-based compensation expense (pre LLC conversion)	—	170	—	—	—	—	—	170	—	170
Deemed capital contributions from Chairman and CEO (pre LLC conversion	—	830	—	—	—	—	—	830	—	830
Series F put right accretion (pre LLC conversion)	—	(4,375)	—	—	—	—	—	(4,375)	—	(4,375)
Conversion of members' interests	(556,741,897)	(525,388)	99,661,906	10	525,378	—	—	—	—	—
Issuance of common stock upon conversion of related party promissory note	—	—	2,899,297	—	40,590	—	—	40,590	—	40,590
Issuance of common stock in initial public offering, net of $13,034 in offering costs	—	—	6,900,000	1	83,565	—	—	83,566	—	83,566

NantHealth, Inc.
Consolidated and Combined Stockholders' / Members' Equity
(Dollars in thousands)

	Members' Equity		Common Stock		Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (loss)	Total NantHealth Equity	Non-controlling interests	Total Equity
	Units	Amount	Shares	Amount						
Series F put right accretion (post LLC conversion)	—	—	—	—	(583)	—	—	(583)	—	(583)
Redeemable common stock put right expiration	—	—	10,714,285	1	170,999	—	—	171,000	—	171,000
Stock-based compensation expense (post LLC conversion)	—	—	—	—	54,925	—	—	54,925	—	54,925
Shares issued in connection with employee stock plans, net of shares withheld for employee taxes	—	—	1,074,949	—	(5,838)	—	—	(5,838)	—	(5,838)
Deemed capital contributions from Chairman and CEO (post LLC conversion)	—	—	—	—	2,980	—	—	2,980	—	2,980
Equity component of the convertible notes issuance, net	—	—	—	—	14,318	—	—	14,318	—	14,318
Other comprehensive income	—	—	—	—	—	—	608	608	—	608
Net loss	—	—	—	—	—	(184,102)	—	(184,102)	—	(184,102)
Balance at December 31, 2016	—	$ —	121,250,437	$ 12	$ 886,334	$ (475,273)	$ 521	$ 411,594	$ —	$ 411,594

The accompanying notes are an integral part of these Consolidated and Combined Financial Statements.

NantHealth, Inc.
Consolidated and Combined Statements of Cash Flows
(Dollars in thousands)

	Year Ended December 31,		
	2016	2015	2014
Cash flows from operating activities:			
Net loss	$ (184,102)	$ (72,011)	$ (84,617)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	30,933	15,788	16,178
Amortization of debt discounts and deferred financing offering cost	108	—	—
Impairment of intangible asset	—	—	24,150
Unrealized changes in fair value of marketable securities	(49)	(3,624)	3,677
Realized changes in fair value of marketable securities	49	3,971	109
Change in fair value of derivatives liability	(1,228)	—	—
Stock-based compensation	53,952	1,429	340
Deferred income taxes, net	(23,385)	—	—
Provision for bad debt expense	549	207	204
Inventory provision	499	7	38
Loss (income) from related party equity method investments	40,994	2,584	(1,525)
Other non-cash expense	144	—	333
Changes in operating assets and liabilities, net of business combinations:			
Accounts receivable, net	8,111	3,580	468
Inventories	(570)	982	(2,308)
Related party receivables, net	(325)	228	120
Prepaid expenses and other current assets	3,495	(4,245)	(132)
Deferred implementation costs	(5,952)	(4,155)	—
Accounts payable	(5,644)	1,731	1,634
Accrued and other current liabilities	3,787	5,450	(4,606)
Deferred revenue	3,853	(21,158)	(928)
Related party payables	4,220	(4,738)	7,582
Other assets and liabilities	(73)	(26)	(2,852)
Net cash used in operating activities	(70,634)	(74,000)	(42,135)
Cash flows from investing activities:			
Purchase of property and equipment	(15,780)	(8,244)	(7,637)
Investments in unconsolidated related parties	—	(150,816)	(3,319)
Purchases of intangible assets	—	(5,000)	(4,000)
Purchases of marketable securities	(31)	(15,219)	(251,729)
Proceeds from sales of marketable securities	1,275	136,315	26,072
Proceeds from sales of property and equipment	138	—	—
Purchase of cost method investment	—	(1,750)	—
Proceeds from sale of business and equity method investment, net of cash transferred	—	—	12,842
Acquisitions of businesses, net of cash acquired	(78,725)	(50,548)	(2,306)
Deferred consideration for acquisition	4,358	—	—
Net cash used in investing activities	(88,765)	(95,262)	(230,077)
Cash flows from financing activities:			
Proceeds from issuance of membership interests	—	200,000	260,525
Deemed capital contribution from Chairman and CEO	3,810	6,190	—
Payment of short-term notes payable	(23,324)	—	—
Payment of long-term notes payable	—	—	(1,975)
Earnout to former non-controlling interests	—	—	(5,608)
Proceeds from (payment of) related party promissory notes	152,666	(34,502)	5,903

NantHealth, Inc.
Consolidated and Combined Statements of Cash Flows (Continued)
(Dollars in thousands)

	Year Ended December 31,		
	2016	**2015**	**2014**
Cash flows from operating activities:			
Proceeds from initial public offering, net of offering costs	83,566	—	—
Proceeds from issuance of convertible notes to related party, net of offering costs	9,917	—	—
Proceeds from issuance of convertible notes to others, net of offering costs	92,797	—	—
Tax payments related to stock issued, net of stock withheld, for vested phantom units	(5,838)	—	—
Net cash provided by financing activities	313,594	171,688	258,845
Effect of exchange rate changes on cash and cash equivalents	169	(136)	49
Net increase in cash and cash equivalents	154,364	2,290	(13,318)
Cash and cash equivalents, beginning of period	5,989	3,699	17,017
Cash and cash equivalents, end of period	$ 160,353	$ 5,989	$ 3,699

	Year Ended December 31,		
	2016	**2015**	**2014**
Supplemental disclosure of cash flow information:			
Interest paid	$ (11)	$ (2,193)	$ (31)
Interest received	119	599	—
Non-cash transactions:			
Transfer of marketable securities as investment in unconsolidated related party	—	99,184	—
Healthcare Solutions acquisition escrow receivable	—	2,494	—
Purchase of property and equipment (including internal use software capitalized costs including stock based compensation)	2,962	—	—
Accretion to redemption value of Series F / redeemable common stock	4,958	16,042	—
Conversion of related party promissory note and interest payable to common stock	40,590	—	—
Reclassification of redeemable common stock to common stock (former Series F units)	171,000	—	—
Equity component reclassification of the convertible notes issuance, net	14,318	—	—

The accompanying notes are an integral part of these Consolidated and Combined Financial Statements.

Note 1. Description of Business and Basis of Presentation

Nature of Business

Nant Health, LLC was formed on July 7, 2010, as a Delaware limited liability company. On June 1, 2016, Nant Health, LLC converted into a Delaware corporation (the "LLC Conversion") and changed its name to NantHealth, Inc. ("NantHealth"). NantHealth, together with its subsidiaries (the "Company"), is a healthcare IT company converging science and technology through a single integrated clinical platform, to provide actionable health information at the point of care, in the time of need, anywhere, anytime. NantHealth works to transform clinical delivery with actionable clinical intelligence at the moment of decision, enabling clinical discovery through real-time machine learning systems. The company's technology empowers physicians, patients, payers and researchers to transcend genomics into the world of proteomics and the traditional barriers of today's healthcare system. By converging molecular science, computer science and big data technology the Nant Operating System (NantOS) platform allows physicians, patients and payers to coordinate care, monitor outcomes and control cost in real time. NantHealth is a majority-owned subsidiary of NantWorks, LLC ("NantWorks"), which is a subsidiary of California Capital Equity, LLC ("Cal Cap"). The three companies were founded by and are led by Dr. Patrick Soon-Shiong.

As of December 31, 2016, the Company conducted the majority of its operations in the United States, Canada, the United Kingdom, Singapore and India.

LLC Conversion and Initial Public Offering

On June 1, 2016, immediately prior to the pricing of its initial public offering ("IPO") and in conjunction with the LLC Conversion, all outstanding units of Nant Health, LLC were automatically converted into shares of NantHealth's common stock. Immediately following the LLC Conversion, NantHealth effected a 1-for-5.5 reverse stock split of its common stock. All share and per share amounts in the Consolidated and Combined Financial Statements and notes thereto have been retroactively adjusted, where necessary, to give effect to this reverse stock split.

On June 7, 2016, the Company completed its IPO, whereby it sold 6,500,000 shares of common stock at a public offering price of $14.00 per share. Additionally, on June 9, 2016, the underwriters partially exercised their option to purchase an additional 400,000 shares of common stock at $14.00 per share.

The Company received a total of $83,566 in proceeds from its IPO, after deducting underwriting discounts and commissions and offering costs of $13,034. The offering was registered under the Securities Act of 1933, as amended, on a registration statement on Form S-1 (Registration No. 333-211196), as amended (the "Registration Statement").

Basis of Presentation and Principles of Consolidation

The accompanying Consolidated and Combined Financial Statements include the financial statements of NantHealth and its wholly owned subsidiaries and other entities in which NantHealth has a controlling financial interest. For consolidated subsidiaries that are less than wholly owned, the third-party holdings of equity interests are referred to as non-controlling interests. All intercompany accounts and transactions have been eliminated in consolidation. These Consolidated and Combined Financial Statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP"). Certain reclassifications have been made to prior period amounts to conform to the current year presentation.

The transfer and assignment by NantWorks to NantHealth of the equity interests in NantCloud Services, LLC ("NantCloud") was recorded and presented at its carryover basis since NantHealth and the transferor are under common control. The historical statements of operations, stockholders' / members' equity and cash flows of NantCloud have been combined with the Company's statements of operations, stockholders' / members' equity and cash flows beginning on the date of inception of common control of the entity. Net.Orange, Inc. ("NDO") was treated as an available-for-sale debt investment on NantHealth's consolidated balance sheet beginning October 2, 2012 as NantHealth did not have a controlling financial interest in the entity until June 2014 when it acquired the remaining equity interests in NDO that it did not already own (See Note 3 and Note 11).

Note 2. Summary of Significant Accounting Policies

Use of Estimates

The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the Consolidated and Combined Financial Statements and accompanying notes. Actual results may differ from those estimates. The estimates and assumptions used in the accompanying Consolidated and Combined Financial Statements are based upon management's evaluation of the relevant facts and circumstances at the balance sheet date. On an ongoing basis, the Company evaluates its estimates, including those related to revenue recognition, accounts receivable allowance, inventory provisions, useful lives of long-lived assets and intangible assets, income taxes, stock based compensation, impairment of long-lived assets and intangible assets and the fair value of its investments and derivatives liability. The Company bases its estimates on historical experience and on various other assumptions that are believed to be reasonable, the results of which can affect the reported amounts of assets and liabilities as of the date of the financial statements, as well as the reported amounts of revenue and expenses during the periods presented.

Variable Interest Entities

The Company evaluates its ownership interests, contractual rights and other interests in entities to determine if the entities are variable interest entities ("VIEs"), if it has a variable interest in those entities and the nature and extent of those interests. These evaluations are highly complex and involve judgment, the use of estimates and assumptions based on available historical information. In order for the Company to be the primary beneficiary of a VIE, it must have both (1) the power to direct the activities of a VIE that most significantly affect the VIE's economic performance and (2) the obligation to absorb losses or the right to receive benefits that, in either case, could potentially be significant to the VIE. The Company consolidates entities of which it is the primary beneficiary.

The Company determines whether it is the primary beneficiary of a VIE upon its initial involvement with the VIE and reassesses whether it is the primary beneficiary on an ongoing basis. This determination is based upon an analysis of the design of the VIE, including the VIE's structure and activities, the power to make significant economic decisions held by the Company and by other parties, and the variable interests owned by the Company and other parties.

Non-Controlling Interests

Non-controlling interests are classified as a separate component of equity in the Consolidated and Combined Balance Sheets and Consolidated and Combined Statements of Changes in Members' Equity / Stockholders' Equity. Additionally, net loss attributable to non-controlling interests is reflected separately from consolidated and combined net loss in the Consolidated and Combined Statements of Operations, Comprehensive Loss and Changes in Members' Equity / Stockholders' Equity.

The Company uses the hypothetical liquidation at book value ("HLBV") method to attribute certain non-wholly owned subsidiaries' income or loss to the non-controlling interests when such income or loss is not allocated to the equity holders based on pro rata ownership percentage. This allocation methodology best represents the economics of the non-controlling interest holders' share of income or loss. HLBV uses a balance sheet approach, which measures the non-controlling interests' share of income or loss by calculating the change in the amount of net assets the investors are legally able to claim based on a hypothetical liquidation of the entity at the beginning and end of a reporting period.

Revenue Recognition

Revenue represents the consideration received or receivable from clients for solutions and services provided by the Company. The Company's revenue is generated from the following sources:

- **Software and hardware -** Software and hardware revenue is generated from the sale of the Company's software, on either a perpetual or term license basis, and the sale of hardware. The software is installed on the client's site or the client's designated vendor's site and is not hosted by the Company or by a vendor contracted by the Company. The Company also sells third-party software and hardware to its clients.

- **Software-as-a-service** ("SaaS") - SaaS revenue is generated from clients' access to and usage of the Company's hosted software solutions on a subscription basis for a specified contract term, which is usually monthly. In SaaS arrangements, the client cannot take possession of the software during the term of the contract and generally has the right to access and use the software and receive any software upgrades published during the subscription period.

- **Maintenance -** Maintenance revenue includes ongoing post contract client support (“PCS”) or maintenance during the paid PCS term. Additionally, PCS includes ongoing development of software updates and upgrades provided to the client on a when and if available basis.

- **Sequencing and molecular analysis -** Sequencing and molecular analysis revenue is generated by the process of performing sequencing and analysis of whole genome DNA, RNA and proteomic results under the Company's reseller agreement with NantOmics, LLC ("NantOmics") (See Note 21).

- **Other services -** Other services includes revenue from professional services provided that are generally complementary to the software and may or may not be required for the software to function as desired by the client. The services are generally provided in the form of training and implementation services during the software license period and do not include PCS. Other services revenue also includes the sale of nursing and therapy services provided to patients in a home care setting and any other services not included in the preceding revenue sources.

Revenue is recognized when persuasive evidence of an arrangement exists, services or products have been provided to the client, fees are fixed or determinable, and collectability is reasonably assured. While most of the Company’s arrangements include short-term payment terms, the Company on occasion provides payment terms to clients in excess of one year from the date of contract signing. The Company does not recognize revenue for arrangements containing these extended payment terms until such payments become due. Certain of the Company’s customer arrangements allow for termination for convenience with advanced notice. Such termination rights do not allow for refunds other than prepaid PCS or other services. These provisions do not affect when the Company commences revenue recognition. The Company also has certain arrangements which allow for termination and refunds of fees in the event that software acceptance by the customer has not occurred. In these instances, the Company will defer all revenue until software acceptance has occurred.

The Company's clinical sequencing and molecular analysis revenue is primarily generated from payments received from commercial third-party payors, hospitals and other provider networks and patients. The Company reports revenue from arrangements with these customers on a gross basis in accordance with Financial Accounting Standards Board (“FASB") Accounting Standards Update ("ASC") No. 605-45, *Principal Agent Considerations*. The Company recognizes revenue from these arrangements when all revenue recognition criteria have been met or on a cash basis when it cannot conclude that the fees are fixed or determinable and collectability is reasonably assured. The Company uses judgment in its assessment of whether the fees are fixed or determinable and whether collectability is reasonably assured in determining when to recognize revenue in the future as it continues to gain payment experience with its customers. Accordingly, the Company expects to recognize revenue on a cash basis when it cannot conclude that the fees from a particular customer are fixed or determinable and collectability is reasonably assured until it has a sufficient history to reliably estimate payment patterns from such customer.

The Company engages in various multiple-element arrangements, which may generate revenue across any of the sources noted above. For multiple-element software arrangements that involve the sale of the Company’s proprietary software, PCS and other software-related services, vendor-specific objective evidence (“VSOE”) of fair value is required to allocate and recognize revenue for each element. VSOE of fair value is determined based on the price charged in which each deliverable is sold separately. The Company has established VSOE for PCS on certain of its software solutions using the Stated Renewal Method. In this instance, the Company has determined that its stated renewals are substantive and appropriate for use in the Stated Renewal Method. The Company has not yet established VSOE of fair value for any element other than PCS for a portion of its arrangements. In situations where VSOE of fair value exists for PCS but not a delivered element (typically the software license and services elements), the residual method is used to allocate revenue to the undelivered element equal to its VSOE value with the remainder allocated to the delivered elements. In situations in which VSOE of fair value does not exist for all of the undelivered software-related elements, revenue is deferred until only one undelivered element remains (typically the PCS element) and then recognized following the pattern of delivery of the final undelivered element. The Company’s multiple element arrangements typically provide for renewal of PCS terms upon expiration of the original term. The amounts of these PCS renewals are recognized as revenue ratably over the specified PCS renewal period.

For non-software arrangements that include multiple-elements, primarily consisting of the Company's SaaS agreements and research sequencing and molecular analysis agreements, revenue recognition involves the identification of separate units of accounting after consideration of combining and/or segmenting contracts and allocation of the arrangement consideration to the units of accounting on the basis of their relative selling price. The selling price used for each deliverable is based on VSOE of fair value, if available, third party evidence ("TPE") of fair value if VSOE is not available, or the Company's best estimate of selling price ("BESP") if neither VSOE nor TPE is available. In determining the units of accounting for these arrangements, the Company evaluates whether each deliverable has stand-alone value as defined in the FASB's guidance. The Company's SaaS arrangements are treated as a single unit of accounting as the professional services do not have standalone value. As a result, the Company recognizes initial system implementation and deployment fees ratably over a period of time from when the system implementation or deployment services are completed and accepted by the customer over the longer of the life of the agreement or the estimated customer life.

If an arrangement to deliver software requires significant production, modification or customization of the licensed software, the Company accounts for the arrangement as a construction-type contract. The Company currently recognizes revenue for these arrangements using the completed-contract method as it does not currently have sufficient information to reliably estimate the percentage of completion for these projects. The Company considers these arrangements to be substantially complete upon the clients' acceptance of the software and related professional services and consistently applies this policy to all contract accounting arrangements.

Transaction processing fees are recognized on a monthly basis based on the number of transactions processed and the fee per transaction.

Revenue derived from reseller arrangements is recognized when the resellers, in turn, sell the software solution to their clients and installation of the software solution has occurred, provided all other revenue recognition criteria are met. This is commonly referred to as the sell-through method and the Company defers recognition until there is a sell-through by the reseller to an actual end user clients and acceptance by the end user has occurred.

Cost of Revenue

Cost of revenue includes associate salaries, bonuses and benefits, stock based compensation, consultant costs, direct reimbursable travel expenses, depreciation related to software developed for internal use and other direct engagement costs associated with the design, development, sale and installation of systems, including system support and maintenance services for clients. System support includes ongoing client assistance for software updates and upgrades, installation, training and functionality. All service costs except deferred implementation costs are expensed when incurred. Amortization of deferred implementation costs are also included in cost of revenue. Cost of revenue associated with each of the Company's revenue sources consists of the following types of costs:

- **Software and hardware** - Software and hardware cost of revenue includes third-party software and hardware costs directly associated with solutions, including purchasing and receiving costs.

- **Software-as-a-service** - SaaS cost of revenue includes personnel-related costs, amortization of deferred implementation costs and other direct costs associated with the delivery and hosting of NantOS and NantOS apps, the cancer-decision support solution, and NaviNet on a subscription basis.

- **Maintenance** - Maintenance cost of revenue includes personnel-related costs and other direct costs associated with the ongoing support or maintenance provided to the Company's clients.

- **Sequencing and molecular analysis** - Sequencing and molecular analysis cost of revenue includes (a) personnel-related costs associated with these services and (b) amounts due to NantOmics under the reseller agreement (See Note 21) for the sequencing and analysis of whole genome, DNA, RNA and proteomic results.

- **Other services** - Other services cost of revenue includes personnel-related, amortization of deferred implementation costs and other direct costs associated with the Company's software training and implementation services provided to our clients as well as direct expenses relating to the Company's nursing and therapy services provided to patients in a home care setting.

In addition to direct labor costs, cost of revenue also includes hardware costs directly related to bringing manufactured products to their final selling destination. It includes purchasing and receiving costs and direct and indirect costs to manufacture products, including direct materials, direct labor, and direct overhead expenses necessary to acquire and convert purchased materials and supplies into finished goods.

Selling, General and Administrative costs

Selling, general and administrative expense consists primarily of shared service fees from NantWorks, personnel-related expenses for our sales and marketing, finance, legal, human resources, and administrative associates, stock based compensation, and advertising and marketing promotions of NantHealth solutions. It also includes trade show and event costs, sponsorship costs, point of purchase display expenses and related amortization as well as legal costs, consulting and professional fees, insurance and other corporate and administrative costs. Advertising costs are expensed as incurred.

Research and Development Expenses

Research and development (“R&D”) costs incurred to establish the technological feasibility of software to be sold are expensed as incurred. These expenses include the costs of the Company’s proprietary R&D efforts, as well as costs incurred in connection with certain licensing arrangements.

Development costs, consisting primarily of employee salaries and benefits (including stock based compensation), incurred in the research and development of new software products and enhancements to existing software products are expensed as incurred until technological feasibility has been established. After technological feasibility is established, any software development costs are capitalized.

Costs incurred to acquire or create a computer software product are expensed when incurred as research and development until technological feasibility has been established for the product, at which point such costs are capitalized. Technological feasibility is normally established upon completion of a detailed program design or, in its absence, a working model of the software product.

Capitalization of computer software costs to be sold to customers ceases when the product is available for general release to customers. As of December 31, 2016 and 2015, the Company has not capitalized software costs to be sold to customers as no significant costs have been incurred in developing software products and technological feasibility has not been established for new software products and enhancements to existing software.

Stock Based Compensation

The Company accounts for stock based compensation arrangements granted to employees in accordance with ASC 718, "*Compensation: Stock Compensation",* by measuring the grant date fair value of the award and recognizing the resulting expense over the period during which the employee is required to perform service in exchange for the award.

The Company accounts for stock based compensation arrangements issued to non-employees using the fair value approach prescribed by ASC 505-50, “*Equity-Based Payments to Non-Employees".* The value of non-employee stock based compensation is re-measured at the end of each reporting period until the award vests and is recognized as stock based compensation expense over the period during which the non-employee provides the services.

Stock based compensation expense for both employee and non-employee awards is recognized on a straight-line basis over the appropriate service period for awards that are only subject to service conditions and is recognized using the accelerated attribution method for awards that are subject to performance conditions. Stock based compensation expense is only recognized for awards subject to performance conditions if it is probable that the performance condition will be achieved.

The Company early adopted FASB ASU 2016-09, "*Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting*" ("ASU 2016-09") related to stock based compensation, beginning July 1, 2016, simplifying the accounting for employee share-based payment transactions, including the accounting for income taxes, forfeitures, and statutory withholding requirements, as well as the related classification in the statement of cash flows. All excess tax benefits and tax deficiencies are recognized as income tax benefit or expense in the income statement as discrete items in the reporting period in which they occur, and such tax benefits and tax deficiencies are not included in the estimate of an entity's annual effective tax rate, applied on a prospective basis. The recognition of excess tax benefits is not deferred until the benefit is realized through a reduction to taxes payable. When the Company applies the treasury stock method, in calculating diluted earnings per share, excess tax benefits, if applicable, are excluded and deficiencies from the calculation of assumed proceeds since such amounts are recognized in the income statement. Excess tax benefits if applicable, are classified as operating activities in the same manner as other cash flows related to income taxes on the statement of cash flows. Per ASU 2016-09, an entity can make an entity-wide accounting policy election to either estimate the number of awards that are expected to vest (current GAAP) or account for forfeitures when they occur. The Company has elected to account for forfeitures when they occur. Cash paid by the Company when directly withholding shares for tax withholding purposes should be classified as a financing activity in the Statement of Cash Flows (See Note 15 and Note 19).

Change in fair value of derivative liability

The Company has classified the interest make-whole provision of its convertible notes and related party convertible note due June 2021 and issued in December 2016 as a derivative liability as part of other liabilities and related party liabilities, respectively, in the Consolidated and Combined Balance Sheets and is recorded at fair value. This derivative liability is subject to re-measurement at each balance sheet date, and the Company recognizes any change in fair value in the Company's Consolidated and Combined Statements of Operations as a change in fair value of the derivative liability. The change in the fair value of this derivative liability is primarily due primarily to the change in the value of the Company's common stock (See Note 13).

Income Taxes

Prior to June 1, 2016, NantHealth was a limited liability company taxed as partnership. It also owned a number of subsidiaries, including single member limited liability companies taxed as disregarded entities and corporations. The income and losses of the entities classified as pass-through entities for tax purposes flowed directly through to the members of the partnership. Accordingly, no provision for U.S. federal and state income taxes was reflected in the Consolidated and Combined Financial Statements for the pass-through income or losses. The Company recorded a tax provision on its domestic and foreign corporate subsidiaries.

On June 1, 2016, NantHealth converted from a limited liability company to a C corporation and formed a consolidated group with its domestic corporate subsidiaries for federal tax purposes. The Company now records federal and state tax provision of the consolidated group, and foreign tax provision of its foreign subsidiaries.

FASB ASC Topic 740 *Income Taxes* (" Topic 740 ") provides the accounting treatment for uncertainty in income taxes recognized in an enterprise's financial statements. Topic 740 prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. Topic 740 also provides guidance on derecognizing, classification, interest and penalties, accounting in interim periods, disclosure and transition.

As part of the process of preparing our Consolidated and Combined Financial Statements, the Company is required to estimate its provision for income taxes in each of the tax jurisdictions in which the Company conducts business. This process involves estimating our actual current tax expense in conjunction with the evaluation and measurement of temporary differences resulting from differing treatment of certain items for tax and accounting purposes. These temporary differences result in the establishment of deferred tax assets and liabilities, which are recorded on a net basis and included in the Company's Consolidated and Combined Balance Sheets. The Company then evaluates on a periodic basis the probability that the net deferred tax assets will be recovered and therefore realized from future taxable income and to the extent the Company believes that recovery is not more likely than not, a valuation allowance is established to address such risk resulting in an additional related provision for income taxes during the period.

Significant management judgment is required in determining its provision for income taxes, its deferred tax assets and liabilities, tax contingencies, unrecognized tax benefits, and any required valuation allowance, including taking into consideration the probability of the tax contingencies being incurred. Management assesses this probability based upon information provided by its tax advisers, its legal advisers and similar tax cases. If at a later time its assessment of the probability of these tax contingencies changes, its accrual for such tax uncertainties may increase or decrease.

The Company has a valuation allowance due to management's overall assessment of risks and uncertainties related to its future ability to realize and, hence, utilize certain deferred tax assets, primarily consisting of net operating losses, carry forward temporary differences and future tax deductions.

The effective tax rate for annual and interim reporting periods could be impacted if uncertain tax positions that are not recognized are settled at an amount which differs from the Company's estimate. Finally, if the Company is impacted by a change in the valuation allowance resulting from a change in judgment regarding the realizability of deferred tax assets, such effect will be recognized in the interim period in which the change occurs.

Net Income (Loss) Per Share

Basic net income (loss) per share is computed by dividing the net income (loss) by the weighted-average number of shares of common stock outstanding during the period. Diluted net income (loss) per share is computed by dividing the net income (loss) by the weighted-average number of shares of common stock outstanding during the period, adjusted to give effect to potentially dilutive securities. However, potentially dilutive securities are excluded from the computation of diluted net income (loss) per share to the extent that their effect is anti-dilutive. The Company applies treasury method in calculating weighted average dilutive umber of shares for its stock plans.

The Company recorded in certain reporting periods an accretion to the carrying value of the Redeemable Series F units and a reduction to members' equity carrying amount, when the Company deemed it probable that the Series F units would be redeemed. As a result, the net loss applicable to common stockholders reported in the calculation of earnings per share was increased, income for redeemable Series F was increased, and a two class method of net income (loss) per share was applied (See Note 16 and Note 20).

Foreign Currency Translation

The Company has operations and holds assets in various foreign countries. The local currency is the functional currency for the Company's subsidiaries in Canada, United Kingdom, Singapore and India. Assets and liabilities are translated at end-of-period exchange rates while revenues and expenses are translated at the average exchange rates in effect during the period. Equity is translated at historical rates and the resulting cumulative translation adjustments are included as a component of accumulated other comprehensive income until the translation adjustments are realized.

Segment Reporting

The chief operating decision maker for the Company is its Chief Executive Officer. The Chief Executive Officer reviews financial information presented on a Consolidated and Combined basis for purposes of allocating resources and evaluating financial performance. The Company has one business activity and there are no segment managers who are held accountable for operations, operating results, or plans for levels or components below the Consolidated and Combined unit level. Accordingly, management has determined that the Company operates in one reportable segment.

Business Combinations

Business combinations are accounted for using the acquisition method of accounting. Under the acquisition method, assets acquired and liabilities assumed are recorded at their respective fair values as of the acquisition date. Any excess of the purchase price over the estimated fair values of the net assets acquired is recorded as goodwill. Management routinely monitors the factors impacting the acquired assets and liabilities. Transaction related costs are expensed as incurred. The operating results of the acquired business are reflected in the Company's Consolidated and Combined Financial Statements as of the acquisition date.

Fair Value of Financial Instruments

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value measurements are classified and disclosed in one of the following three categories:

- Level 1—Quoted prices for identical assets or liabilities in active markets;
- Level 2—Quoted prices for similar assets or liabilities in active markets or quoted prices for identical or similar assets or liabilities in markets that are not active or are directly or indirectly observable; and
- Level 3—Unobservable inputs that reflect estimates and assumptions.

The carrying amounts reported in the balance sheet for cash and cash equivalents, accounts receivable, accounts payable, notes payable, deferred revenue and other current monetary assets and liabilities approximate fair value because of the immediate or short-term maturity of these financial instruments.

(Dollars in thousands, except per share amounts)

In accordance with this guidance, the Company measures its cash equivalents and marketable securities at fair value. The Company's cash equivalents and marketable securities are classified within Level 1. Cash equivalents and marketable securities are valued primarily using quoted market prices utilizing market observable inputs.

Cash and Cash Equivalents

The Company considers all unrestricted, highly liquid investments with an initial maturity of three months or less to be cash equivalents. These amounts are stated at cost, which approximates fair value. At December 31, 2016 and 2015, cash equivalents were deposited in financial institutions and consisted of immediately available fund balances. Cash and cash equivalents are maintained at stable financial institutions, generally at amounts in excess of federally insured limits, which represents a concentration of credit risk. The Company has not experienced any losses on deposits of cash and cash equivalents to date.

Marketable Securities

The Company's marketable securities consist of investments in mutual funds and are reported on the balance sheet at fair value based upon quoted market prices (See Note 13). Although the Company does not actively trade these investments, it classifies the marketable securities as trading securities. The cost of investments sold is determined on the specific identification method. Dividend and interest income are accrued as earned.

Accounts Receivable and Allowance for Doubtful Accounts

Accounts receivable are recorded at the invoiced amount, net of amounts related to PCS and other services that were billed but not yet delivered at each period end (See Note 4) and net of allowances for doubtful accounts. The allowance for doubtful accounts is based on management's assessment of the collectability of accounts. The Company regularly reviews the adequacy of the allowance for doubtful accounts by considering the age of each outstanding invoice and the collection history of each client to determine whether a specific allowance is appropriate. Accounts receivable deemed uncollectible are charged against the allowance for doubtful accounts when identified.

Concentrations of Risk

The following table summarizes the number of customers that individually comprise greater than 10% of revenues and or 10% of accounts receivable, and their aggregate percentages of total revenues and total billed and unbilled accounts receivable:

Period	Significant Customers	Percentage of Total Revenues		Percentage of Total Accounts Receivable	
		A	B	A	B
Year Ended December 31, 2016	2	10.6%	10.2%	7.9%	7.6%
Year Ended December 31, 2015	1	14.7%	—%	—%	—%

No customers accounted for more than 10% of revenue for the year ended December 31, 2014.

Inventories

Through December 31, 2015 inventories were stated at the lower of cost (first-in, first-out basis) or market. The Company early adopted FASB ASC 2015-11 *Simplifying the Measurement of Inventory ("ASC 2015-11")*, and starting in December 31, 2016 inventories were stated at the lower of cost and net realizable value. There was no material effect to the adoption of ASC 2015-11.

Property, Plant and Equipment, net

Property, plant and equipment received in connection with business combinations are recorded at fair value. Property, plant and equipment acquired in the normal course of business are recorded at cost. Depreciation is computed on a straight line basis over the estimated useful lives of the related assets (See Note 7). Maintenance and repairs are charged to expense as incurred while expenditures for refurbishments and improvements that significantly add to the productive capacity or extend the useful life of an asset are capitalized.

The Company accounts for the costs of computer software obtained or developed for internal use in accordance with FASB ASC 350, "*Intangibles — Goodwill and Other* " ("ASC 350"). Computer software development costs are expensed as incurred, except for internal use software costs that qualify for capitalization as described below, and include employee related expenses, including salaries, benefits and stock-based compensation expenses; costs of computer hardware and software; and costs incurred in developing features and functionality. These capitalized costs are included in property and equipment on the Consolidated and Combined Balance Sheets. The Company expenses costs incurred in the preliminary project and post implementation stages of software development and capitalizes costs incurred in the application development stage and costs associated with significant enhancements to existing internal use software applications. Software costs are amortized using the straight-line method commencing when the software project is ready for its intended use.

Deferred Implementation Costs

The Company provides SaaS and information technology management services under long-term arrangements which require the Company to perform system implementation activities. In some cases, the arrangements either contain provisions requiring customer acceptance of the setup activities prior to commencement of the ongoing services arrangement or the system implementation services do not have separate value from the service revenue. Up-front fees billed during the setup phase for these arrangements are deferred and setup costs that are direct and incremental to the contract are capitalized. The costs deferred consist of employee compensation (including stock based compensation) and benefits for those employees directly involved with performing system implementation or deployment services, as well as other direct and incremental costs.

The Company defers costs estimated to be realizable based on contracted implementation revenue and estimated margin from the service contract. The Company periodically reviews the deferred implementation contracts for recoverability. The costs are amortized to cost of revenue ratably over a period of time from when the system implementation or deployment services are completed and accepted to the end of the contract term or the expected customer life, whichever is longer.

Goodwill and Intangible Assets

Goodwill acquired in a business combination and determined to have an indefinite useful life is not amortized but is tested for impairment annually as of October 1 or between annual tests when an impairment indicator exists. In the event there is a change in reporting units or segments, the Company will test for impairment at the reporting unit. A component of an operating segment is a reporting unit if the component constitutes a business for which discrete financial information is available and segment management regularly reviews the operating results of that component.

As part of the annual impairment test, the Company may conduct an assessment of qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. In a qualitative assessment, the Company would considered the macroeconomic conditions, including any deterioration of general conditions, industry and market conditions, including any deterioration in the environment where the reporting unit operates, increased competition, changes in the products/ services and regulator and political developments; cost of doing business; overall financial performance, including any declining cash flows and performance in relation to planned revenues and earnings in past periods; other relevant reporting unit specific facts, such as changes in management or key personnel or pending litigation, and events affecting the reporting unit, including changes in the carrying value of net assets.

If an optional qualitative goodwill impairment assessment is not performed, the Company is required to determine the fair value of each reporting unit. If a reporting unit's fair value is lower than its carrying value, the Company must determine the amount of implied goodwill that would be established if the reporting unit was hypothetically acquired on the impairment test date. If the carrying amount of a reporting unit's goodwill exceeds the amount of implied goodwill, the Company would record an impairment loss equal to the excess (See Note 9).

The determination of fair value of a reporting unit is based on a combination of a market approach that considers benchmark company market multiples and an income approach that uses discounted cash flows for each reporting unit utilizing Level 3 inputs. Under the income approach, the Company determines the fair value based on the present value of the most recent income projections for each reporting unit and calculates a terminal value utilizing a terminal growth rate. The significant assumptions under this approach include, among others: income projections, which are dependent on sales to new and existing clients, new solution introductions, client behavior, competitor pricing, operating expenses, the discount rate, and the terminal growth rate. The cash flows used to determine fair value are dependent on a number of significant management assumptions based on historical experience, expectations of future performance, and the expected economic environment. Estimates are subject to change given the inherent uncertainty in predicting future results. Additionally, the discount rate and the terminal growth rate are based on judgment of the rates that would be utilized by a hypothetical market participant.

Accounting guidance requires that definite-lived intangible assets be amortized over their respective estimated useful lives and reviewed for impairment whenever events or changes in circumstances indicate that their carrying amounts may not be recoverable. Amortization of finite-lived intangible assets is provided over their estimated useful lives on a straight-line basis or the pattern in which economic benefits are consumed, if reliably determinable. If the estimates of the useful lives change, the Company amortizes the remaining book value over the remaining useful lives or, if an asset is deemed to be impaired, a write-down of the value of the asset to its fair value may be required at such time. The Company reviews its finite-lived intangible assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable.

Investment in Related Party

Investment in and advances to related party in which the Company has a substantial ownership interest of approximately 20% to 50%, or for which the Company exercises significant influence but not control over policy decisions, are accounted for by the equity method. Investment in a limited liability company that is similar to a partnership is also accounted for under the equity method if more than minor influence over the operation of the investee exists (generally through more than 3-5% ownership). As part of that accounting, the Company recognizes gains and losses that arise from the issuance of stock by a related party that results in changes in the Company's proportionate share of the dollar amount of the related party's equity.

Investment in related party is assessed for possible impairment when events indicate that the fair value of the investment may be below the Company's carrying value. When such a condition is deemed to be other than temporary, the carrying value of the investment is written down to its fair value, and the amount of the write-down is included in net loss. In making the determination as to whether a decline is other than temporary, the Company considers such factors as the duration and extent of the decline, the investee's financial performance, and the Company's ability and intention to retain its investment for a period that will be sufficient to allow for any anticipated recovery in the investment's market value. The new cost basis of investments in these equity investees is not changed for subsequent recoveries in fair value. The fair value of the related party equity method investment would be determined using the income approach. The income approach utilizes a discounted cash flow model incorporating management's expectations for future revenue, operating expenses, and earnings before interest, taxes, depreciation and amortization, capital expenditures and an anticipated tax rate. The related cash flow forecasts are discounted using an estimated weighted-average cost of capital at the date of valuation.

Differences between the Company's carrying value of an equity investment and its underlying equity in the net assets of the related party are assigned to the extent practicable to specific assets and liabilities based on the Company's analysis of the various factors giving rise to the difference. When appropriate, the Company's share of the related party's reported earnings is adjusted quarterly to reflect the difference between these allocated values and the related party's historical book values.

Deferred Revenue

The Company records deferred revenue when it receives cash from clients prior to meeting the applicable revenue recognition criteria. The Company uses judgment in determining the period over which the deliverables are recognized as revenue. As of December 31, 2016 and 2015, current and non-current deferred revenue are comprised of deferrals for fees related to software licenses, SaaS arrangements, PCS services, non-PCS services and other revenue. Non-current deferred revenue as of December 31, 2016 is expected to be recognized on or over 12 month period following that day.

Recent Accounting Pronouncements

Revenue from Contracts with Customers

The new FASB Topic 606 standards commencing with Accounting Standard Update ("ASU") No. 2014-09 ("Topic 606"), *Revenue from Contracts with Customers* replace existing revenue recognition rules including industry-specific guidance. Topic 606 outlines a five-step process for revenue recognition that focuses on transfer of control, as opposed to transfer of risk and rewards, and also requires enhanced disclosures regarding the nature, amount, timing and uncertainty of revenues and cash flows from contracts with customers. Major provisions include determining which goods and services are distinct and require separate accounting (performance obligations), how variable consideration (which may include change orders and claims) is recognized, whether revenue should be recognized at a point in time or over time and ensuring the time value of money is considered in the transaction price. Revenue is recognized in an amount that reflects the consideration which the entity expects to receive in exchange for goods or services. They become effective for annual reporting periods beginning after December 15, 2017, at which point we plan to adopt the standard. The FASB allows two adoption methods under Topic 606 standards. Under one method, a company will apply the rules to contracts in all reporting periods presented, subject to certain allowable exceptions. Under the other method, a company will apply the rules to all contracts existing as of January 1, 2018, recognizing in beginning retained earnings an adjustment for the cumulative effect of the change and providing additional disclosures comparing results to previous rules.

In December 2016, the FASB issued ASU No. 2016-20, *Technical Corrections and Improvements to Topic 606, Revenue from Contracts with Customers*. The FASB issued 13 technical corrections and improvements to ASU No. 2014-09, Revenue from Contracts with Customers (Topic 606), including providing optional exemptions from the disclosure requirement for remaining performance obligations for specific situations in which an entity need not estimate variable consideration to recognize revenue. The amendments in this standard also expand the information that is required to be disclosed when an entity applies one of the optional exemptions.

In May 2016, the FASB issued ASU No. 2016-12, "*Revenue from Contracts with Customers (Topic 606)"*. The amendments, which address transition, collectability, non-cash consideration and the presentation of sales and other similar taxes, do not change the core principles of ASU 2014-09, but rather address implementation issues and are intended to result in more consistent application.

In April 2016, the FASB issued ASU No. 2016-10, "*Identifying Performance Obligations and Licensing",* which amends certain aspects of ASC 606, Revenue from Contracts with Customers. ASU No. 2016-10 amends step two of the new revenue standard's five-step model to include guidance on immaterial promised goods or services, shipping and handling activities and identifying when promises represent performance obligations. ASU No. 2016-10 also provides guidance related to licensing such as, but not limited to, sales-based and usage-based royalties and renewals of license that provide a right to use intellectual property.

The initial assessment of the impact of the new revenue standard on the current business processes, systems and controls is expected to be completed during fiscal 2017. Additionally, the Company is currently evaluating the potential impact that the implementation of this new revenue standard will have on the Company's Consolidated Financial Statements as well as selection of the method of adoption. The FASB has issued, and may issue in the future, interpretive guidance which may cause the evaluation to change.

The Company currently does not expect to implement this new standard prior to the required effective date. Upon initial evaluation, the Company expects that the most significant impact will likely be to its software arrangements due to the requirement to estimate of selling price for deliverables. Under current revenue accounting guidance, if VSOE did not exist for license and implementation fees, the Company recognizes those revenues over the post contract support period. Also, the principal versus agent analysis under ASC 606 focuses on whether the entity controls each specified good or service in an arrangement and the company is currently evaluating whether the guidance will have an impact on how the Company reports its sequencing and molecular analysis revenue.

Other accounting pronouncements

In January 2017, the FASB issued ASU No. 2017-01, Business Combinations (Topic 805): C*larifying the Definition of a Business*. This standard clarifies the definition of a business and provides a screen to determine if a set of inputs, processes and outputs is a business. The screen requires that when substantially all of the fair value of gross assets acquired (or disposed of) is concentrated in a single identifiable asset or a group of similar identifiable assets, the assets acquired would not be a business. Under the new guidance, in order to be considered a business, an acquisition must include, at a minimum, an input and a substantive process that together significantly contribute to the ability to create output. In addition, the standard narrows the definition of the term "output" so that it is consistent with how it is described in Topic 606 standards. This standard will be effective for annual periods beginning after December 15, 2017, including interim periods within that reporting period. The Company is currently evaluating the impact this guidance may have on its Consolidated and Combined Financial Statements.

In November 2016, the FASB issued ASU No. 2016-18, Statement of Cash Flows (Topic 230): *Restricted Cash*. This standard will require that companies include restricted cash and restricted cash equivalents in their cash and cash equivalent balances in the statement of cash flows. Therefore, amounts generally described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. This standard will be effective for annual periods beginning after December 15, 2017, including interim periods within that reporting period. Early adoption of this standard is permitted. The adoption of this standard update is not expected to have a material impact on the Company's Consolidated and Combined Financial Statements.

In January 2017, the FASB issued ASU 2017-04, *Intangibles – Goodwill and Other* (Topic 350) to simplify the accounting for goodwill impairment. This guidance, among other things, removes step 2 of the goodwill impairment test thus eliminating the need to determine the fair value of individual assets and liabilities of the reporting unit. Upon adoption of this ASU, goodwill impairment will be the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying amount of goodwill. This may result in more or less impairment being recognized than under current guidance. This Update will become effective for the Corporation's annual and interim goodwill impairment tests beginning in the first quarter of 2020. The adoption of this standard update is not expected to have a material impact on the Company's Consolidated and Combined Financial Statements.

In August 2016, the FASB issued ASU No. 2016-15, "*Statement of Cash Flows (Topic 230) - Classification of Certain Cash Receipts and Cash Payments*." This standard update was issued to address diversity in practice in how certain cash receipts and cash payments are presented and classified. The provisions of ASU 2016-15 will be effective for interim and annual periods beginning after December 15, 2017. Early adoption is permitted. The adoption of this standard update is not expected to have a material impact on the Company's Consolidated and Combined Financial Statements.

In June 2016, the FASB issued ASU No. 2016-13, "*Measurement of Credit Losses on Financial Instruments"* ("ASU 2016-13"), which changes how companies measure credit losses on most financial instruments measured at amortized cost, such as loans, receivables and held-to-maturity debt securities. Rather than generally recognizing credit losses when it is probable that the loss has been incurred, the revised guidance requires companies to recognize an allowance for credit losses for the difference between the amortized cost basis of a financial instrument and the amount of amortized cost that the company expects to collect over the instrument's contractual life. ASU 2016-13 is effective for fiscal periods beginning after December 15, 2019 and must be adopted as a cumulative effect adjustment to retained earnings. Early adoption is permitted. The Company is evaluating the potential effects of the adoption of this guidance on the Company's Consolidated and Combined Financial Statements.

In March 2016, the FASB issued ASU No. 2016-09, "*Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting"*. ASU 2016-09 changes certain aspects of the accounting for share-based payment awards, including: accounting and cash flow classification for excess tax benefits and deficiencies; income tax withholding obligations; forfeitures; and cash flow classification. ASU 2016-09 was effective for the Company in the first quarter of 2017, with early adoption permitted. As mentioned above, the Company early adopted this guidance effective July 1, 2016, see Note 15 and Note 19.

In February 2016, the FASB issued ASU No. 2016-02, "*Leases (Topic 842)"* ("ASU 2016-02"). The update is aimed at making leasing activities more transparent and comparable, and requires substantially all leases be recognized by lessees on their balance sheet as a right-of-use asset and corresponding lease liability, including leases currently accounted for as operating leases. This guidance will become effective for interim and annual reporting periods beginning with the year ending December 31, 2019. Early adoption is permitted. The Company is currently evaluating the impact that the adoption of this guidance will have on its Consolidated and Combined Financial Statements and related disclosures.

In January 2016, the FASB issued ASU No. 2016-01, "*Financial Instruments Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities"* ("ASU 2016-01"), which addresses certain aspects of recognition, measurement, presentation, and disclosure of financial instruments, including a provision that requires equity investments (except for investments accounted for under the equity method of accounting) to be measured at fair value, with changes in fair value recognized in current earnings. ASU 2016-01 is effective for the Company in the first quarter of 2018, with early adoption permitted. The Company is currently evaluating the effect that ASU 2016-01 will have on its Consolidated and Combined Financial Statements and related disclosures.

In August 2014, the FASB issued Accounting Standards Update No. 2014-15, *Going Concern* (Subtopic 205-40) ("ASU 2014-15"). ASU 2014-15 requires management of all entities to evaluate whether there are conditions and events that raise substantial doubt about the entity's ability to continue as a going concern within one year after the financial statements are issued (or available to be issued when applicable). The guidance is effective for annual periods ending after December 15, 2016 and for interim periods thereafter. The adoption of this guidance did not have an effect on the Company's Consolidated and Combined Financial Statements during the year ended December 31, 2016.

Other recent accounting pronouncements issued by the FASB (including its Emerging Issues Task Force), the American Institute of Certified Public Accountants, and the Securities and Exchange Commission ("SEC") did not have, or are not believed by management to have, a material impact on the Company's present or future Consolidated and Combined Financial Statements.

(Dollars in thousands, except per share amounts)

Note 3. Business Combinations

2016 Acquisition

NaviNet, Inc.

On November 30, 2015, NantHealth entered into a definitive agreement with 3BE Holdings, LLC ("3BE") to acquire 100% of the outstanding equity interest of NaviNet, Inc. ("NaviNet") in exchange for $83,529 in cash, subject to working capital adjustments, 15,513,726 newly issued Series H units with a fair value of $52,500 and contingent arrangements or earnouts of up to $12,250, which was effective on January 1, 2016. The contingent arrangements or earnouts require the Company to pay up to a total of $12,250 to certain of NaviNet's former shareholders if NaviNet's revenues to those former shareholders exceed certain thresholds during the years ended December 31, 2016 and 2017. These contingent amounts or earnouts have been excluded from the purchase price consideration and are accounted for as sales incentives as certain predefined targets are met and are reflected as contra revenue. The cash portion of the acquisition was financed through a promissory note with NantCapital, LLC ("NantCapital"), an affiliate of the Company (See Note 21). In June 2016, the Company paid an additional $455 to 3BE as the final working capital adjustment and accounted for the payment as an increase to the purchase price of NaviNet. In December 2016, and in accordance with the definitive agreements, the Company received $2,409 out of the escrow account for the settlement of the final net working capital adjustment.

The following table summarizes the total purchase consideration for the acquisition:

	Amounts
Cash paid to 3BE at closing	$ 74,823
Cash paid to option holders after closing	2,580
Cash paid to escrow account	6,126
Working capital settlement payment	455
Fair value of Series H units	52,500
Total consideration	$ 136,484

The total consideration was allocated to the net assets acquired based upon their estimated fair values:

	Amounts
Cash and restricted cash	$ 4,804
Accounts receivable, net	10,693
Property, plant and equipment	5,044
Other assets and liabilities, net	4,561
Accounts payable	(4,585)
Accrued and other current liabilities	(3,674)
Deferred revenue	(2,603)
Deferred tax liability	(15,508)
Assumed indebtedness	(23,324)
Trade names	3,000
Developed technology	32,000
Customer relationships	52,000
Goodwill	74,076
Total fair value of net assets acquired	$ 136,484

The estimated life of the acquired trade names is four years, the estimated life of customer relationships is fifteen years and the estimated life of the developed technology is seven years, with these intangibles amortized on a straight-line basis. The excess of the purchase price over the net tangible and intangible assets of $74,076 was recorded as goodwill, and considered non-deductible for income tax purpose.

At the closing of the acquisition, the Company repaid all $23,324 of assumed indebtedness presented in the table above.

Immediately prior to the closing, the board of directors of NaviNet approved the acceleration of all unvested stock options of NaviNet. The equity incentive plan governing these stock options stated that NaviNet's board of directors had the right, at its sole discretion, to accelerate vesting of all outstanding stock options in connection with a change of control. The option holders received a payout of $7,394 immediately following the closing which represented the fair value of all vested and unvested stock options. The Company recognized in its post-acquisition results $4,814 of compensation expense during the year ended December 31, 2016 since the Company received post-combination benefits resulting from the accelerated vesting.

(Dollars in thousands, except per share amounts)

During the year ended December 31, 2016, the Company recognized a net increase of $300 from measurement period adjustments, which reduced goodwill. The measurement period adjustments included a $2,909 increase to goodwill related to a decrease in property and equipment, a $697 decrease to goodwill related to an increase in research and development grant receivable, a $955 decrease to goodwill related to a decrease in deferred revenue, a $209 increase to goodwill related to a deferred tax liability increase due to various allocation adjustments, $455 increase to goodwill for working capital adjustments, a $188 increase to goodwill related to an accrued sales tax liability increase and a $2,409 decrease to goodwill, representing the Company's right to be reimbursed from 3BE for severance benefits if their employment is terminated by the Company without cause or by the employee for good reason within 12 months after the closing date, which was settled through the escrow account in December 2016.

2015 Acquisitions

NantCloud

On May 31, 2015, NantHealth purchased 100% of the outstanding equity interests in NantCloud Services, LLC ("NantCloud") from NantWorks in exchange for $7,227 in cash, the amount invested in that business by NantWorks without any markup. NantCloud offers a secure cloud infrastructure for hosting sensitive healthcare data as well as information technology security services tailored for the healthcare industry. The Company accounted for its purchase of NantCloud as an arrangement between entities under common control. As a result, the acquisition was recorded and presented at carryover basis and the historical statements of operations and cash flows of NantCloud have been combined with the Company beginning on the date of inception of common control of each respective entity, which started February 10, 2014.

Healthcare Solutions from Harris Corporation

On June 16, 2015, the Company entered into a definitive agreement with Harris Corporation ("Harris") to acquire certain assets and assume certain liabilities related to its Healthcare Solutions ("HCS") business in exchange for $50,556 in cash, subject to working capital adjustments. The acquired assets comprise a business that helps complex healthcare delivery organizations achieve better patient outcomes, clinical and administrative workflow efficiency and stronger collaboration across the continuum of care. The acquisition of HCS closed on July 1, 2015 and furthered the Company's mission to provide patients with a fully integrated and personalized approach to the delivery of care.

The purchase consideration included $7,500 of funds held in escrow for the settlement of net working capital and other indemnifications. In March 2016, and in accordance with the definitive agreements, the Company received $2,494 out of the escrow account for the settlement of the final net working capital adjustment.

The following table summarizes the total purchase consideration for the acquisition, including the effects of the final net working capital adjustment:

	Amounts
Cash paid to Harris at closing	$ 43,056
Cash paid to escrow account	7,500
Working capital released from escrow	(2,494)
Total consideration	$ 48,062

The fair value of the identifiable assets acquired and liabilities assumed for the HCS business is shown in the table below:

	Amounts
Accounts receivable, net	$ 13,119
Other liabilities and assets, net	(2,205)
Deferred revenue	(16,076)
Trademarks	2,400
Developed technology	14,400
Customer relationships	8,900
Backlog	3,900
Goodwill	23,624
Total fair value of net assets acquired	$ 48,062

(Dollars in thousands, except per share amounts)

The estimated lives of the acquired trademark, customer relationships and backlog are five years and the estimated life of the developed technology is seven years, to be amortized on a straight line basis. The excess of the purchase price over the net tangible and intangible assets of $23,624 was recorded as goodwill, and considered deductible for income tax purpose. During the year ended December 31, 2016, the Company recognized $274 of net measurement period adjustments, which increased goodwill.

2014 Acquisition

NDO

On June 18, 2014, NantHealth entered into a Contribution and Merger Agreement with NDO and certain of its shareholders to acquire 100% of NDO's equity that it did not already own. NDO provides healthcare informatics solutions through its cOS platform to address population health issues and help healthcare organizations implement a patient-centric virtually integrated care delivery model. The acquisition of NDO allowed the Company to bring together clinical, financial and operational data to identify and solve complex healthcare problems.

The aggregate consideration for the acquisition was $32,958 and consisted of the issuance of 6,905,566 of NantHealth's Series A units and $2,335 in cash to repay a portion of NDO's debt. As part of the acquisition, NantHealth issued 18,348 Series C units to NDO's former option holders who elected not to exercise those options prior to the close of the transaction. The fair value of Company's Series A and C units was estimated using both an option pricing method and a probability weighted expected return method. The Company used a volatility and risk-free-rate of 45.0% and 0.95%, respectively, to estimate the fair value of the units. The estimated volatility was based on the historical equity volatility of comparable companies.

Prior to June 18, 2014, NantHealth owned 13,712,558 shares of NDO's Series A preferred stock which represented approximately 39.1% of the outstanding shares on a fully-diluted basis. The Company accounted for its non-controlling investment in NDO as an available-for-sale debt security as opposed to using the equity method because the shares were not considered in-substance common stock and the Company could have required NDO to redeem the investment. Prior to the acquisition, the investment was measured at fair value and any unrecognized gains or losses were recorded as a component of equity as accumulated other comprehensive income in the accompanying Consolidated and Combined Financial Statements. As of the year ended December 31, 2013 the Company had total unrealized losses of $504 related to its investment in NDO. Upon completion of the acquisition of the remaining NDO shares, NantHealth re-measured its previously owned investment in NDO at fair value as of the acquisition date and reclassified the cumulative losses of $332 out of accumulated other comprehensive income into other income (expense) in the Consolidated and Combined Statement of Operations during the year ended December 31, 2014. The fair value of the 13,712,558 shares of NDO's Series A preferred stock was determined using an option pricing model to allocate the total equity value of NDO to the different classes of shares outstanding.

Prior to the acquisition, NDO owed NantHealth $6,393 for amounts NantHealth had provided to fund NDO's operations. The acquisition of NDO effectively settled this preexisting relationship and the settlement was accounted for separately from the business combination. No settlement amount was recorded in the Company's Consolidated and Combined Statement of Operations for the year ended December 31, 2014 as the receivables were settled at their recorded amounts.

The following table summarizes the total consideration for the acquisition, including interest-bearing liabilities assumed and the impacts of the settlement of preexisting relationships:

	Amounts
Fair value of acquired 60.9% interest	$ 16,619
Fair value of previously owned 39.1% investment	14,005
Debt repayment to NDO founder	2,335
Interest-bearing liabilities assumed	722
Settlement of preexisting relationships	6,393
Total consideration	$ 40,074

The fair value of the identifiable assets acquired and liabilities assumed for the NDO acquisition is shown in the table below:

(Dollars in thousands, except per share amounts)

	Amounts
Cash and cash equivalents	$ 29
Non-cash net working capital, excluding deferred revenue	(3,773)
Property and Equipment and other non-current assets	332
Deferred revenue	(7,352)
Developed technology	23,400
Goodwill	27,438
Total fair value of net assets acquired	$ 40,074

The estimated fair values of the developed technology, was primarily determined using excess earnings methods. The rate utilized to discount net cash flows to their present values was 9% and was determined after consideration of the overall enterprise rate of return and the relative risk and importance of the assets to the generation of future cash flows. The Company did not record any in process research and development assets as NDO's major technology projects were either substantially complete or primarily represent improvements and additional functionality to existing products for which a substantial risk of completion did not exist.

The estimated useful life of the acquired developed technology intangible was seven years to be amortized on a straight line basis. The excess of the purchase price over the net tangible and intangible assets of approximately $27,438 was recorded as goodwill, which primarily reflects the expected future benefits to be realized upon integrating NantHealth's existing software solutions with NDO's cOS platform. The goodwill is considered non-deductible for income tax purpose.

The Company consolidated $1,041 and $11,221 of NDO's revenue and net loss, respectively, from the acquisition date until December 31, 2014.

Pro Forma Financial Information (Unaudited)

The historical operating results of neither NaviNet nor HCS have been included in the Company's historical Consolidated and Combined operating results prior to the respective acquisition dates. The following financial information presents the combined results of continuing operations for the year ended December 31, 2015, as if the acquisitions had been completed on January 1, 2015. As mentioned above, the results of NaviNet and HCS are included in the Company's Consolidated and Combined Financial Statements beginning on January 1, 2016 and July 1, 2015, respectively. The unaudited pro forma results do not reflect any material adjustments, operating efficiencies or potential cost savings that may result from the consolidation of operations.

	Year Ended December 31,	
	2016	2015
Net revenue	$ 100,380	$ 119,786
Net loss	(184,102)	(122,555)

Note 4. Accounts Receivable, net

Accounts receivable, net excludes amounts related to PCS and other services that were billed but not yet delivered at each period end. These undelivered services are also excluded from the deferred revenue balances on the accompanying Consolidated and Combined Balance Sheets. The amount of outstanding and unpaid invoices excluded from both the accounts receivable and deferred revenue balances as of December 31, 2016 and 2015 was $5,325 and $12,643, respectively.

Accounts receivable are included on the Consolidated and Combined Balance Sheets net of the allowance for doubtful accounts. A summary of activity in the allowance for doubtful accounts for the years ended December 31, 2016, 2015 and 2014 is as follows:

(Dollars in thousands, except per share amounts)

	Balance at beginning of the year	Additions to expense	(Write offs) / Recoveries	Balance at the end of the year
Year Ended December 31, 2016	$ 956	543	(1,047)	$ 452
Year Ended December 31, 2015	$ 277	694	(15)	$ 956
Year Ended December 31, 2014	$ 373	145	(241)	$ 277

Note 5. Inventories

Inventories as of December 31, 2016 and 2015 consisted of the following:

	December 31,	
	2016	2015
Finished goods	$ 1,840	$ 2,005
Raw Materials	377	141
Inventories	$ 2,217	$ 2,146

Note 6. Prepaid Expenses and Other Current Assets and Accrued and Other Current Liabilities

Prepaid expenses and other current assets as of December 31, 2016 and 2015 consisted of the following:

	December 31,	
	2016	2015
Prepaid expenses	$ 4,685	$ 2,161
Restricted cash (1)	100	—
Deferred equity offering costs (See Note 1)	—	3,902
Escrow receivable (See Note 3)	—	2,494
Other current assets	261	150
Prepaid expenses and other current assets	$ 5,046	$ 8,707

(1) Additional $250 of non-current restricted cash is included in the Company's Consolidated and Combined Balance Sheets as part of Other assets.

Accrued and other current liabilities of December 31, 2016 and 2015 consisted of the following:

	December 31,	
	2016	2015
Payroll and related costs	$ 13,248	$ 7,194
Other accrued and other current liabilities	11,983	8,773
Accrued and other current liabilities	$ 25,231	$ 15,967

(Dollars in thousands, except per share amounts)

Note 7. Property, Plant and Equipment, net

Property, plant and equipment, net as of December 31, 2016 and 2015 consisted of the following:

	Useful life (in years)	December 31, 2016	December 31, 2015
Computer equipment and software	3-5	$ 16,080	$ 9,865
Furniture and equipment	5-7	7,533	6,772
Leasehold and building improvements (1)		4,051	1,433
Internal use software	3	15,600	1,018
Construction in progress		1,090	1,462
		44,354	20,550
Less: Accumulated depreciation and amortization		(15,215)	(6,651)
Property, plant and equipment, net		$ 29,139	$ 13,899

(1) Useful life for leasehold and building improvements represents the term of the lease or the estimated life of the related improvements, whichever is shorter.

Depreciation expense was $8,088 for the year ended December 31, 2016, of which $1,766 related to internal use capitalized software development costs. Depreciation expense was $3,660 and $1,451 for the years ended December 31, 2015 and 2014, respectively, of which none related to internal use capitalized software development costs. Amounts capitalized to internal use software for the years ended December 31, 2016 and 2015 were $14,582 and $1,018, respectively.

Note 8. Intangible Assets, net

The Company's definite-lived intangible assets as of December 31, 2016 and 2015 consisted of the following:

	December 31, 2016					
	Customer Relationships	Developed Technologies	Software License	Intellectual Property	Trade Name	Total
Gross carrying amount	$ 65,200	$ 98,930	$ 5,000	$ 2,400	$ 3,000	$ 174,530
Accumulated amortization	(7,707)	(44,665)	(1,562)	(720)	(750)	(55,404)
Intangible assets, net	$ 57,493	$ 54,265	$ 3,438	$ 1,680	$ 2,250	$ 119,126

	December 31, 2015					
	Customer Relationships	Developed Technologies	Software License	Intellectual Property	Trade Name	Total
Gross carrying amount	$ 13,200	$ 66,930	$ 5,000	$ 2,400	$ —	$ 87,530
Accumulated amortization	(1,680)	(30,326)	(313)	(240)	—	(32,559)
Intangible assets, net	$ 11,520	$ 36,604	$ 4,687	$ 2,160	$ —	$ 54,971

Amortization of finite-lived intangible assets is provided over their estimated useful lives on a straight-line basis or the pattern in which economic benefits are consumed, if reliably determinable. The Company reviews its finite-lived intangible assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Amortization expense were $22,845, $12,127 and $14,727 for the years ended December 31, 2016, 2015 and 2014, respectively.

During the year ended December 31, 2013, the Company recorded a $34,500 intangible asset, which was the consideration owed to the vendor for the right to use, operate, reproduce and sell the software solution exclusively within the United States and non-exclusively within the United Kingdom (the "UK Software License"). As of December 31, 2014, the Company paid the vendor $34,000. The remaining $500 owed to the vendor was presented on the Consolidated and Combined Balance Sheet within Accrued and Other Current Liabilities and was paid in the year ended December 31, 2015. Prior to the impairment discussed below, the UK Software License was being amortized over a period of five years to coincide with the license term.

(Dollars in thousands, except per share amounts)

During the year ended December 31, 2016, the Company recorded $87,000 of definite-lived intangible assets related to the acquisition of NaviNet (See Note 3). These intangibles are amortized over a period of four to fifteen years.

During the year ended December 31, 2015, the Company recorded $29,600 of definite-lived intangible assets related to the acquisition of HCS (See Note 3). These intangible assets are amortized over a period of five to seven years.

During the year ended December 31, 2014, the Company recorded $23,400 for an intangible asset related to developed technologies as a result of the NDO acquisition (See Note 3). This intangible asset is amortized over a period of seven years.

On September 29, 2015, the Company entered into an exclusive license agreement with NorthShore University Health System ("NorthShore") to further develop their Health Heritage software platform and to license the software to customers. As part of the agreement, the Company paid NorthShore a one-time license fee of $5,000 and will pay royalties of at least $750 annually for the first four years of the agreement. The Company will have no obligation to pay any additional royalties after 7 years or once aggregate royalties reach $5,000.

The estimated future intangibles amortization expense over the next five years and thereafter for the intangible assets that exist as of December 31, 2016 is as follows:

	Amounts
2017	$ 19,078
2018	18,478
2019	18,166
2020	14,958
2021	11,646
Thereafter	36,800
Total future intangibles amortization expense	$ 119,126

Impairment

During the year ended December 31, 2014, the Company determined that a triggering event for the UK Software License had occurred given the nominal sales that had occurred during the year and the minimal progress made in developing and distributing the software in the licensed territories. The Company determined that the UK Software License had no fair value given the significant amount of costs required to further develop the software to a point in which it could be sold in the licensed territories. Therefore, the Company fully impaired the intangible asset on December 31, 2014 and recorded an impairment loss of $24,150 within operating expenses.

Note 9. Goodwill

The Company performed a qualitative test on October 1, 2016 and 2015 for its single reporting unit to test for goodwill impairment. By review of macroeconomic conditions, industry and market conditions, cost factors, overall financial performance compared with prior projections, and other relevant entity-specific events, the Company determined that the fair value of the reporting unit was significantly in excess of the carrying value, and therefore concluded that a quantitative test was not necessary and as a result goodwill was not impaired as of December 31, 2016 and 2015.

(Dollars in thousands, except per share amounts)

Goodwill activity during the years ended December 31, 2015 and 2016 is shown as follows:

	Amounts
Balance at January 1, 2015	$ 33,368
Activity during the year:	
HCS acquisition (See Note 3)	23,350
Balance at December 31, 2015	56,718
Activity during the year:	
NaviNet acquisition (See Note 3)	74,076
HCS measurement period adjustment (See Note 3)	274
Net activity during the year	74,350
Balance at December 31, 2016	$ 131,068

The Company added $74,076 of goodwill related to the acquisition of NaviNet on January 1, 2016 (See Note 3).

On July 1, 2015, the Company added $23,624 of goodwill related to the acquisition of the HCS business (See Note 3).

During the year ended December 31, 2014, the Company sold its 80.0% fully diluted equity interest in Qi Imaging to Ziosoft KK (See Note 21). The Company allocated $424 of goodwill to the Qi Imaging reporting unit and derecognized this goodwill when the business was sold.

Measurement period adjustments during the year ended December 31, 2016 reflected a decrease of $26 (See Note 3). No measurement period adjustments were recorded during the years ended December 31, 2015 and 2014.

Note 10. Investments

Equity method investments

Investment in NantOmics during 2015

In 2015 the Company purchased a total of 169,074,539 Series A-2 units of NantOmics, LLC (“NantOmics”), a related party of the Company, for an aggregate purchase price of $250,774. 67,385,444 Series A-2 units were acquired on June 19, 2015, 101,078,167 Series A-2 units were acquired on June 30, 2015 and 610,928 Series A-2 units were acquired on September 8, 2015, for aggregate price of $250,000 in cash and the remainder in exchange for NantOmics' subsidiary's purchase of NantHealth’s equity interests in TRM (See Investment in TRM and sale to NantCRO below). The Series A-2 units do not have any voting rights and represent approximately 14.28% of NantOmics’ issued and outstanding membership interests. NantOmics is majority owned by NantWorks and delivers molecular diagnostic capabilities with the intent of providing actionable intelligence and molecularly driven decision support for cancer patients and their providers at the point of care.

The Company applied the equity method to account for its investment in NantOmics as the interest in the equity is similar to a partnership interest. Further, the Company has the ability to exert significant influence over the operating and financial policies of the entity since NantWorks controls both NantHealth and NantOmics. The difference between the carrying amount of the investment in NantOmics and the Company’s underlying equity in NantOmics’ net assets relate to both definite and indefinite-lived intangible assets. The Company attributed $28,195 and $14,382 of these differences to NantOmics’ developed technologies and its reseller agreement with the Company, respectively, prior to the application of developed technology intangibles included in NantOmics net assets, and the remaining basis differences were attributed to goodwill. The Company amortizes the basis differences related to the definite-lived intangible assets over the assets’ estimated useful lives and records these amounts as a reduction in the carrying amount of its investment and an increase in its equity method loss.

(Dollars in thousands, except per share amounts)

The Company reports its share of NantOmics' income or loss and the amortization of basis differences using a one quarter lag. For the year ended December 31, 2016, the Company recognized $40,994 of loss related to this investment, including a $29,816 impairment charge as described below. From the date of the initial investment at June 19, 2015 through December 31, 2015, the Company recognized $2,584 of loss related to this investment, and no impairment charge recorded for that same period.

During the year ended December 31, 2016, the Company determined that an other than temporary decrease in the value of the investment in NantOmics had occurred. The impairment analysis compared the estimated fair value of the Company's investment in NantOmics to its carrying value. The decline in the fair value was primarily caused by a change in the risk profile of the financial projections for NantOmics resulting from the delay in the Company's GPS revenue growth.

Key assumptions in the income approach include NantOmics' forecasted revenue streams, operating expenses, capital expenditures, working capital requirements, tax rate and the discount rate used to determine the present value of the estimated future cash flows.

As a result of the analysis, the Company recorded an other than temporary impairment on its equity method investment in NantOmics of $29,816 during the year ended December 31, 2016. The Company based its assumptions on projected financial information that the Company believes is reasonable; however, actual results may differ materially from those projections. It is reasonably possible that the estimate of the impairment of the equity method investment in NantOmics will change in the near term due to the following: actual NantOmics cash distribution is materially lower than expected, significant adverse changes in NantOmics's operating environment, increase in the discount rate, and changes in other key assumptions which require judgment and are forward looking in nature.

The Company used the following summarized financial information for NantOmics for the trailing twelve months ended September 30, 2016 to record its equity investment method losses for the year ended December 31, 2016:

	Trailing Twelve Months Ended September 30, 2016
Sales	$ 5,189
Gross loss	(5,752)
Loss from operations	(42,215)
Net loss	(36,435)
Net loss attributable to NantOmics	(34,236)

Investment in NantPharma sold during 2014

During the year ended December 31, 2013, the Company purchased a minority equity interest in NantPharma, LLC, a related party entity of the Company ("NantPharma"), that was sold during the year ended December 31, 2014, and generated $1,525 of income for the year ended December 31, 2014 (See Note 21). There was no balance of investment in NantPharma as of December 31, 2016 and 2015.

Other investments

Investment in IOBS during 2015

On June 16, 2015, the Company invested $1,750 in Innovative Oncology Business Solutions, Inc. ("IOBS") in exchange for 1,750,000 shares of IOBS's Series A preferred stock. IOBS offers community oncology practices an alternative medical home model for oncology patients that improves health outcomes, enhances patient care experiences and significantly reduces costs of care. The shares of preferred stock represent 35.0% of the outstanding equity of IOBS on an as-converted basis. The Company applied the cost method to account for its investment because the preferred stock is not considered in-substance common stock, is not considered a debt instrument as the Company cannot unilaterally demand redemption of the preferred stock and the preferred stock does not have a readily determinable fair value.

Investment in TRM and sale to NantCRO during 2015

On September 8, 2015, the Company completed a Contribution Agreement with the members of Translational Research Management, LLC ("TRM") whereby those members contributed their 54% equity interest in TRM in exchange for $250 in cash and 267,905 of the Company's Series A units. TRM is a management services organization committed to building a nationwide network of community based medical oncology professionals dedicated to offering research studies to their patients. On June 1, 2016, the Series A units issued to TRM were converted into 44,778 shares of the Company's common stock.

On the same day, the Company sold its 54% equity interest in TRM to NantCRO, LLC, a wholly owned subsidiary of NantOmics, in exchange for $250 in cash and 610,928 of NantOmics' Series A-2 units, which is equivalent in value to the purchase price paid by the Company. As a result, the Company's ownership percentage in NantOmics is approximately 14.28%.

Note 11. Variable Interest Entities

Prior to the transactions described below, the Company was the primary beneficiary of two VIEs, eviti, Inc. ("eviti") and Qi Imaging, and consolidated and combined the financial statements for these entities. The Company also had a variable interest in NDO but was not considered the primary beneficiary.

IOBS

On June 16, 2015, the Company invested $1,750 in IOBS' Series A preferred stock and therefore has a variable interest in IOBS. The shares of preferred stock represent 35.0% of the outstanding equity of IOBS on an as-converted basis. The Company applied the cost method to account for its investment because the preferred stock is not considered in-substance common stock, is not considered a debt instrument as the Company cannot unilaterally demand redemption of the preferred stock and the preferred stock does not have a readily determinable fair value.

As of December 31, 2016 and 2015, IOBS was considered a variable interest entity. The Company is not the primary beneficiary of IOBS because it only has the right to elect two of five directors. All major decisions of IOBS require the majority vote by the members of the board of directors, including decisions made to manage the business including hiring and firing of officers and other critical management functions. Therefore, the Company does not consolidate IOBS.

eviti

In September and October of 2014, NantHealth purchased all of the non-controlling interests in eviti, which resulted in eviti becoming a wholly-owned subsidiary of NantHealth (See Note 17). Upon acquisition of the non-controlling interests, eviti ceased to be a VIE as it was determined that eviti's equity was sufficient to finance its activities without additional subordinated financial support.

Qi Imaging

On April 25, 2014, NantHealth sold all of its equity interest in Qi Imaging to Ziosoft KK and deconsolidated the related assets and liabilities of Qi Imaging as it no longer had a variable interest in Qi Imaging and did not have the power to control Qi Imaging's Board of Directors (See Note 21).

NDO

Prior to its acquisition of NDO on June 18, 2014, the Company had a variable interest in NDO but was not the primary beneficiary because it only had the right to elect three of six directors to NDO's board of directors. All major decisions of NDO required the majority vote by the members of the board of directors, including decisions related to the approval of the annual operating budget and the hiring, firing, and compensation of all key executives. Therefore, NantHealth did not consolidate NDO prior to June 18, 2014.

However, upon purchasing 100% of NDO's outstanding equity interests that it did not already own in June of 2014, NantHealth received the right to appoint all members of NDO's board of directors. Upon completion of the acquisition, NDO ceased to be a VIE as NDO's equity was sufficient to finance its activities without additional subordinated financial support. Therefore, NantHealth consolidated NDO under the voting interest model and applied purchase accounting as of June 18, 2014 (See Note 3).

Note 12. Convertible Notes

In December 2016, the Company entered into the Purchase Agreement with J.P. Morgan Securities LLC and Jefferies LLC, as representatives of the several initial purchasers named therein (collectively, the “Initial Purchasers”), to issue and sell $90,000 in aggregate principal amount of its 5.50% senior convertible notes due 2021 ("Convertible Notes") in a private placement to qualified institutional buyers pursuant to Rule 144A under the Securities Act of 1933, as amended (the “Securities Act”) and to non-U.S. persons pursuant to Regulation S under the Securities Act. In December 2016, the Company entered into a purchase agreement (the “Cambridge Purchase Agreement”) with Cambridge Equities, L.P., an entity affiliated with Dr. Patrick Soon-Shiong, the Company’s Chairman and Chief Executive Officer (“Cambridge”), to issue and sell $10,000 in aggregate principal amount of the Convertible Notes in a private placement pursuant to an exemption from the registration requirements of the Securities Act afforded by Section 4(a)(2) of the Securities Act. In December 2016, pursuant to the exercise of the overallotment by the Initial Purchasers, the Company issued an additional $7,000 principal amount of the Convertible Notes. The total net proceeds from this offering were approximately $102,714, $9,917 from Cambridge and $92,797 from the initial purchasers, after deducting of initial purchasers’ discount and debt issuance costs of $4,286 in connection with the Convertible Notes offering.

On December 21, 2016, the Company entered into an Indenture, relating to the issuance of the Convertible Notes (the “Indenture”), by and between the Company and U.S. Bank National Association, as trustee (the “Trustee”). The interest rates are fixed at 5.50% per year, payable semi-annually on June 15 and December 15 of each year, beginning on June 15, 2017. The Convertible Notes will mature on December 15, 2021, unless earlier repurchased by the Company or converted pursuant to their terms.In connection with the offering of the Convertible Notes, on December 15, 2016, the Company entered into a Second Amended and Restated Promissory Note which amends and restates the Amended and Restated Promissory Note, dated May 9, 2016, between the Company and NantCapital, to, among other things, extend the maturity date of the Promissory Note to June 30, 2022 and to subordinate the Promissory Note in right of payment to the Convertible Notes (See Note 21).

The initial conversion rate of the Convertible Notes is 82.3893 shares of common stock per $1 principal amount of Convertible Notes (which is equivalent to an initial conversion price of approximately $12.14 per share). Prior to the close of business on the business day immediately preceding September 15, 2021, the Convertible Notes will be convertible only under the following circumstances:

(1) during any calendar quarter commencing after March 31, 2017 (and only during such calendar quarter), if, for at least 20 trading days (whether or not consecutive) during the 30 consecutive trading day period ending on the last trading day of the immediately preceding calendar quarter, the last reported sale price of the Company’s common stock on such trading day is greater than or equal to 120% of the conversion price on such trading day;

(2) during the five business day period after any five consecutive trading day period in which, for each day of that period, the trading price per $1 principal amount of the Convertible Notes for such trading day was less than 98% of the product of the last reported sale price of the Company’s common stock and the conversion rate on such trading day; or

(3) upon the occurrence of specified corporate transactions as described in the Indenture agreement.

Upon conversion, the Convertible Notes will be settled in cash, shares of the Company’s common stock or any combination thereof at the Company’s option.

Upon the occurrence of a fundamental change (as defined in the Indenture), holders may require the Company to purchase all or a portion of the Convertible Notes in principal amounts of $1 or an integral multiple thereof, for cash at a price equal to 100% of the principal amount of the Convertible Notes to be purchased plus any accrued and unpaid interest to, but excluding, the fundamental change purchase date. The conversion rate will be subject to adjustment upon the occurrence of certain specified events.

On or after the date that is one year after the last date of original issuance of the Convertible Notes, if the last reported sale price of the Company’s common stock for at least 20 trading days (whether or not consecutive) during the period of 30 consecutive trading days ending within the five trading days immediately preceding a conversion date is greater than or equal to 120% of the conversion price on each applicable trading day, the Company will make an interest make-whole payment to a converting holder (other than a conversion in connection with a make-whole fundamental change in which the conversion rate is adjusted) equal to the sum of the present values of the scheduled payments of interest that would have been made on the Convertible Notes to be converted had such Convertible Notes remained outstanding from the conversion date through the earlier of (i) the date that is three years after the conversion date and (ii) the maturity date if the Convertible Notes had not been so converted. The present values of the remaining interest payments will be computed using a discount rate equal to 2.0%. The Company may pay any interest make-whole payment either in cash or in shares of its common stock, at the Company’s election as described in the Indenture.

(Dollars in thousands, except per share amounts)

The Company accounts for convertible debt instruments that may be settled in cash upon conversion (including partial cash settlement) by recording the liability and equity components of the convertible debt separately. The liability component is computed based on the fair value of a similar liability that does not include the conversion option. The liability component includes both the value of the embedded interest make-whole derivative and the carrying value of the Convertible Notes. The equity component is computed based on the total debt proceeds less the fair value of the liability component. The equity component is also recorded as debt discount and amortized as interest expense over the expected term of the Convertible Notes.

The liability component of the Convertible Notes on the date of issuance was computed as $83,079, consisting of the value of the embedded interest make-whole derivative of $1,499 and the carrying value of the Convertible Notes of $81,580. Accordingly, the equity component on the date of issuance was $23,921. If the debt will be considered current at the balance sheet date, the liability component of the convertible notes will be classified as current liabilities and presented in current portion of convertible notes debt and the equity component of the convertible debt will be considered a redeemable security and presented as redeemable equity on the Company's Condensed and Consolidated Balance Sheet.

Offering costs of $4,286 related to the issuance of the Convertible Notes are allocated to the liability and equity components in proportion to the allocation of the proceeds and accounted for as deferred financing offering costs and equity issuance costs, respectively. Approximately $972 of this amount was allocated to equity and the remaining $3,314 have been capitalized as deferred financing offering costs.

The debt discounts and deferred financing offering costs on the Convertible Notes are being amortized to interest expense over the contractual terms of the Convertible Notes, using the effective interest method at an effective interest rate of 12.82%.

As of December 31, 2016, the remaining life of the Convertible Notes is approximately 60 months. The following table summarizes how the issuance of the Convertible Notes is reflected in the Company's Consolidated and Combined Balance sheet as of December 31, 2016:

	Related party	Others	Total
Gross proceeds	$ 10,000	$ 97,000	$ 107,000
Interest make-whole derivative	(148)	(1,351)	(1,499)
Conversion option reported in equity as additional paid-in capital	(2,233)	(21,688)	(23,921)
Deferred financing offering costs	(65)	(3,249)	(3,314)
Amortization of debt discounts and deferred financing offering costs	10	98	108
Unamortized debt discounts and deferred financing offering costs	(2,436)	(26,190)	(28,626)
Net carrying amount	$ 7,564	$ 70,810	$ 78,374

The following table sets forth the Company's interest expense incurred for the year ended December 31, 2016:

	Related party	Others	Total
Accrued coupon interest expense	$ 15	$ 139	$ 154
Amortization of debt discounts	10	86	96
Amortization of deferred financing offering costs	—	12	12
Total convertible notes interest expense	$ 25	$ 237	$ 262

Note 13. Fair Value Measurements

Assets and liabilities measured at fair value on a recurring basis as of December 31, 2016 and 2015 consisted of the following:

(Dollars in thousands, except per share amounts)

	December 31, 2016			
	Total fair value	Quoted price in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Assets				
Cash equivalents	$ 149,067	$ 149,067	$ —	$ —
Marketable securities	—	—	—	—
	149,067	149,067	—	—
Liabilities - Interest make-whole derivative	271	—	—	271

	December 31, 2015			
	Total fair value	Quoted price in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Assets				
Cash equivalents	$ 630	$ 630	$ —	$ —
Marketable securities	1,243	1,243	—	—
	1,873	1,873	—	—

The Company's intangible assets and goodwill are initially measured at fair value and any subsequent adjustment to the initial fair value occurs only if an impairment charge is recognized. During the year ended December 31, 2016 and 2015, there were no adjustments to the fair value of these assets. During the year ended December 31, 2014, the Company impaired certain of the intangible assets and adjusted these specific assets to fair value on such date (See Note 8).

The fair values of the Company's marketable securities and cash equivalents (consisting of mainly money market accounts) are based on quoted market prices in active markets with no valuation adjustment (See Note 8).

Level 3 Inputs

In December 2016, the Company issued $107,000 in aggregate principal amount of Convertible Notes due December 15, 2021, of which $10,000 issued to a related party (See Note 12). The Convertible Notes include an interest make-whole feature whereby if a noteholder converts any of the Convertible Notes one year after the last date of original issuance of the Convertible Notes, they are entitled, in addition to the other consideration payable or deliverable in connection with such conversion, to an interest make-whole payment equal to the sum of the present values of the scheduled payments, computed using a discount rate equal to 2.0%, of interest that would have been made on the Convertible Notes to be converted had such Convertible Notes remained outstanding from the conversion date through the earlier of (i) the date that is three years after the conversion date and (ii) the maturity date if the Convertible Notes had not been so converted. The Company may pay any interest make-whole payment either in cash or in shares of its common stock, at the Company's election as described in the Indenture. The Company has determined that this feature is an embedded derivative and have recognized the fair value of this derivative as a liability in the Company's Condensed and Consolidated Balance Sheet, with subsequent changes to fair value recorded through earnings at each reporting period on the Company's Condensed and Consolidated Statements of Operations as change in fair value of derivative liability. The fair value of this embedded derivative was determined based on a binomial lattice model.

The following tables set forth a summary of changes in the fair value of Level 3 liabilities for the year ended December 31, 2016:

(Dollars in thousands, except per share amounts)

	December 31, 2015	Additions	Change in fair value	December 31, 2016
Interest make-whole derivative liability:				
Related party	$ —	$ 148	$ (123)	$ 25
Others	—	1,351	(1,105)	246
	$ —	$ 1,499	$ (1,228)	$ 271

As of December 31, 2016, the fair value and carrying value of the Company's Convertible Notes were:

	Fair value	Carrying value	Face value
5.5% convertible senior notes due December 15, 2021:			
Related party	$ 11,081	$ 7,564	$ 10,000
Others	107,491	70,810	97,000
	$ 118,572	$ 78,374	$ 107,000

The fair value shown above represents the fair value of the total debt instrument, inclusive of both the liability and equity components, while the carrying value represents only the carrying value of the liability.

Prior to the acquisition of NDO on June 18, 2014, the Company's investment in NDO was accounted for at fair value on a recurring basis and was adjusted to fair value when the carrying value differed from fair value. The Company categorized NDO as a Level 3 investment due to the subjective nature of the unobservable inputs used. The fair values were estimated using an equally weighted combination of a discounted cash flow analysis and a market comparable approach. The significant inputs include a discount rate, long-term growth rate, financial projections, net working capital requirements, selected multiples, and a control premium.

The following table presents the activity of the Company's financial assets and liabilities that were measured at fair value using significant unobservable inputs during the year ended December 31, 2014:

	Amounts
Balance at December 31, 2013	$ 13,833
Fair value adjustment	172
Derecognition upon acquisition (See Note 3)	(14,005)
Balance at December 31, 2014	$ —

Note 14. Commitments and Contingencies

The Company's principal commitments consist of obligations under its outstanding debt obligations, non-cancelable leases for its office space and certain equipment and vendor contracts to provide research services, and purchase obligations under license agreements and reseller agreements.

Lease Arrangements

The Company leases both real estate and equipment used in its operations and classifies those leases as either operating or capital leases for accounting purposes. As of December 31, 2016 and 2015, the Company had no material capital leases and the remaining lives of its operating leases ranged from one to five years.

(Dollars in thousands, except per share amounts)

Rental expense associated with operating leases is charged to expense in the year incurred and is included in the Consolidated and Combined Statements of Operations. For the years ended December 31, 2016, 2015 and 2014 the rental expense was charged to selling, general and administrative expense in the amount of $4,526, $2,108 and $1,348, respectively.

As of December 31, 2016, the Company's future minimum rental commitments under its non-cancellable operating leases are as follows:

	Amounts
2017	$ 4,568
2018	2,539
2019	641
2020	508
2021	327
Total minimum rental commitments	$ 8,583

Related Party Promissory Note

On January 4, 2016, the Company executed a $112,666 demand promissory note in favor of NantCapital to fund the acquisition of NaviNet, On May 9, 2016 and December 15, 2016, the promissory note with NantCapital was amended to provide that all outstanding principal and accrued interest is due and payable on June 30, 2022, and not on demand (See Note 21).

Indenture obligations under Convertible Notes

On December 21, 2016, the Company entered into the Indenture relating to the issuance of the $107,000 Convertible Notes, by and between the Company and U.S. Bank National Association the Trustee. The interest rates are fixed at 5.50% per year, payable semi-annually on June 15 and December 15 of each year, beginning on June 15, 2017. The Convertible Notes will mature on December 15, 2021, unless earlier repurchased by the Company or converted pursuant to their terms (See Note 12).

Purchase obligations Under License Agreements and Reseller Agreements

In September 2016, the Company entered into a Second Amended and Restated Reseller Agreement for genomic and proteomic sequencing services and related bioinformatics and analysis services with NantOmics, with an effective date of June 19, 2015 (See Note 21).

Obligations Under Exclusive License Agreement with Northshore

On September 29, 2015, the Company entered into an exclusive license agreement with NorthShore to further develop their Health Heritage software platform ("Health Heritage"), and to license the software to customers (See Note 8).

Regulatory Matters

The Company is subject to regulatory oversight by the U.S. Food and Drug Administration and other regulatory authorities with respect to the development, manufacturing, and sale of some of the solutions. In addition, the Company is subject to the Health Insurance Portability and Accountability Act ("HIPAA"), the Health Information Technology for Economic and Clinical Health Act and related patient confidentiality laws and regulations with respect to patient information. The Company reviews the applicable laws and regulations regarding effects of such laws and regulations on its operations on an on-going basis and modifies operations as appropriate. The Company believes it is in substantial compliance with all applicable laws and regulations. Failure to comply with regulatory requirements could have a significant adverse effect on the Company's business and operations.

Legal Matters

The Company is, from time to time, subject to claims and litigation that arise in the ordinary course of its business. The Company intends to defend vigorously any such litigation that may arise under all defenses that would be available. In the opinion of management, the ultimate outcome of proceedings of which management is aware, even if adverse to them, would not have a material adverse effect on the Company's Consolidated and Combined Financial Condition or Results Of Operations. Regardless of the outcome, litigation can have an adverse impact on the Company because of defense and settlement costs, diversion of management resources and other factors. See subsequent event related to securities litigation as described in Note 24.

(Dollars in thousands, except per share amounts)

Note 15. Income Taxes

The components of the provision for income taxes are presented in the following table:

	Year Ended December 31,		
	2016	2015	2014
Current:			
Federal	$ 228	$ 338	$ —
State	28	52	5
Foreign	318	15	—
Total current provision	574	405	5
Deferred:			
Federal	(11,864)	—	—
State	(2,671)	—	—
Entity status change	(8,725)	—	—
Foreign	(125)	—	—
Total deferred benefit	(23,385)	—	—
Provision for (benefit from) income taxes, net	$ (22,811)	$ 405	$ 5

The provision for income taxes differs from the amount of income tax determined by applying the applicable U.S. statutory federal income tax rate to pretax loss as a result of the following differences:

	Year Ended December 31,		
	2016	2015	2014
United States federal tax at statutory rate	34.00 %	34.00 %	34.00 %
Items affecting federal income tax rate:			
State tax rate, net of federal benefit	4.02 %	0.07 %	— %
Pass - through losses	(7.04)%	(30.70)%	(26.50)%
Valuation allowance	(28.04)%	(2.60)%	(5.90)%
LLC conversion to C corporation	10.29 %	— %	— %
Stock compensation	(1.08)%	— %	— %
Other adjustments	(1.13)%	(1.47)%	(1.60)%
Effective income tax rate	11.02 %	(0.70)%	— %

Prior to June 1, 2016, NantHealth was a limited liability company taxed as partnership. It also owned a number of subsidiaries, including single member limited liability companies taxed as disregarded entities and corporations. As detailed in the table above, a significant amount of the Company's losses before income taxes was generated by pass-through entities during the years ended December 31, 2015 and 2014. Since the losses of the pass-through entities flow directly to the members of the Company for tax purposes, no provision for income taxes was reflected in the Consolidated and Combined Financial Statements for these entities. The Company recorded a tax provision on its domestic and foreign corporate subsidiaries.

(Dollars in thousands, except per share amounts)

From January 1, 2016 to May 31, 2016, the Company recorded an income tax benefit of $5,986, mainly consisted of the deferred tax benefit from the amortization of NaviNet's purchase accounting intangibles when NaviNet was a stand-alone corporation for tax purposes. On June 1, 2016, NantHealth converted from a limited liability company to a C corporation and formed a consolidated group with its domestic corporate subsidiaries for federal tax purposes. Upon the LLC conversion, the Company recorded $8,725 of tax benefit that represents the valuation allowance release to offset the purchase accounting deferred tax liability recorded on NaviNet's separate company basis, and tax expense related to certain deferred tax liability arising from tax goodwill amortization. Going forward, the Company will record federal and state tax provision of the consolidated group, and foreign tax provision of its foreign subsidiaries.

The Company's issuance of the Convertible Notes and the requirement for the Company to separately account for the Note liability (debt), and equity (conversion option), and make-whole liability (other liability) components of the Convertible Notes resulted in a difference between the carrying amount and the tax basis of the Convertible Notes. This temporary difference resulted in the Company recognizing a deferred tax liability for the temporary difference between the carrying value and the tax basis of the Convertible Notes excluding the make-whole liability, which was recorded as an adjustment to additional paid-in capital of $8,631. The creation of the deferred tax liability recognized as a component of equity represents a source of future taxable income pursuant to ASC 740, "*Income Taxes*". The Company considered amounts recorded directly to equity in evaluating the need for a valuation allowance on deferred tax assets related to continuing operations. Accordingly, the Company recognized a tax benefit in continuing operations that represents the hypothetical realizable benefit of its current year operating losses resulting from the creation of the deferred tax liability in an amount equal to the $8,631 deferred tax liability that it recognized in connection with the issuance of the Convertible Notes.

Significant components of the Company's deferred tax assets and liabilities as of December 31, 2016 and 2015 are as follows:

	December 31,	
	2016	2015
Deferred income tax assets:		
Accounts payable and accrued expenses	$ 3,231	$ 29
Inventory impairment	431	255
Deferred revenue	10,229	841
Allowance for doubtful accounts	124	399
Property, plant and equipment, net	3,279	131
Intangibles	2,918	36
Investments	15,653	—
Stock compensation	11,574	—
Other	1,144	59
Net operating loss carryforwards	93,974	37,387
Less: Valuation allowance	(88,861)	(30,850)
Total deferred income tax assets	53,696	8,287
Deferred income tax liabilities:		
Accounts receivable, net	(250)	—
State taxes	(2,933)	(1,290)
Intangible assets, net	(36,581)	(6,812)
Convertible notes	(9,700)	—
Deferred implementation cost	(3,753)	—
Other	(1,233)	(185)
Total deferred income tax liabilities	(54,450)	(8,287)
Deferred income taxes, net	$ (754)	$ —

(Dollars in thousands, except per share amounts)

The realization of deferred income tax assets may be dependent on the Company's ability to generate sufficient income in future years in the associated jurisdiction to which the deferred tax assets relate. The Company considers all available positive and negative evidence, including scheduled reversals of deferred income tax liabilities, projected future taxable income, tax planning strategies, and recent financial performance. Based on the review of all positive and negative evidence, including a three year cumulative pre-tax loss, the Company concluded that except for the deferred tax liability recorded on amortization of certain goodwill due to its indefinite life, it should record a full valuation allowance against all other net deferred income tax assets at December 31, 2016 and 2015 as none of these deferred income tax assets were more likely than not to be realized as of the balance sheet dates. However, the amount of the deferred income tax assets considered realizable may be adjusted if estimates of future taxable income during the carryforward period are increased or if objective negative evidence in the form of cumulative losses is no longer present.

A summary of activity in the valuation reserve deducted from deferred tax assets for the years ended December 31, 2016, 2015 and 2014 is as follows:

	Balance at beginning of the year	Additions (Adjustments)	Deductions	Balance at the end of the year
Year to Date December 31, 2016	$ 30,849	66,731	(8,719)	$ 88,861
Year to Date December 31, 2015	$ 28,995	1,854	—	$ 30,849
Year to Date December 31, 2014	$ 22,746	6,249	—	$ 28,995

The Company records a tax benefit from uncertain tax positions only if it is more likely than not the tax position will be sustained with the taxing authority having full knowledge of all relevant information. The Company records a liability for unrecognized tax benefits from uncertain tax positions as discrete tax adjustments in the first period that the more-likely-than-not threshold is not met. As of December 31, 2016 and 2015, the Company had approximately $977 and $879, respectively, of unrecognized tax benefits, without interest or penalty, all of which would impact the effective tax rate if recognized. The unrecognized tax benefits are recorded consistent with ASU No. 2013-11, Income Taxes (Topic 740): Presentation of an Unrecognized Tax Benefit When a Net Operating Loss Carryforward, a Similar Tax Loss, or a Tax Credit Carryforward Exists (a consensus of the Emerging Issues Task Force), in two parts. The first part is recorded as a reduction of the gross deferred income tax asset in the amount of $382 and the second part is recorded as an increase to income tax payable in the amount of $595.

	December 31,	
	2016	2015
Balance as of January 1	$ 879	$ —
Increases related to tax positions taken during the current year	98	879
Balance as of December 31	$ 977	$ 879

The Company's policy is to recognize interest and penalties related to uncertain tax positions in income tax expense. As of December 31, 2016 and 2015, there are no material interest and penalties associated with unrecognized tax benefits recorded in our consolidated statement of operations or balance sheet. Any changes to unrecognized tax benefits recorded as of December 31, 2016 that are reasonably possible to occur within the next 12 months are not expected to be material.

One of the Company's corporate subsidiary, Assisteo Holding, Inc, is currently under an IRS audit for the tax year 2014. The Company is no longer subject to income tax examination by the U.S. federal, state or local tax authorities for years ended December 31, 2011 or prior, however, its tax attributes, such as net operating loss ("NOL") carryforwards and tax credits, are still subject to examination in the year they are used.

As of December 31, 2016, the Company had federal, state and foreign NOL carryforwards of $238,865, $169,840 and $2,565, respectively, expiring at various dates through 2036. Utilization of the NOL carryforwards is subject to annual limitations due to ownership change limitations that occurred or could occur in the future as provided by Section 382 of the Internal Revenue Code of 1986, as amended, as well as similar state and foreign provisions. These ownership changes may limit the amount of the NOL carryforwards that can be utilized annually to offset future taxable income. The total NOL amounts above do not include the NOLs expected to expire.

As of December 31, 2016, we had an immaterial amount of unremitted earnings related to certain foreign subsidiaries that were indefinitely reinvested. Since these unremitted earnings have been indefinitely reinvested, deferred taxes were not provided. The unrecognized deferred tax liability associated with these unremitted earnings is immaterial

As described in Note 2, the Company early adopted ASU 2016-06, *Improvements to Employee Share-Based Payment Accounting,* simplifying the accounting for employee share-based payment transactions, including the accounting for income taxes and statutory withholding requirements. Because of the Company's current valuation allowance position, the adoption of ASC 2016-09 did not result in current tax expense or benefit related to vested stock awards during the year ended December 31, 2016. As a result, the Company did not exclude any excess tax benefits from the calculation of diluted earnings per share during the year ended December 31, 2016, and there was no method change to the cash flow presentation as required by ASU 2016-09.

Note 16. Redeemable Series F Units / Common Stock

On June 20, 2014, the Kuwait Investment Office (“KIO”) purchased 53,580,996 Series F units of the Company through a Delaware blocker corporation, KHealth Holdings, Inc. (“KHealth”), at a purchase price of $2.7995 per unit for an aggregate amount of $150,000. KIO is the London Office of the Kuwait Investment Authority (“KIA”). As part of the investment, KIO had the right and option, but not the obligation, to require NantHealth to redeem 100% of the outstanding shares of KHealth at an amount equal to the original purchase price of $150,000 plus accrued annual interest of 7.0% if the Company had not (i) filed a registration statement on Form S-1 with the Securities and Exchange Commission on or before December 20, 2015 or (ii) had not completed a qualified initial public offering on or before June 20, 2016 (the “Put Right”). KIO did not exercise the Put Right, and it expired as of June 20, 2016.

As of December 31, 2015, the Company determined that the redemption of the Series F units was probable due to the uncertainty of completing a qualified initial public offering under prong (ii) and, as such, accrued $16,042 of interest as a reduction to members’ equity. Prior to December 31, 2015, the Company had concluded that redemption was not probable and had not adjusted the carrying value of such units to redemption value. The Series F units were classified in the Consolidated and Combined balance sheet as of December 31, 2015 as temporary equity as a result of the contingent redemption feature.

As part of the LLC Conversion, the Series F units converted to 10,714,285 shares of redeemable common stock as of June 1, 2016. Since the Put Right expired unexercised on June 20, 2016, the shares of common stock owned by KIO are no longer redeemable and are included in Stockholders’ equity.

(Dollars in thousands, except per share amounts)

The change in net carrying amount of the Series F units and common stock owned by KIO for the years ended December 31, 2016, 2015 and 2014 consisted of the following:

	Redeemable Series F Units	Redeemable Common Stock	Common Stock and Additional-Paid-in-Capital
Balance at December 31, 2013	$ —	$ —	$ —
Issuance of units	150,000	—	—
Balance at December 31, 2014	150,000	—	—
Accretion to redemption value	16,042	—	—
Balance at December 31, 2015	166,042	—	—
Accretion to redemption value	4,375	—	—
Balance at June 1, 2016 pre-LLC Conversion	170,417	—	—
LLC Conversion	(170,417)	170,417	—
Balance at June 1, 2016 post-LLC Conversion	—	170,417	—
Accretion to redemption value	—	583	—
Balance at June 20, 2016 pre expiration of Put Right	—	171,000	—
Expiration of Put Right at June 20, 2016	—	(171,000)	171,000
Balance at June 20, 2016 post expiration of Put Right and at December 31, 2016	$ —	$ —	$ 171,000

Letter Agreement with NantWorks

On May 22, 2016, the Company signed a letter agreement with NantWorks whereby NantWorks agreed to purchase directly from KIO all of the outstanding shares of KHealth if KIO had elected to exercise its Put Right. KIO did not exercise its Put Right (which expired by its terms on June 20, 2016) and NantWorks, therefore did not purchase these shares.

Note 17. Non-Controlling Interests

During the years ended December 31, 2016 and 2015 there were no non-controlling interests outstanding for NantHealth's subsidiaries.

During a portion of 2014, there were non-controlling interests outstanding for certain of NantHealth's subsidiaries. As of December 31, 2014, however, there were no non-controlling interests outstanding as NantHealth owned 100% of each of its subsidiaries as a result of the transactions described below.

While the non-controlling interests were outstanding, the Company attributed the losses of these subsidiaries to the non-controlling interests using the HLBV method as this methodology best represented the economics of the non-controlling interests' share of the subsidiaries' losses for each period.

Under the HLBV method, the non-controlling interests were determined at each balance sheet date by calculating the amount the non-controlling interests would receive (or be obligated to pay) if the subsidiaries' assets were liquidated at book value, all outstanding expenses and debts were paid off, and the resulting cash was distributed to the investors of that subsidiary in accordance with the terms of the governing contractual arrangements. The difference between this amount at the beginning and end of each reporting period represented the non-controlling interests' share of the subsidiaries' net losses for that period.

The net loss attributable to the members of NantHealth equal to the total Consolidated and Combined Net Loss less the Net Loss Attributable To the Non-Controlling Interests.

(Dollars in thousands, except per share amounts)

Buyout of eviti non-controlling interests

In September and October of 2014, NantHealth acquired the non-controlling interests in eviti in exchange for issuing 567,930 of its Series A units and 1,515 Series C units to replace any unexercised, in-the-money stock options of eviti. The carrying value of the non-controlling interest was derecognized as of September 25, 2014 and the value was reclassified to NantHealth's Series A members' equity. On June 1, 2016, the Series A units and Series C units issued to non-controlling interests in eviti were converted into 94,908 shares of the Company's common stock.

Buyout of iSirona non-controlling interests

On December 31, 2012, the Company acquired the non-controlling interests in iSirona, LLC ("iSirona") for total consideration of up to $20,202 in cash and issuance of up to 9,197,700 of the Company's Series A units. The Company made an upfront payment to the former unit holders of iSirona of $13,468 in cash and issued 6,131,800 Series A units and also agreed to pay an earn-out in 2014 if iSirona achieved a certain revenue target during calendar year 2013. On June 1, 2016, the Series A units issued to former unit holders of iSirona were converted into 1,024,877 shares of the Company's common stock.

The carrying value of the non-controlling interest was derecognized as of December 31, 2012 and the difference between this amount and the sum of (i) the $13,468 upfront cash payment and (ii) the 6,131,800 of the Company's units measured at fair value was recognized in Series A members' equity. The fair value of the units at this date was the same price per unit paid by Verizon in October 2012, or $1.00 per unit.

In June 2014, the Company paid $5,608 in cash and issued 2,553,238 Series A units as payment of the earn-out associated with the purchase of the non-controlling interest in iSirona that occurred on December 31, 2012. The calculation of the earn-out payment was based on measuring the percentage of the revenue milestone that was achieved according to the terms of the earn-out outlined in the Agreement and Plan of Merger between NantHealth and iSirona as of December 31, 2012. The amounts paid to the non-employees in cash or through issuance of the Company's Series A units were recognized as additional consideration to purchase the non-controlling interest in May 2014, the period when NantHealth determined the revenue target had been achieved. On June 1, 2016, the Series A units issued for the purchase of the non-controlling interest in iSirona were converted into 426,754 shares of the Company's common stock.

The cash paid and equity issued to associates were treated as compensation expense since the payment required these associates to remain employed with the Company through the payment date. During the year ended December 31, 2014, the Company recognized $105 of stock-based compensation expense based on the earn-out that was paid to associates in the form of Series A units.

The following table shows the effects of changes in NantHealth's ownership interest in its subsidiaries on NantHealth's members' equity during the year ended December 31, 2014:

	Amounts
Net loss attributable to NantHealth	$ (84,425)
Transfers to (from) the non-controlling interests:	
Increase in NantHealth's Series A members' equity upon sale of Qi Imaging (See Note 21)	5,439
Decrease in NantHealth's Series A members' equity for acquisition of eviti's non-controlling interests	(75)
Decrease in NantHealth's Series A members' equity for acquisition of iSirona's non-controlling interests	(4,817)
Net transfers to (from) non-controlling interests	547
Change from net loss attributable to NantHealth and transfers to (from) the non-controlling interests	$ (83,878)

(Dollars in thousands, except per share amounts)

Note 18. Stockholders' Equity

Initial Public Offering

On June 7, 2016, the Company completed its IPO of 6,500,000 shares of common stock at a public offering price of $14.00 per share. Additionally, on June 9, 2016, the underwriters partially exercised their overallotment option to purchase an additional 400,000 shares of the common stock at $14.00 per share. The Company received $83,566 in proceeds from its IPO, after deducting underwriting discounts and commissions and offering costs of $13,034.

In connection with the pricing of the Company's IPO on June 1, 2016, $40,590 of principal and accrued interest on the Company's related party promissory notes with NantOmics was converted into 2,899,297 shares of the Company's common stock.

On July 25, 2016, the Company issued 1,056,689 shares of common stock, after withholding of approximately 538,794 shares to satisfy tax withholding obligations, to participants of the Phantom Unit Plan based in the United States whose phantom units vested as a result of the IPO. The Company made a cash payment of $5,738 to cover employee withholding taxes upon the settlement of these vested phantom units. The Company also paid $235 on August 9, 2016 to cash-settle 16,818 vested phantom units held by participants of the Phantom Unit Plan at the time of the IPO who were based outside of the United States.

LLC Conversion and Reverse Split

Upon completion of the LLC Conversion on June 1, 2016, (a) all of the Company's outstanding units automatically converted into shares of common stock, based on the relative rights of the Company's pre-IPO equityholders as set forth in the Company's limited liability company agreement (the "LLC Agreement") and (b) the Company adopted and filed a certificate of incorporation with the Secretary of State of the state of Delaware and adopted bylaws. The Company adopted and filed an amendment to its certificate of incorporation (the "Amended Certificate of Incorporation") with the Secretary of State of the state of Delaware to effect a 1-for-5.5 reverse stock split of its common stock on June 1, 2016.

Below is a summary of the number of member units pre LLC Conversion as converted into common shares:

	Pre Conversion (Units)
Former Series A Unit Holders	420,255,676
Former Series B Unit Holders	19,109,603
Former Series C Unit Holders	3,470,254
Former Series D Unit Holders	3,572,066
Former Series E Unit Holders	35,720,664
Former Series G Unit Holders	59,099,908
Former Series H Unit Holders	15,513,726
Total Member Units	556,741,897

The units in the table above were converted to 99,661,906 shares of common stock, of which 10,462 shares of restricted stock. The members' equity balance of $525,388 was reclassified into common stock and additional paid-in capital in the Consolidated and Combined Balance Sheet as of June 1, 2016.

LLC Agreement and Amended Certificate of Incorporation

Prior to the LLC Conversion, the Company's operations were governed by its LLC Agreement. Upon the consummation of the LLC Conversion, the Company converted into a corporation, and the LLC Agreement no longer governs the Company's operations or the rights of its equityholders.

The LLC Agreement provided that the board of directors had the power and discretion to manage and control the business, property and affairs of the company, but that certain actions required the consent of certain of the Company's former members. Under the LLC Agreement, the Company had units authorized, including Series A through H units. Each equityholder holding Series A, B, D, E, F, G or H units had one vote for each unit held. Profits interests units awarded under the Nant Health, LLC Profits Interests Plan (the "Profits Interests Plan") took the form of Series C units of the Company. Holders of Series C units did not have the right to vote. The LLC Agreement also set forth the rights of and restrictions on unitholders, including certain rights of first refusal and preemptive and co-sale rights. The LLC Agreement also provided that, upon the LLC Conversion, the allocation of shares of the Company's common stock among the pre-IPO equityholders was dependent upon the IPO price of its common stock, based on the relative rights of the pre-IPO equityholders as set forth in the LLC Agreement. As a result, as part of the LLC Conversion, the Company set the actual allocation of shares among its pre-IPO equityholders based upon the IPO price of its common stock.

Concurrently with the consummation of the LLC Conversion, the LLC Agreement was terminated, other than certain provisions relating to certain pre-termination tax matters and certain liabilities.

In accordance with the Company’s amended and restated certificate of incorporation, which was filed immediately following the closing of its IPO, the Company is authorized to issue 750,000,000 shares of common stock, with a par value of $0.0001 per share, and 20,000,000 shares of undesignated preferred stock, with a par value of $0.0001 per share. Holders of the Company’s common stock are entitled to one vote for each share held on all matters submitted to a vote of its stockholders. Holders of the Company’s common stock have no cumulative voting rights. Further, as of December 31, 2016, holders of the Company’s common stock have no preemptive, conversion, redemption or subscription rights and there are no sinking fund provisions applicable to the Company’s common stock. Upon liquidation, dissolution or winding-up of the Company, holders of the Company’s common stock are entitled to share ratably in all assets remaining after payment of all liabilities and the liquidation preferences of any outstanding shares of preferred stock. Subject to preferences that may be applicable to any outstanding shares of preferred stock, holders of the Company’s common stock are entitled to receive dividends, if any, as may be declared from time to time by the Company’s board of directors. As of December 31, 2016, there were no outstanding shares of preferred stock.

2016 Equity Issuances

NaviNet

On January 1, 2016, the Company issued 15,513,726 Series H units to 3BE Holdings, LLC for the acquisition of NaviNet at a purchase price of $3.3841 per unit for an aggregate amount of $52,500. The Series H units had substantially the same rights and preferences as the former Series B, D, E, F and G units that were outstanding at the time. On June 1, 2016, the Series H units issued to 3BE Holdings, LLC were converted into 3,749,998 shares of the Company’s common stock.

2015 Equity Issuances

Allscripts Investment

On June 29, 2015, the Company issued 59,099,908 Series G units to Allscripts Healthcare Solutions, Inc. (“Allscripts”), at a purchase price of $3.3841 per unit for an aggregate amount of $200,000. The Series G units had substantially the same rights and preferences as the former Series B, D, E and F units that were outstanding at the time. On June 1, 2016, the Series G units issued to Allscripts were converted into 14,285,714 shares of the Company’s common stock.

2014 Equity Issuances

Blackberry Investment

On March 31, 2014, the Company issued 3,572,031 Series D units to BlackBerry Corporation, a leader in mobile communications, at a purchase price of $2.7995 per unit for an aggregate amount of $10,000. The two companies are collaborating on the development of HIPAA-certified integrated clinical systems that transform the delivery of medical care. On June 1, 2016, the Series D units issued to BlackBerry Corporation were converted into 597,037 shares of the Company’s common stock.

KIA Investment

On April 28, 2014, KIA, through a Delaware blocker corporation, made a $100,000 investment in the Company in exchange for 35,720,664 Series E units at a purchase price of $2.7995 per unit. On June 1, 2016, the Series E units issued to KIA were converted into 5,000,002 shares of the Company’s common stock.

(Dollars in thousands, except per share amounts)

Blackstone and Other Investment

In July 2014, the Company issued 3,572,031 Series A units to the Blackstone Group ("Blackstone") in accordance with an Exchange Agreement executed during 2013. The issuance of the equity only resulted in an adjustment to the number of the issued and outstanding membership interests since the consideration from Blackstone was received in 2013 (See Note 21). Additionally, the Company issued 187,550 Series A units to an investor affiliated with Blackstone in exchange for $525 in cash. On June 1, 2016, the Series A units issued to Blackstone Group were converted into 31,347 shares of the Company's common stock.

Other Equity Contributions

In January 2015, the Company entered into an agreement to provide certain research related sequencing services to a research institution. The agreement provides that the institution pay the Company $10,000 in exchange for the Company providing sequencing services. Certain public and private charitable 501(c)(3) non-profit organizations provided partial funding for the sequencing and related bioinformatics costs associated with the project. The Company's Chairman and CEO serves as the CEO and a member of the board of directors of each of the non-profit organizations and by virtue of these positions he may have influence or control over these organizations. The institution was not contractually or otherwise required to use the Company's molecular profiling solutions or any of the Company's other products or services as part of the charitable gift, however, the institution did not have a requirement to order or pay for the services unless it first received private donor funding for the project. As a result, the Company does not classify the fees related to this project as revenue but instead classifies the amounts as deemed capital contributions from the Company's Chairman and CEO. During the years ended December 31, 2016 and 2015, $3,810 and $6,190 respectively, was recorded as a deemed capital contribution within members' equity or stockholders' equity. During the years ended December 31, 2016 and 2015, $2,286 and $3,714 of costs, respectively, were recorded as other services cost of revenue related to the service performed.

In December 2016, the Company entered into an agreement to provide genomic and proteomic sequencing and related bioinformatics services to an institution related to cancer research. The agreement provides that the institution pay the Company a fixed per-test fee in exchange for the services to be provided by the Company. A private charitable 501(c)(3) non-profit organization controlled by the Company's Chairman and CEO also made a charitable gift to the institution in December 2016. The gift does not contractually or otherwise require the institution to use the Company's molecular profiling solutions or any of the Company's other products or services. No amounts related to this arrangement have been recognized in the Company's Consolidated and Combined Balance Sheets or Statements of Operations as of or for the year ended December 31, 2016.

Note 19. Stock Based Compensation

The following table reflects the components of stock-based compensation expense recognized in the Company's Consolidated and Combined Statements of Operations:

	Year Ended December 31,		
	2016	2015	2014
Series C / Restricted Stock -			
Research and development	$ (238)	$ 1,429	$ 340
Phantom units:			
Cost of revenue	8,415	—	—
Selling, general and administrative	28,534	—	—
Research and development	17,187	—	—
Total phantom units stock-based compensation expense	54,136	—	—
Stock options -			
Selling, general and administrative	54	—	—
Total stock-based compensation expense	53,952	1,429	340
Amount capitalized to internal-use software and deferred implementation costs	2,433	—	—
Total stock-based compensation cost	$ 56,385	$ 1,429	$ 340

(Dollars in thousands, except per share amounts)

Retired Profits Interests Plan

On December 3, 2013, the Company adopted the Profits Interests Plan under which it had reserved an aggregate of 63,750,000 Series C units for issuance to associates, consultants and contractors of the Company in consideration for bona fide services provided to the Company.

The Series C units were considered profits interests of the Company and did not entitle their holders (the "Series C Members") to receive distributions if the Company were liquidated immediately after the grant. Instead, the Series C Members were entitled to receive an allocation of a portion of the profit and loss of the Company arising after the date of the grant and, subject to vesting conditions, distributions made out of a portion of the profits of the Company arising after the grant date of the Series C units. Grants of the Series C units were either fully vested, partially vested, or entirely unvested at the time of the grant as determined by the Board.

Series C Members were not entitled to receive any distributions until the aggregate distributions made by the Company exceeded a hurdle amount applicable to those Series C units. The hurdle amount for each grant was determined by the Board at the date of issuance of such units. After all other members received their applicable hurdle amount, the Series C Members were entitled to receive their percentage interest of such excess distributions.

As of December 31, 2015 and through the date of the LLC Conversion, the Company had 3,470,254 Series C units outstanding.

Upon the LLC Conversion (See Note 18) on June 1, 2016, the Company issued 28,973 shares of common stock to holders of vested Series C units and 10,462 shares of restricted stock to holders of unvested Series C units. The shares of restricted stock issued to holders of unvested profits interests are subject to forfeiture until becoming fully vested in accordance with the terms of the original Series C unit grant agreements (See Restricted Stock below).

Phantom Unit Plan

On March 31, 2015, the Company approved the Nant Health, LLC Phantom Unit Plan (the "Phantom Unit Plan"). The maximum number of phantom units that may be issued under the Phantom Plan is equal to 11,590,909 minus the number of issued and outstanding Series C units of the Company. As of December 31, 2016, there were 4,322,081 phantom units outstanding under the Phantom Unit Plan, after giving effect to the 1-for-5.5 reverse stock split. Each grant of phantom units made to a participant under the Phantom Unit Plan vests over a defined service period, subject to completion of a liquidity event. The Company's IPO satisfied the liquidity event condition and the phantom units now entitle their holders to cash or non-cash payments in an amount equal to the number of vested units held by that participant multiplied by the fair market value of one share of the Company's common stock at the Company's option on the date each phantom unit vests. After the Company's IPO, the Company will no longer issue any units under the Phantom Unit Plan.

The Company intends to settle all vested phantom unit payments held by United States-based participants in shares of the Company's common stock and classifies these awards as equity awards in its Consolidated and Combined Balance Sheet. Awards held by participants who are based outside of the United States are estimated to be settled in cash and are classified within accrued expenses on the Consolidated and Combined Balance Sheet as of December 31, 2016.

The following table summarizes the activity related to the unvested phantom units during the years ended December 31, 2016, 2015 and 2014:

	Number of Units	Weighted Average Grant date value per phantom unit
Unvested phantom units outstanding - December 31, 2013 and 2014	—	—
Granted	5,079,187	$15.78
Vested	—	—
Forfeited	(1,356,273)	$15.79
Unvested phantom units outstanding - December 31, 2015	3,722,914	$15.78
Granted	3,024,430	$14.07
Vested	(1,638,617)	$15.02
Forfeited	(786,646)	$15.38
Unvested phantom units outstanding - December 31, 2016	4,322,081	$14.95

During the year ended December 31, 2016, the Company granted 995,364 phantom units to employees of related companies who are providing services to the Company under the shared services agreement with NantWorks (See Note 21) as well as certain consultants of the Company. Stock compensation expense for the phantom units issued to these participants is re-measured at the end of each reporting period until the awards vest. All other grants of phantom units have been made to employees of the Company. The Company uses the accelerated attribution method to recognize expense for all phantom units since the awards' vesting was subject to the completion of a liquidity event. The grant date fair value of the phantom units granted prior to LLC Conversion was estimated using both an option pricing method and a probability weighted expected return method.

As of December 31, 2016, the Company had $29,218 of unrecognized stock based compensation expense related to phantom units which will be recognized over a weighted-average period of 2.0 years. Of that amount, $25,875 of unrecognized expense is related to employee grants with a weighted-average period of 2.0 years and $3,343 of unrecognized expense is related to non-employee grants with a weighted-average period of 2.1 years.

During the year ended December 31, 2016, the Company issued 1,074,949 shares of common stock to participants of the Phantom Unit Plan based in the United States, after withholding approximately 546,728 shares to satisfy tax withholding obligations. The Company made a cash payment of $5,838 to cover employee withholding taxes upon the settlement of these vested phantom units. During the year ended December 31, 2016 the Company also paid $237 to cash-settle 16,940 vested phantom units held by participants of the Phantom Unit Plan based outside of the United States, and fractional shares remaining of vested units held by participants based in the United States.

As described in Note 2, the Company early adopted ASU 2016-06 *Improvements to Employee Share-Based Payment Accounting* related to stock based compensation. The new standard simplifies the accounting for employee share-based payment transactions, including the accounting for forfeitures. The adoption of this standard had no material effect to the Company's Consolidated and Combined Financial Statements.

2016 Equity Incentive Plan

In May and June of 2016, the Company's Board of Directors adopted and the Company's stockholders approved the 2016 Equity Incentive Plan ("the 2016 Plan") in connection with the Company's IPO. The 2016 Plan provides for the grant of incentive stock options, non-statutory stock options, restricted stock, restricted stock units, stock appreciation rights, performance units and performance shares to employees, directors and consultants. A total of 6,000,000 shares of common stock were reserved for issuance pursuant to the 2016 Plan.

Restricted Stock

The Company issued 10,462 shares of restricted stock under the 2016 Plan during the year ended December 31, 2016 in connection with the conversion of the Series C units, of which 3,486 were vested and converted into unrestricted common stock during 2016, and as of December 31, 2016 there were 6,976 shares of restricted stock.

Total stock-based compensation expense of $266 is expected to be recognized on a straight-line basis over approximately the next 1.8 years for the unvested restricted stock outstanding as of December 31, 2016. The unrecognized stock compensation relates to nonemployees and the awards are being accounted for pursuant to ASC 505-50. Stock compensation expense for the Series C units/restricted stock issued to the nonemployees is calculated based on the fair value of the award on each balance sheet date and the attribution of that cost is being recognized ratably over the vesting period.

Stock Options

During the year ended December 31, 2016 the Company issued 500,000 stock options under the 2016 equity incentive plan to Mark Burnett, who is a non-employee member of the Company's Board of Directors, with exercise price of $14.00. The award is being accounted for pursuant to ASC 505-50. Stock compensation expense issued to the nonemployees is calculated based on the fair value of the award on each balance sheet date and the attribution of that cost is being recognized ratably over the vesting period. The Company has utilized the Black-Scholes option-pricing model to determine the fair value of the stock options.

A summary of the Company's stock options information as of December 31, 2016 is presented as follows:

(Dollars in thousands, except per share amounts)

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (Years)	Weighted Average grant date fair value	Intrinsic Value
Outstanding	500,000	$14.00	9.9	$11.98	$—
Vested and Expected to Vest	—	—	—	—	—
Exercisable	—	—	—	—	—

The aggregate intrinsic value of the stock options is calculated as the maximum between the difference between the exercise price of a stock option and the quoted price of the Company's common stock and zero at December 31, 2016. Accordingly, the aggregate intrinsic value excludes stock options that have exercise prices in excess of the quoted price of the Company's common stock at December 31, 2016.

The fair value of options at the date of grant, and the weighted-average assumptions utilized to determine such values for the year ended December 31, 2016 are indicated in the following table:

	Amounts	
Risk-free interest rates	1.56	%
Expected dividend yield	—	%
Expected life	3.4	yrs
Expected volatility	40.0	%

As of December 31, 2016, the Company had $902 of unrecognized stock based compensation expense related to the stock options. This cost is expected to be recognized over a weighted-average period of 9.9 years.

(Dollars in thousands, except per share amounts)

Note 20. Net Income (Loss) Per Share

The following table sets forth reconciliations of the numerators and denominators used to compute basic and diluted net income (loss) per share of common stock and redeemable common stock for the years ended December 31, 2016, 2015 and 2014:

	Year ended December 31,				
	2016		2015		2014
	Common Stock	Redeemable Common Stock	Common Stock	Redeemable Common Stock	Common Stock
Income (loss) per share numerator:					
Net loss attributed to NantHealth	$ (184,102)	$ —	$ (72,011)	$ —	$ (84,425)
Accretion to redemption value of series F/redeemable common stock	(4,958)	4,958	(16,042)	16,042	—
Net income (loss) for basic/diluted net income (loss) per share	$ (189,060)	$ 4,958	$ (88,053)	$ 16,042	$ (84,425)
Income (loss) per share denominator:					
Weighted-average shares for basic net loss per share	111,600,650	5,005,855	88,970,842	10,714,285	74,505,127
Effect of dilutive securities	—	—	—	—	—
Weighted-average shares for dilutive net income (loss) per share	111,600,650	5,005,855	88,970,842	10,714,285	74,505,127
Basic and diluted net income (loss) per share	$ (1.69)	$ 0.99	$ (0.99)	$ 1.50	$ (1.13)

The net income (loss) per share and weighted-average shares outstanding have been computed to give effect to the LLC Conversion (See Note 18) that occurred June 1, 2016 prior to the Company's initial public offering. In conjunction with the LLC Conversion, (a) all of the Company's outstanding units automatically converted into shares of common stock, based on the relative rights of the Company's pre-IPO equityholders as set forth in the limited liability company agreement and (b) the Company adopted and filed a certificate of incorporation with the Secretary of State of the state of Delaware and adopted bylaws. The Company filed an amended certificate of incorporation to effect a 1-for-5.5 reverse stock split of its common stock on June 1, 2016.

As of December 31, 2015, the Company determined that the redemption of the Series F units was probable due to the uncertainty of completing a qualified initial public offering and, as such, accrued interest as a reduction to members' equity. Prior to December 31, 2015, the Company had concluded that redemption was not probable and had not adjusted the carrying value of such units to redemption value. As of June 1, 2016 as part of the LLC Conversion, the Series F units converted to shares of redeemable common stock. The Put Right on redeemable common stock expired unexercised on June 20, 2016, and as of that date, the shares of common stock owned by KIO are no longer redeemable and are included in common shares (See Note 16).

The following number of potential common shares at the end of each period were excluded from the calculation of diluted net loss per share attributable to common stockholders because their effect would have been anti-dilutive for the periods presented:

(Dollars in thousands, except per share amounts)

	Year Ended December 31,		
	2016	2015	2014
Unvested restricted stock	6,976	10,462	13,948
Unvested phantom units	4,322,081	3,722,914	—
Stock options	500,000	—	—
Convertible notes	8,815,655	—	—

Note 21. Related Party Transactions

NantWorks Shared Services Agreement

In October 2012, the Company entered into a shared services agreement with NantWorks that provides for ongoing services from NantWorks in areas such as public relations, information technology and cloud services, human resources and administration management, finance and risk management, environmental health and safety, sales and marketing services, facilities, procurement and travel, and corporate development and strategy (the "Shared Services Agreement"). The Company was billed quarterly for such services at cost, without mark-up or profit for NantWorks, but including reasonable allocations of employee benefits, facilities and other direct or fairly allocated indirect costs that relate to the associates providing the services. The Company incurred $8,879, $10,320 and $9,853 of expenses during the years ended December 31, 2016, 2015 and 2014, respectively, related to selling, general and administrative services provided to the Company by NantWorks and affiliates, net of services provided to NantWorks and affiliates. Additionally, the Company incurred $414, $1,324 and $1,530 of expenses during the years ended December 31, 2016, 2015 and 2014, respectively, related to research and development services provided by NantWorks and its subsidiaries.

Related Party Receivables and Payables

As of December 31, 2016 and 2015, the Company had related party receivables, net of payables of $2,870 and $2,545, respectively. The related party receivables, net as of December 31, 2016 and 2015 primarily consisted of a receivable from Ziosoft KK of $2,126 and $2,150, respectively, which was related to the sale of Qi Imaging. As of December 31, 2016 and 2015 the Company had related party payables, net of receivables of $8,082 and $10,166, respectively. The related party payables, net of receivables balances primarily relate to amounts owed to NantWorks pursuant to the Shared Services Agreement and amounts owed to NantOmics under the Second Amended Reseller Agreement (defined below). The balance of the related party receivables and payables represent amounts paid by affiliates on behalf of the Company or vice versa.

Amended Reseller Agreement

On June 19, 2015, the Company entered into a five and a half year exclusive Reseller Agreement with NantOmics for sequencing and bioinformatics services (the "Original Reseller Agreement"). NantOmics is a majority owned subsidiary of NantWorks and is controlled by the Company's Chairman and CEO. On May 9, 2016, the Company and NantOmics executed an Amended and Restated Reseller Agreement (the “Amended Reseller Agreement”), pursuant to which the Company received the worldwide, exclusive right to resell NantOmics’ quantitative proteomic analysis services, as well as related consulting and other professional services, to institutional customers (including insurers and self-insured healthcare providers) throughout the world. The Company retained its existing rights to resell NantOmics’ genomic sequencing and bioinformatics services. Under the Amended Reseller Agreement, the Company is responsible for various aspects of delivering its sequencing and molecular analysis solutions, including patient engagement and communications with providers such as providing interpretations of the reports delivered to the physicians and resolving any disputes, ensuring customer satisfaction, and managing billing and collections. On September 20, 2016, the Company and NantOmics further amended the Reseller Agreement (the "Second Amended Reseller Agreement"). The Second Amended Reseller Agreement permits the Company to use vendors other than NantOmics to provide any or all of the services that are currently being provided by NantOmics and clarifies that the Company is responsible for order fulfillment and branding.

The Second Amended Reseller Agreement grants to the Company the right to renew the agreement (with exclusivity) for up to three renewal terms, each lasting three years, if the Company achieves projected volume thresholds, as follows: (i) the first renewal option can be exercised if the Company completes at least 300 tests between June 19, 2015 and June 30, 2020; (ii) the second renewal option can be exercised if the Company completes at least 570 tests between July 1, 2020 and June 30, 2023; and (iii) the third renewal option can be exercised if the Company completes at least 760 tests between July 1, 2023 and June 30, 2026. If the Company does not meet the applicable volume threshold during the initial term or the first or second exclusive renewal terms, the Company can renew for a single additional three year term, but only on a non-exclusive basis.

The Company agreed to pay NantOmics non-cancellable annual minimum fees of $2,000 per year for each of the calendar years from 2016 through 2020 and, subject to the Company exercising at least one of its renewal options described above, the Company is required to pay annual minimum fees to NantOmics of at least $25,000 per year for each of the calendar years from 2021 through 2023 and $50,000 per year for each of the calendar years from 2024 through 2029.

As of December 31, 2016 and 2015, the Company had $1,950 and $3,111, respectively, of outstanding related party payables under the Second Amended Reseller Agreement.

Master Services and License Agreement with the Chan Soon-Shiong Medical Center at Windber

On December 29, 2016, the Company entered into a master services and license agreement with the Chan Soon-Shiong Medical Center at Windber ("CSSMCW") whereby the Company will provide CSSMCW with access to certain of its hosted, software-as-a-service solutions and associated products and services. The initial order form under the agreement has a service period of three years and may be terminated for cause by either party in the case of material breach by the other party. Upon expiration of the initial term, the agreement automatically renews for successive one-year periods, unless either party provides the other party with at least 120 days' prior written notice of its intent not to renew. Amounts invoiced to CSSMCW by the Company are payable within 30 days of receipt. No amounts have been recognized under this agreement during the year ended December 31, 2016.

Cambridge Purchase Agreement

On December 15, 2016, the Company entered into a purchase agreement (the "Cambridge Purchase Agreement") with Cambridge Equities, L.P., an entity affiliated with the Company's Chairman and CEO Dr. Patrick Soon-Shiong ("Cambridge"), to issue and sell $10,000 in aggregate principal amount of the Convertible Notes in a private placement pursuant to an exemption from the registration requirements of the Securities Act afforded by Section 4(a)(2) of the Securities Act. The Cambridge Purchase Agreement includes customary representations, warranties and covenants by the Company and customary closing conditions (See Note 12). The accrued and unpaid interest on the convertible notes was $15 at December 31, 2016, as part of current related party liabilities on the Consolidated and Combined Balance Sheet.

Related Party Promissory Notes

On January 4, 2016, the Company executed a $112,666 demand promissory note in favor of NantCapital to fund the acquisition of NaviNet. The note bears interest at a per annum rate of 5.0%, compounded annually and computed on the basis of the actual number of days elapsed and a year of 365 or 366 days, as the case may be. The unpaid principal and any accrued and unpaid interest on the note was originally due and payable on demand in either (i) cash, (ii) shares of the Company's common stock based on per share price of $18.6126, (iii) Series A-2 units of NantOmics based on a per unit price of $1.484 to the extent such equity is owned by the Company or (iv) any combination of the foregoing, all at the option of NantCapital. Subject to the preceding sentence, the Company may prepay the outstanding amount at any time, either in whole or in part, without premium or penalty and without the prior consent of NantCapital. On May 9, 2016, the promissory note with NantCapital was amended to provide that all outstanding principal and accrued interest is due and payable on June 30, 2021, and not on demand. On December 15, 2016, in connection with the offering of the Convertible Notes, the Company entered into a Second Amended and Restated Promissory Note which amends and restates the Amended and Restated Promissory Note, dated May 9, 2016, between the Company and NantCapital, to, among other things, extend the maturity date of the Promissory Note to June 30, 2022 and to subordinate the Promissory Note in right of payment to the Convertible Notes (See Note 12). No other terms of the promissory note were changed. As of December 31, 2016, the total principal and interest outstanding on the note amounted to $118,253. The accrued and unpaid interest on the note was $5,587 at December 31, 2016, as part of non current related party liabilities on the Consolidated and Combined Balance Sheet. The Company can request additional advances subject to NantCapital approval. The NantCapital Note bears interest at a per annum rate of 5.0% compounded annually and computed on the basis of the actual number of days in the year. NantCapital has the option, but not the obligation, to require us to repay any such amount in cash, Series A-2 units of NantOmics (based on a per unit price of $1.484) held by us, shares of the Company's common stock based on a per share price of $18.6126 (if such equity exists at the time of repayment), or any combination of the foregoing at the sole discretion of NantCapital.

On January 22, 2016, the Company executed a demand promissory note in favor of NantOmics. The principal amount of the initial advance totaled $20,000. On March 8, 2016, NantOmics made a second advance to the Company for $20,000. The note bears interest at a per annum rate is 5.0% and is compounded annually. In May and June of 2016, the Company executed amendments to the demand promissory note with NantOmics, which provide that all unpaid principal of each advance owed to NantOmics and any accrued and unpaid interest would convert automatically into shares of the Company’s common stock after pricing of the Company’s IPO and immediately after conversion of the Company from a limited liability company to a corporation. On June 1, 2016, approximately $40,590 of principal and accrued interest under the promissory note with NantOmics was converted into 2,899,297 shares of the Company’s common stock in connection with the IPO. The Company can request additional advances subject to NantOmics approval, and as of December 31, 2016, there was no outstanding balance on the promissory note.

Investment in NantPharma and Redemption Agreement

On October 31, 2013, the Company entered into an exchange agreement, or the Exchange Agreement, with Blackstone Healthcare Partners II (AIV) L.L.C., or Blackstone, BCP NantPharma, L.P., NantBioScience, Inc., Blackstone Management Partners L.L.C., NantPharma and NantWorks. Pursuant to the Exchange Agreement, the Company purchased a portion of Blackstone’s minority equity interest in NantPharma in exchange for 3,572,031 of the Company's Series A units. In May 2014, the Company entered into a redemption agreement, or the Redemption Agreement, with NantPharma whereby the Company sold its entire equity interest in NantPharma in exchange for a cash payment of $10,000, which was the approximate value of the Series A units issued to Blackstone. NantPharma currently is a wholly-owned subsidiary of NantWorks.

For the year ended December 31, 2014, the Company recognized $1,525 income related to this investment. These amounts represented the Company's pro rata share of NantPharma’s earnings and losses during the period.

Note 22. Employee Retirement Plan

The Company has various employee retirement plans that it accounted for during the years ended December 31, 2016, 2015 and 2014.

NantHealth 401(k) Plan

The Company has a qualified defined contribution plan (the “NantHealth 401(k) Plan”) under Section 401(k) of the Internal Revenue Code covering eligible associates, including associates at certain of its subsidiaries. Associate contributions to the NantHealth 401(k) Plan are voluntary. The Company contributes a 100% match up to 3.0% of the participant’s eligible annual compensation, which contribution fully vests after three years of service. Participants’ contributions are limited to their annual tax deferred contribution limit as allowed by the Internal Revenue Service. For the years ended December 31, 2016, 2015 and 2014, the Company’s total matching contributions to the NantHealth 401(k) Plan were $2,160, $1,079 and $551, respectively.

(Dollars in thousands, except per share amounts)

Old iSirona 401(k) Plan

Prior to 2014, the Company had additional qualified defined contribution plan (the “Old iSirona 401(k) Plan”) for selected full time associates effective on their first day of employment. The Old iSirona 401(k) Plan was similar to the NantHealth 401 (k) Plan with the exception that the Company contributed a 100% match up to 3.0% of the participant’s eligible annual compensation and up to 50.0% of the next 2.0% of their annual earnings, which vest immediately. For the year ended December 31, 2014, the Company's total matching contributions to the Old iSirona 401(k) Plan was $345. In January 2014, the Company retired the Old iSirona 401(k) Plan and replaced it with the NantHealth 401(k) Plan.

Old eviti 401(k) Plan

The Company also had a Simple Individual Retirement Account plan that covers associates that have elected to participate in the plan who have at least six months of service ("Old eviti 401(k) Plan"). Associates who have not earned $5 or more in any preceding two year period, or who were not expected to earn at least that much in the current year, were not eligible to participate. The Company matches the associate’s contributions up to 3.0% of the associate’s wages for those associates who were contributing to the plan via a salary reduction, or a maximum of the associate’s contributions of $12 if the associate was under 50 years of age or $15 if over 50 years of age. The Company's contribution for the year ended December 31, 2014 was $220. In January 2015, the Company retired the Old eviti 401(k) Plan and replaced it with the NantHealth 401(k) Plan.

Note 23. Selected Quarterly Financial Information (Unaudited)

The following tables show a summary of the Company’s quarterly financial information for each of the four quarters of the years ended December 31, 2016 and 2015 (Unaudited):

	Year Ended December 31, 2016			
	Fourth Quarter	Third Quarter	Second Quarter	First Quarter
Net revenue	$ 24,082	$ 25,357	$ 31,490	$ 19,451
Gross profit	4,262	8,121	9,250	6,413
Loss from operations	(31,636)	(32,263)	(64,133)	(33,469)
Net loss	(59,951)	(36,874)	(54,132)	(33,145)
Net income (loss) per share:				
Basic and diluted - common stock	(0.49)	(0.30)	(0.54)	(0.36)
Basic and diluted - redeemable common stock	N/A	N/A	0.25	N/A

	Year Ended December 31, 2015			
	Fourth Quarter	Third Quarter	Second Quarter	First Quarter
Net revenue	$ 20,405	$ 14,405	$ 11,752	$ 11,742
Gross profit	9,552	2,314	5,453	6,176
Loss from operations	(15,001)	(23,620)	(17,343)	(14,939)
Net loss	(17,852)	(22,958)	(17,236)	(13,965)
Net income (loss) per share:				
Basic and diluted - common stock	(0.35)	(0.24)	(0.21)	(0.17)
Basic and diluted - redeemable common stock	1.50	N/A	N/A	N/A

Note 24. Subsequent Events

Securities Litigation

In March 2017, a number of putative class action securities complaints were filed in U.S. District Court for the Central District of California, naming as defendants the Company and certain of the Company's executive officers and directors. The pending complaints are captioned Deora v. NantHealth, Inc., 2:17-cv-01825, Di Rienzo v. NantHealth, Inc., 2:17-cv-01912, and Shafik v. NantHealth, Inc., 2:17-cv-01940. Some of the complaints also name as defendants investment banks who were underwriters in the Company's initial public offering. The complaints generally allege that defendants violated the federal securities laws by making material misstatements and omissions concerning NantHealth's business, operations, and results. In particular, the complaints refer to an article in alleging that defendants misrepresented NantHealth's business with the University of Utah and donations to the university by non-profit entities associated with our founder Dr. Soon-Shiong. The complaints seek unspecified damages and other relief on behalf of putative classes of persons who purchased or acquired NantHealth securities in the IPO or on the open market from the time of the initial public offering through early March 2017. The Company believes that the claims lack merit and intend to vigorously defend the litigation. The monetary and other impact of this action may remain unknown for substantial periods of time. The cost to defend, settle or otherwise resolve this matter may be significant and divert management's attention. The Company cannot assure you that it will prevail in this lawsuit. If the Company is ultimately unsuccessful in this matter, it could be required to pay substantial amounts which might materially adversely affect the Company's business, operating results and financial condition.

The Company evaluated subsequent events after the balance sheet date of December 31, 2016 through the date of the filing of this report, and determined that with the exception of the subsequent securities litigation described above, there were no other reportable subsequent events.

INDEPENDENT AUDITORS' REPORT

To the Board of Directors and Members of
NantOmics, LLC and Subsidiaries

We have audited the accompanying consolidated balance sheets of NantOmics, LLC and Subsidiaries as of December 31, 2016 and 2015, and the related consolidated and combined statements of operations and comprehensive loss, changes in members' equity, and cash flows for the years ended December 31, 2016, 2015 and 2014, and the related notes to the consolidated and combined financial statements.

Management's Responsibility for the Consolidated and Combined Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated and combined financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated and combined financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated and combined financial statements based on our audits. We did not audit the financial statements of Expression Pathology, Inc. dba OncoPlex Diagnostics ("OncoPlex"), a subsidiary, for the year ended December 31, 2014. The total revenue of OncoPlex for the year ended December 31, 2014 was approximately $424,000. Those statements were audited by other auditors, whose report has been furnished to us, and our opinion, insofar as it relates to the amounts included for OncoPlex is based solely on the report of the other auditors. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated and combined financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated and combined financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the consolidated and combined financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal control relevant to the entity's preparation and fair presentation of the consolidated and combined financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated and combined financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, based on our audits and the report of the other auditors, the consolidated and combined financial statements referred to above present fairly, in all material respects, the financial position of NantOmics, LLC and Subsidiaries as of December 31, 2016 and 2015, and the results of their operations and their cash flows for the years ended December 31, 2016, 2015 and 2014, in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matter

As discussed in Note 14 to the consolidated and combined financial statements, the Company has elected to change its method of accounting for patents in the year ended December 31, 2016. Our opinion is not modified with respect to this matter.

/s/ Mayer Hoffman McCann P.C.

March 31, 2017
Los Angeles, California

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NantOmics, LLC and Subsidiaries
Consolidated Balance Sheets
(In thousands, except per unit amounts)

	December 31,	
	2016	2015
		(As adjusted - see Note 14)
Assets		
Current assets		
Cash and cash equivalents	$ 5,209	$ 121,822
Marketable securities - trading	83	105,881
Accounts receivable, net of allowance of $353 and $60 at December 31, 2016 and 2015, respectively	169	284
Related party accounts receivable, net of allowance of $0 at December 31, 2016 and 2015	3,650	3,111
Related party notes receivable	150,074	10,255
Prepaid expenses and other current assets	2,496	2,743
Total current assets	161,681	244,096
Property and equipment, net	29,437	28,746
Marketable securities - available for sale	28,819	—
Cost method investments	5,000	—
Goodwill	7,623	8,818
Intangible assets, net	7,023	10,393
Other assets	277	108
Total assets	239,860	292,161
Liabilities and Members' Equity		
Current liabilities		
Accounts payable	$ 1,623	$ 3,219
Accrued expenses	2,950	2,694
Related party payables	3,923	6,232
Related party promissory notes payable	20,763	24,854
Other current liabilities	1,123	1,305
Total current liabilities	30,382	38,304
Deferred revenue, non-current	7,694	7,260
Other non-current liabilities	1,628	1,041
Total liabilities	39,704	46,605
Commitments and contingencies (Note 8)		
Members' equity		
Series A-1 units: 1,007,805 units issued and outstanding at December 31, 2016 and 2015	27,713	27,087
Series A-2 units: 175,813 units issued and outstanding at December 31, 2016 and 2015	258,524	258,524
Series B units: 150,000 units authorized, 8,457 units issued and outstanding at December 31, 2016 and 2015 (excluding liability-classified units)	1,574	868
Accumulated deficit	(87,113)	(43,064)
Total NantOmics members' equity	200,698	243,415
Non-controlling interests	(542)	2,141
Total members' equity	200,156	245,556
Total liabilities and members' equity	$ 239,860	$ 292,161

The accompanying notes are an integral part of these Consolidated and Combined Financial Statements.

NantOmics, LLC and Subsidiaries
Consolidated and Combined Statements of Operations and Comprehensive Loss
(In thousands, except per unit amounts)

	Year Ended December 31,		
	2016	2015	2014
		(As adjusted - see Note 14)	(As adjusted - see Note 14)
Revenue:			
Related party revenue	$ 5,418	$ 3,753	$ —
Third party revenue	936	1,217	424
Net revenue	6,354	4,970	424
Cost of Revenue:			
Cost of revenue	12,517	5,011	227
Amortization of acquisition-related assets	1,021	788	671
Total cost of revenue	13,538	5,799	898
Gross loss	(7,184)	(829)	(474)
Operating Expenses:			
Selling, general and administrative (including related party shared service expenses of $2,945, $2,726, and $598 for the years ended December 31, 2016, 2015 and 2014, respectively)	11,152	11,633	9,110
Research and development	18,772	13,696	5,688
Impairment on intangible assets	2,129	—	—
Total operating expenses	32,053	25,329	14,798
Loss from operations	(39,237)	(26,158)	(15,272)
Impairments on equity investments	(15,771)	—	—
Interest income (expense), net	7,686	(1,084)	(146)
Gain on previously held equity interests	—	—	4,290
Other income (expense), net	635	(1,208)	(71)
Loss before income taxes	(46,687)	(28,450)	(11,199)
Provision for income taxes	—	—	—
Net loss and comprehensive loss	(46,687)	(28,450)	(11,199)
Less: Net loss attributable to non-controlling interests	(2,683)	(1,843)	(2,580)
Net loss attributable to NantOmics	$ (44,004)	$ (26,607)	$ (8,619)

The accompanying notes are an integral part of these Consolidated and Combined Financial Statements.

NantOmics, LLC and Subsidiaries
Consolidated and Combined Statements of Changes in Members' Equity
(In thousands, except per unit amounts)

	Series A-1 Units		Series A-2 Units		Series B Units		Accumulated	NantOmics, LLC	Non-controlling	Total
	Units	Amount	Units	Amount	Units	Amount	Deficit	Equity	Interests	Equity
Balance at December 31, 2013, as adjusted (see Note 14)	—	14,628	—	—	—	—	(7,838)	6,790	280	7,070
Acquisition of Five3G	7,805	7,805	—	—	—	—	—	7,805	1,850	9,655
Non-cash contributions by Parent	1,000,000	2,459	—	—	—	—	—	2,459	—	2,459
Cash contributions by Parent	—	2,184	—	—	—	—	—	2,184	816	3,000
Purchase of additional shares of OncoPlex	—	(2,558)	—	—	—	—	—	(2,558)	2,558	—
Transactions with non-controlling interests	—	222	—	—	—	—	—	222	79	301
Equity based compensation	—	—	—	—	8,250	327	—	327	251	578
Net loss, as adjusted (see Note 14)	—	—	—	—	—	—	(8,619)	(8,619)	(2,580)	(11,199)
Balance at December 31, 2014, as adjusted (see Note 14)	1,007,805	24,740	—	—	8,250	327	(16,457)	8,610	3,254	11,864
Exercise of OncoPlex warrants	—	(1,097)	—	—	—	—	—	(1,097)	1,097	—
Transactions with non-controlling interests	—	3,444	—	—	—	—	—	3,444	(1,617)	1,827
Acquisition of TRM	—	—	611	774	—	—	—	774	873	1,647
Issuance of membership interests	—	—	175,202	257,750	—	—	—	257,750	—	257,750
Equity based compensation	—	—	—	—	207	541	—	541	377	918
Net loss, as adjusted (see Note 14)	—	—	—	—	—	—	(26,607)	(26,607)	(1,843)	(28,450)
Balance at December 31, 2015, as adjusted (see Note 14)	1,007,805	27,087	175,813	258,524	8,457	868	(43,064)	243,415	2,141	245,556
Non-cash contributions by Parent	—	630	—	—	—	—	—	630	—	630
Equity based compensation	—	(4)	—	—	—	661	—	657	—	657
Early adoption of ASU 2016-09	—	—	—	—	—	45	(45)	—	—	—
Net loss	—	—	—	—	—	—	(44,004)	(44,004)	(2,683)	(46,687)
Balance at December 31, 2016	1,007,805	27,713	175,813	258,524	8,457	1,574	(87,113)	200,698	(542)	200,156

The accompanying notes are an integral part of these Consolidated and Combined Financial Statements.

NantOmics, LLC and Subsidiaries
Consolidated and Combined Statements of Cash Flows
(In thousands, except per unit amounts)

	Year Ended December 31,		
	2016	2015	2014
		(As adjusted - see Note 14)	(As adjusted - see Note 14)
Cash flows from operating activities:			
Net loss	$ (46,687)	$ (28,450)	$ (11,199)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation	6,919	3,164	287
Amortization	2,436	2,203	1,614
Equity-based compensation	1,308	1,293	578
Gain on previously owned investment in Five3G	—	—	(4,290)
Impairments	17,900	—	—
Net realized losses on sales of marketable securities	1,264	2,162	—
Net unrealized changes in fair value of marketable securities - trading	(1,564)	1,469	—
Non-cash interest items, net	(8,184)	(252)	—
Non-cash contributions by Parent	630	—	—
Other	293	(1)	(3)
Net changes in operating assets and liabilities, net of business combinations:			
Accounts receivable, net	(178)	(76)	79
Related party accounts receivable, net	(539)	(3,111)	—
Prepaid and other current assets	110	(2,459)	(110)
Other assets	(169)	(9)	(39)
Accounts payable	(1,596)	300	201
Accrued expenses and other liabilities	346	1,390	1,084
Related party payables	(664)	5,370	846
Deferred revenue	434	7,260	—
Net cash used in operating activities	(27,941)	(9,747)	(10,952)
Cash flows from investing activities:			
Purchases of property and equipment	(7,480)	(28,012)	(269)
Acquisition of businesses, net of cash acquired	—	(29)	(991)
Purchases of cost method investments	(9,000)	—	—
Purchases of marketable securities	(83)	(201,330)	—
Proceeds from sales of marketable securities	81,159	191,002	—
Investments in related party notes receivable	(172,225)	(10,000)	—
Purchase of non-controlling interests	—	(17,125)	—
Net cash used in investing activities	(107,629)	(65,494)	(1,260)
Cash flows from financing activities:			
Repayments of notes payable	(45)	(53)	(56)
Repayments of capital lease obligations	(292)	(302)	(150)
Proceeds from issuance of related party promissory notes payable	20,392	15,385	9,394
Repayments of related party promissory notes	(1,236)	—	—
Proceeds from issuance of Series A-2 units, net of issuance costs	—	158,566	—
Proceeds from investment by Parent company, net of issuance costs	—	—	3,000
Proceeds from issuance of non-controlling interests	—	18,952	300
Release of restricted cash	138	—	—
Net cash provided by financing activities	18,957	192,548	12,488
Net decrease in cash and cash equivalents	(116,613)	117,307	276
Cash and cash equivalents, beginning of period	121,822	4,515	4,239
Cash and cash equivalents, end of period	$ 5,209	$ 121,822	$ 4,515

The accompanying notes are an integral part of these Consolidated and Combined Financial Statements.

NantOmics, LLC and Subsidiaries
Consolidated and Combined Statements of Cash Flows
(In thousands, except per unit amounts)

	Year Ended December 31,		
	2016	2015	2014
Supplemental disclosure of cash flow information:		(As adjusted - see Note 14)	(As adjusted - see Note 14)
Non-cash transactions:			
Conversion of note receivable into NantHealth common stock	$ 40,590	$ —	$ —
Settlement of notes payable with marketable securities	25,022	—	—
Property acquired under capital leases	—	336	684
Contributions of investment in Five3G by Parent	—	—	2,302
Contribution of note receivable by Parent	—	—	158
Acquisition of property and equipment included in accounts payable and related party payables	130	2,496	—
Issuance of Series A-2 units in exchange for marketable securities	—	99,184	—
Supplemental cash flow information:			
Cash paid for interest	31	60	38
Cash paid for income taxes	—	—	—

The accompanying notes are an integral part of these Consolidated and Combined Financial Statements.

1. Description of Business and Basis of Presentation

Nature of Business

NantOmics, LLC ("NantOmics"), a Delaware limited liability company, was formed on September 20, 2012. NantOmics, together with its subsidiaries (together, the "Company"), delivers molecular diagnostic capabilities with the intent of providing actionable intelligence and molecularly driven decision support for cancer patients and their providers at the point of care. It also has a highly scalable cloud-based infrastructure capable of storing and processing thousands of genomes a day, computing genomic variances in near real-time and correlating proteomic pathway analysis with quantitative multiplexed protein expression analysis from the same micro-dissected tumor sample used for genomic analysis. NantOmics is a majority-owned subsidiary of NantWorks, LLC ("NantWorks" or "Parent"), which is a subsidiary of California Capital Equity, LLC ("Cal Cap"). The three companies were founded and are led by Dr. Patrick Soon-Shiong.

NantOmics conducts its operations directly and through the following subsidiaries, all of which are based in the United States.

- *Expression Pathology, Inc. doing business as OncoPlex Diagnostics* ("*OncoPlex*") - formed under the laws of the State of Maryland on December 6, 2001, provides molecular diagnostics through a CAP-accredited, CLIA-certified oncology laboratory linking clinical proteomics and genomics to support personalized patient care.

- *Five3 Genomics, LLC ("Five3G")* - formed under the laws of the State of Delaware on May 20, 2010, to commercialize certain patent rights which were licensed from The Regents of the University of California on December 20, 2010. Five3G provides data processing and analysis services for personalized cancer therapy, matching treatments to specific genetic aberrations discovered in the cancer cells of individual patients.

- *NantCare, LLC, formerly known as NantCRO ("NantCare")* - formed under the laws of the State of Delaware on April 4, 2014, provides clinical research services to support the pharmaceutical, biotechnology, medical device and various other industries.

- *Translational Research Management, LLC ("TRM")* - formed under the laws of the State of Delaware on October 23, 2009, is a management services organization building a nationwide network of community based oncology professionals dedicated to offering research studies to their patients.

Organization

On May 1, 2014, Cal Cap, along with a NantOmics affiliate, contributed the equity interests in the following entities to NantOmics:

- OncoPlex - 65.2% of equity on a fully diluted basis
- Five3G -35.0% of equity on a fully diluted basis

Each of the entities noted above were originally acquired by certain of NantOmics' affiliates, as described below.

OncoPlex

On April 29, 2011, Cal Cap purchased the shares of OncoPlex's Series A-1 preferred stock, Series B preferred stock, and common stock, which represented an approximate 55.0% equity interest on a fully diluted basis. The purchase provided Cal Cap with a controlling financial interest in OncoPlex. On October 27, 2011, OncoPlex issued a $2,500 note to Cal Cap convertible into Series B preferred stock, plus a warrant to purchase up to 300 shares of OncoPlex's Series B preferred stock. On December 6, 2012, OncoPlex issued a $5,000 note to an affiliate of Cal Cap, convertible into OncoPlex's Series B preferred stock, plus a warrant to purchase up to 600 shares of OncoPlex's Series B preferred stock. On May 1, 2014, Cal Cap and the affiliate transferred all of their shares of Series A preferred stock, Series B preferred stock, common stock, stock purchase warrants and convertible notes in OncoPlex to NantOmics.

On May 14, 2015, the Company entered into an agreement to purchase the remaining shares of preferred and common stock of OncoPlex held by the non-controlling shareholders. The purchase was financed through a related party payable. Upon purchase of these shares, OncoPlex became a wholly-owned subsidiary of the Company and OncoPlex's existing equity incentive plan was terminated. On June 22, 2015, the Company transferred these equity interests to NantWorks in exchange for settlement of the related party payable.

On August 20, 2015, the Company exercised two warrants to purchase a total of 900 shares of OncoPlex's Series B preferred stock in exchange for $2,106 in cash. As a result of this transaction, the Company owned 83.1% of OncoPlex's outstanding equity on a non-diluted basis.

Five3G

On January 6, 2011, Cal Cap purchased equity in Five3G representing 35.0% of the outstanding units on a fully diluted basis, in exchange for a commitment to provide up to $4,000 in capital contributions in the form of cash and back-office services. On May 1, 2014, Cal Cap contributed to NantOmics its 35.0% fully diluted equity interest in Five3G and a $200 convertible note issued by Five3G in favor of Cal Cap. Upon transfer, NantOmics converted the note into equity and executed an agreement with the founders of Five3G which provided for cash payments and issuances of NantOmics in exchange for the additional units in Five3G. As a result of this transaction, NantOmics held an 82.1% fully diluted ownership stake in Five3G (see Note 3).

NantCare

On January 1, 2015, NantWorks contributed 100% of NantCare's outstanding equity interests to NantOmics.

TRM

On September 8, 2015, the Company acquired a 54.0% equity interest in TRM from Nant Health, LLC ("NantHealth") in exchange for $250 in cash and 611 of NantOmics' Series A-2 units.

Basis of Presentation

The consolidated and combined financial statements and accompanying notes have been prepared in accordance with accounting principles generally accepted in the United States of America.

The transfer and assignment by Cal Cap and an affiliate to NantOmics of the equity interests in OncoPlex and Five3G are recorded and presented at their carryover basis since NantOmics and the transferors are under common control. The historical statements of operations, members' equity and cash flows of OncoPlex and Five3G have been combined with the Company beginning on the date of inception of common control.

The accompanying consolidated and combined financial statements include the financial statements of entities in which the Company has a controlling financial interest. Equity interests of the Company's subsidiaries that are not owned by the Company are referred to as non-controlling interests. Intercompany balances and transactions between the consolidated entities have been eliminated.

Certain reclassifications have been made to prior period amounts to conform to the current year presentation.

Change in Method of Accounting for Patent Costs

On December 31, 2016, the Company elected to change its method of accounting for patent and patent application costs to expense them as incurred rather than capitalizing them as intangible assets and amortizing them using the straight-line method over the estimated useful lives of the patents. The Company adopted this new method of accounting for patent costs because of the uncertainty and significant judgment involved in estimating the future economic benefits of such costs. In addition, changing the method of accounting for patent costs improves or otherwise enhances the comparability of the Company's consolidated and combined financial statements with other companies in its industry. The Company has adjusted the comparative consolidated and combined financial statements of prior years to retrospectively apply the new method of accounting for patent costs. See Note 14 for the effects of the change in accounting principle on the financial statement line items for fiscal years 2016, 2015 and 2014.

2. Summary of Significant Accounting Policies

Use of *Estimates*

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America ("GAAP") requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. The estimates and assumptions used in the accompanying consolidated and combined financial statements are based upon management's evaluation of the relevant facts and circumstances at the balance sheet date. On an ongoing basis, the Company evaluates its estimates, including those related to revenue recognition, the accounts receivable allowance, useful lives of long-lived assets and intangible assets, and income taxes. The Company bases its estimates on historical experience and on various other assumptions that are believed to be reasonable, the results of which can affect the reported amounts of assets and liabilities as of the date of the consolidated and combined financial statements, as well as the reported amounts of revenue and expenses during the periods presented.

Variable Interest Entities

The Company evaluates its ownership interests, contractual rights and other interests in entities to determine if the entities are variable interest entities ("VIEs"), if it has a variable interest in those entities and the nature and extent of those interests. These evaluations are highly complex and involve judgment, the use of estimates and assumptions based on available historical information. In order for the Company to be the primary beneficiary of a VIE, it must have both (1) the power to direct the activities of a VIE that most significantly affect the VIE's economic performance and (2) the obligation to absorb losses or the right to receive benefits that, in either case, could potentially be significant to the VIE. The Company consolidates entities of which it is the primary beneficiary.

The Company determines whether it is the primary beneficiary of a VIE upon its initial involvement with the VIE and reassesses whether it is the primary beneficiary on an ongoing basis. This determination is based upon an analysis of the design of the VIE, including the VIE's structure and activities, the power to make significant economic decisions held by the Company and by other parties and the variable interests owned by the Company and other parties.

Non-Controlling Interests

Non-controlling interests are classified as a separate component of equity in the consolidated balance sheets and consolidated and combined statements of changes in members' equity. Additionally, net loss attributable to non-controlling interests is reflected separately from consolidated net loss in the consolidated and combined statements of operations and comprehensive loss and changes in members' equity.

The Company records the non-controlling interests' share of income or loss based on the percentage of ownership interest retained by the respective non-controlling interest holders. The net loss attributable to the members of NantOmics is the total consolidated net loss less the net loss attributable to the non-controlling interests.

Revenue Recognition

Revenue represents the consideration received or receivable from customers for products and services provided by the Company. Revenues are generated from the following sources:

- *Genomic sequencing and bioinformatics services* - diagnostic services utilizing whole genome sequencing and RNA sequencing of a patient's tumor, with the patient's normal sample, to identify molecular alterations in the DNA and RNA of the patient's tumor.

- *Quantitative proteomics services* - proprietary clinical services that allow oncologists to determine the optimal treatment plan for oncology patients, based on a molecular analysis of both the mutant genes and dysfunctional proteins that drive the cellular biochemistry responsible for an individual's cancer.

- *Research services* - contract research services for bio-pharmaceutical companies related to cancer drug development generally sold under fixed price contracts.

- *Other revenue* - includes translational research services, the commercial sale of gene mutation and protein expression panel testing kits and license revenues based on net sales of the licensees' use of the Company's patented process.

The Company recognizes revenue when (1) persuasive evidence of an arrangement exists, (2) delivery has occurred, (3) the fee is fixed or determinable, and (4) collectability is reasonably assured. The Company recognizes revenue on a cash basis when it cannot conclude that criterion (3) and (4) have been met.

On June 19, 2015, the Company entered into an exclusive Reseller Agreement with NantHealth, pursuant to which the Company granted to NantHealth the worldwide, exclusive right to resell the Company's genomic sequencing and bioinformatics services to commercial third-party payors, self-insured health plans, hospitals and other provider networks ("Institutional Customers") (see Note 13). On May 9, 2016, the Company also granted to NantHealth the worldwide, exclusive right to resell the Company's quantitative proteomic analysis services to Institutional Customers. Unless first granted by the Company to NantHealth on a case-by-case basis, NantHealth does not have the right to resell the Company's genomic and proteomic sequencing and related bioinformatics services to research, academic or educational institutions, pharmaceutical or biotechnology companies or individual patients or consumers.

Revenue from the Company's genomic and proteomic sequencing and bioinformatics services sold by NantHealth under the Reseller Agreement is recognized when the Company delivers the completed genomic and proteomic reports which summarize the tests' results to NantHealth's customer and all other revenue recognition criteria have been met. The Company reports revenue from these arrangements based on the amount of fees owed by NantHealth to the Company.

The Company currently recognizes revenue on a cash basis from historical sales of its proteomics services for which the Company receives payments from third-party payors and from patients, who make co-payments, pay deductibles or from other amounts that the Company has been unable to collect from third-party payors. The Company granted NantHealth the right to sell to these customers and therefore the Company doesn't expect to sell to these customers directly in the future.

Research service revenue is recognized using the proportional performance method. Unless it is determined as part of the Company's regular contract performance review that overall progress on a contract is not consistent with costs expended to date, the Company recognizes revenue based on the percentage of costs incurred to date in relation to total estimated costs expected upon completion of the contract.

Revenue from product sales is recognized upon shipment or delivery, depending on terms of the arrangement. License and royalty revenue is recognized in the period in which the royalty is earned.

For arrangements that include multiple elements, the Company identifies the separate units of accounting and allocates the total arrangement consideration to the units of accounting on the basis of their relative selling price. The selling price used for each deliverable is based on vendor-specific objective evidence of fair value ("VSOE"), if available, third party evidence of fair value ("TPE") if VSOE is not available or the Company's best estimate of selling price if neither VSOE nor TPE is available. In determining the units of accounting for these arrangements, the Company evaluates whether each deliverable has value to the customer on a standalone basis.

Deferred Revenue

The Company recognizes deferred revenue for amounts it collects from its customers prior to satisfying the Company's revenue recognition policy. The Company uses judgment in determining the period over which the deliverables are recognized as revenue. Non-current deferred revenue is expected to be earned more than one year after the balance sheet date.

Fair Value Measurement

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value measurements are classified and disclosed in one of the following three categories:

- Level 1 - Quoted prices for identical assets or liabilities in active markets;
- Level 2 - Quoted prices for similar assets or liabilities in active markets or quoted prices for identical or similar assets or liabilities in markets that are not active or are directly or indirectly observable; and
- Level 3 - Unobservable inputs that reflect estimates and assumptions.

The carrying amounts reported in the balance sheet for cash and cash equivalents, accounts receivable, accounts payable and other current monetary assets and liabilities approximate fair value because of the immediate or short-term maturity of these financial instruments.

The Company's goodwill and other intangible assets and its investments in non-marketable equity securities are measured at fair value on a non-recurring basis and are adjusted to fair value only if an impairment charge is recognized.

Cash and Cash Equivalents

The Company considers all unrestricted, highly liquid investments with an initial maturity of three months or less to be cash equivalents. These amounts are stated at cost, which approximates fair value. As of December 31, 2016 and 2015, cash equivalents were deposited in financial institutions and consisted of immediately available fund balances. Cash and cash equivalents were maintained at stable financial institutions, generally at amounts in excess of federally insured limits, which represent a concentration of credit risk. The Company has not experienced any losses on deposits of cash and cash equivalents to date.

Marketable Securities

The Company's marketable securities consist of investments in mutual funds and an investment in NantHealth's common stock and are reported on the balance sheet at fair value based upon quoted market prices (see Note 7).

The Company does not actively trade its mutual fund investments and classifies these investments as trading securities. Any realized and unrealized gains and losses on the mutual funds are included in other income (expense), net. The cost of investments sold is determined on the specific identification method. Dividend and interest income are accrued as earned.

The Company classifies its investment in NantHealth as an available-for-sale equity security. Any unrealized gains and losses on the NantHealth investment, which are deemed to be temporary, are reported as a separate component of members' equity. A decline in the market value of any available-for-sale security below its carrying value that is determined to be other-than-temporary would result in a charge to earnings and decrease in the security's carrying value down to its newly established fair value. Factors evaluated to determine if an investment is other-than-temporarily impaired include significant deterioration in earnings performance, credit rating, asset quality or business prospects of the issuer, adverse changes in the general market condition in which the issuer operates, the Company's intent to hold to maturity and an evaluation as to whether it is more likely than not that the Company will not have to sell the investment before recovery of its cost basis and issues that raise concerns about the issuer's ability to continue as a going concern.

Accounts Receivable and Allowance for Doubtful Accounts

Accounts receivable and related party accounts receivable are generated from genomic sequencing services, research services, licenses and royalties and product sales to various commercial entities. The Company does not record accounts receivable associated with amounts billed to third-party payors and directly to patients for proteomics services because this revenue is recognized on a cash basis. Management determines the allowance for doubtful accounts by regularly evaluating the age of individual customer receivables and considering a customer's financial condition, credit history and current economic conditions. Management has recorded an allowance for doubtful accounts for those amounts that it has determined may not be collectible.

Property and Equipment, net

Property and equipment received in connection with business combinations are recorded at fair value. Property and equipment acquired in the normal course of business are recorded at cost. Depreciation is computed on a straight line basis over the estimated useful lives of the related assets (see Note 4). Maintenance and repairs are charged to expense as incurred while expenditures for refurbishments and improvements that significantly add to the productive capacity or extend the useful life of an asset are capitalized. The estimated useful lives of the assets are as follows:

Equipment acquired under capital lease	3 to 5 years
Equipment and other	3 to 5 years
Computer equipment and software	3 to 4 years

Business Combinations

Business combinations are accounted for using the acquisition method of accounting. Under the acquisition method, assets acquired and liabilities assumed are recorded at their respective fair values as of the acquisition date. Any excess of the purchase price over the estimated fair values of the net assets acquired is recorded as goodwill. Management routinely monitors the factors impacting the acquired assets and liabilities. Transaction related costs are expensed as incurred. The operating results of the acquired business are reflected in the Company's consolidated and combined financial statements as of the acquisition date.

Goodwill and Intangible Assets

Goodwill acquired in a business combination and determined to have an indefinite useful life is not amortized but is tested for impairment annually or between annual tests when an impairment indicator exists. The Company evaluates goodwill based upon its reporting units, which are defined as operating segments or, in certain situations, one level below the operating segment. If an optional qualitative goodwill impairment assessment is not performed, the Company is required to determine the fair value of each reporting unit using a quantitative test. If a reporting unit's fair value is lower than its carrying value, the Company must determine the amount of implied goodwill that would be established if the reporting unit was hypothetically acquired on the impairment test date. If the carrying amount of a reporting unit's goodwill exceeds the amount of implied goodwill, an impairment loss equal to the excess would be recorded.

The determination of fair value of a reporting unit is based on a combination of a market approach that considers benchmark company market multiples and an income approach that uses discounted cash flows for each reporting unit utilizing Level 3 inputs. Under the income approach, the Company determines the fair value based on the present value of the most recent income projections for each reporting unit and calculates a terminal value utilizing a terminal growth rate. The significant assumptions under this approach include, among others: income projections, which are dependent on sales to new and existing customers, new product introductions, customer behavior, competitor pricing, operating expenses, the discount rate, and the terminal growth rate. The cash flows used to determine fair value are dependent on a number of significant management assumptions based on historical experience, expectations of future performance and the expected economic environment. Estimates are subject to change given the inherent uncertainty in predicting future results. Additionally, the discount rate and the terminal growth rate are based on judgment of the rates that would be utilized by a hypothetical market participant.

Accounting guidance requires that definite-lived intangible assets be amortized over their respective estimated useful lives and reviewed for impairment whenever events or changes in circumstances indicate that their carrying amounts may not be recoverable. The Company estimates the useful lives of the intangible assets and ratably amortizes the value over the estimated useful lives of those assets. If the estimates of the useful lives change, the Company will amortize the remaining book value over the remaining useful lives or, if an asset is deemed to be impaired, a write-down of the value of the asset to its fair value may be required at such time.

Cost Method Investments

The Company owns non-marketable equity securities that are accounted for under the cost method because the investments are not in the form of common stock or in-substance common stock. All investments are reviewed on a regular basis for possible impairment. If an investment's fair value is determined to be less than its net carrying value and the decline is determined to be other-than-temporary, the investment is written down to its fair value. Such an evaluation is judgmental and dependent on specific facts and circumstances. Factors considered in determining whether an other-than-temporary decline in value has occurred include: market value of the investment based on most recent rounds of financing by the investee; length of time that the market value was below its cost basis; financial condition and business prospects of the investee; the Company’s intent and ability to retain the investment for a sufficient period of time to allow for recovery in market value of the investment; issues that raise concerns about the investee's ability to continue as a going concern; any other information that the Company may be aware of related to the investment.

Research and Development Expenses

Research and development (“R&D”) costs are expensed as incurred and include salary and benefits, professional fees, laboratory supplies, depreciation on laboratory and computer equipment, and allocated overhead expenses.

Equity Based Compensation

The Company accounts for equity based compensation awards by expensing the estimated grant date fair value of the award over the requisite service period. The Company records stock based compensation expense on a straight-line basis over the requisite service period of the grant. The Company early adopted Accounting Standard Update (“ASU”) No. 2016-09, Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting (“ASU 2016-09”) as of December 31, 2016. Upon early adoption of ASU 2016-09, the Company made an accounting policy election to account for forfeitures as they occur rather than by applying an estimated forfeiture rate at the time of grant.

Income Taxes

The Company is a limited liability company that has subsidiaries that are limited liability companies and a subsidiary that is a corporation. The loss of the entities classified as pass-through entities for tax purposes flow directly through to the members of the Company.

The net loss of the corporation is accounted under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases using enacted tax rates in effect for the year in which the differences are expected to affect taxable income. Tax benefits are recognized when it is more likely than not that a tax position will be sustained during an audit. Deferred tax assets are reduced by a valuation allowance if current evidence indicates that it is considered more likely than not that these benefits will not be realized. Management has evaluated the Company’s tax positions and has concluded that the Company has taken no uncertain tax positions that require adjustment to the financial statements. The Company is no longer subject to income tax examination by the U.S. federal, state or local tax authorities for years ended December 31, 2012 and prior.

Concentrations of Risk

For the years ended December 31, 2016 and 2015, one related party customer accounted for 78% and 76% of the Company's revenue, respectively. For the year ended December 31, 2014, three customers accounted for 51% of the Company's revenue.

Recent Accounting Pronouncements

In January 2017, the Financial Accounting Standards Board ("FASB") issued ASU 2017-04, *Intangibles-Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment* ("ASU 2017-04"), a standard which simplifies the accounting for goodwill impairment. The guidance removes Step 2 of the goodwill impairment test, which requires a hypothetical purchase price allocation. Goodwill impairment will now be the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying amount of goodwill. The revised guidance will be applied prospectively, and is effective for the Company's annual goodwill impairment tests in fiscal years beginning after December 15, 2020. Early adoption is permitted for goodwill impairment tests performed on testing dates after January 1, 2017. The Company is currently evaluating the effect that ASU 2017-04 will have on its consolidated and combined financial statements and related disclosures.

In January 2017, the FASB issued ASU 2017-01, *Business Combinations (Topic 805): Clarifying the Definition of a Business* ("ASU 2017-01"). The amendments in this update clarify the definition of a business with the objective of adding guidance to assist entities with evaluating whether transactions should be accounted for as acquisitions or disposals of assets or businesses. The definition of a business affects many areas of accounting including acquisitions, disposals, goodwill and consolidation. The guidance is effective for the Company for annual periods beginning after December 15, 2017 and should be applied prospectively on or after the effective date. The Company is currently evaluating the impact that ASU 2017-01 will have on its consolidated and combined financial statements and related disclosures.

In October 2016, the FASB issued ASU 2016-17, *Consolidation (Topic 810): Interests Held through Related Parties That Are under Common Control* ("ASU 2016-17"), which requires a single decision maker evaluating whether it is the primary beneficiary of a variable interest entity (VIE) to consider its indirect interests held by related parties that are under common control on a proportionate basis. ASU 2016-17 is effective for fiscal years beginning after December 15, 2016. The Company currently evaluating the effect that ASU 2016-17 will have on its consolidated and combined financial statements and related disclosures.

In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments* ("ASU 2016-15"). ASU 2016-15 provides guidance for targeted changes with respect to how cash receipts and cash payments are classified in the statements of cash flows, with the objective of reducing diversity in practice. ASU 2016-15 is effective for annual periods beginning after December 15, 2017, with early adoption permitted. The Company is currently evaluating the effect that ASU 2016-15 will have on its consolidated and combined financial statements and related disclosures.

In March 2016, the FASB issued ASU 2016-09, *Compensation-Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting* ("ASU 2016-09"). ASU 2016-09 changes certain aspects of the accounting for stock based compensation awards, including: accounting and cash flow classification for excess tax benefits and deficiencies; income tax withholding obligations; forfeitures; and cash flow classification. ASU 2016-09 is effective for the Company for annual periods beginning after December 15, 2016, with early adoption permitted. The Company early adopted ASU 2016-09 on December 31, 2016 and made an accounting policy election to account for forfeitures as they occur rather than by applying an estimated forfeiture rate at the time of grant. As a result, the Company recorded a cumulative effect adjustment to opening retained earnings and Series B members' equity on January 1, 2016. Prior periods have not been retrospectively adjusted.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)* ("ASU 2016-02"), to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities, including for operating leases, on the balance sheet and disclosing key information about leasing arrangements. This guidance is effective for financial statements issued for fiscal years beginning after December 15, 2018. The Company is currently evaluating the effect that ASU 2016-02 will have on its consolidated and combined financial statements and related disclosures.

(In thousands, except per unit amounts)

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers (Topic 606)* ("ASU 2014-09") and issued subsequent amendments to the initial guidance in August 2015, March 2016, April 2016, May 2016 and December 2016 within ASU 2015-04, ASU 2016-08, ASU 2016-10, ASU 2016-12, ASU 2016-19 and ASU 2016-20, respectively, which amend the guidance in former Accounting Standards Codification ("ASC") Topic 605, *Revenue Recognition*. This guidance requires that entities recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. In July 2015, the FASB decided to delay the effective date of ASU 2014-09 by one year. As a result, non-public companies are required to apply the new standard to annual reporting periods beginning after December 15, 2018 and pubic companies are required to apply the new standard for fiscal years beginning after December 15, 2017. The Company is in process of establishing a team to assess the potential impact of the new revenue standard. The assessment process will consist of reviewing the Company's current accounting policies and practices to identify potential differences that would result from applying the requirements of the new standard to the Company's revenue contracts and identifying appropriate changes to the business processes, systems and controls to support revenue recognition and disclosure requirements under the new standard. The assessment of the impact of the new revenue standard on the current business processes, systems and controls is expected to be completed during fiscal 2017. Additionally, the Company is currently evaluating the potential impact that the implementation of this new revenue standard will have on the Company's consolidated and combined financial statements as well as selection of the method of adoption. The FASB has issued, and may issue in the future, interpretive guidance which may cause the evaluation to change.

3. Business Combinations

2015 Acquisition

TRM

On September 8, 2015, the Company acquired a 54.0% equity interest in TRM from NantHealth in exchange for $250 in cash and 611 of NantOmics' Series A-2 units. NantHealth acquired its interest in TRM on the same date from a selling member of TRM in exchange for paying that member $250 in cash and issuing 268 of its Series A units.

The Company accounted for the transaction as the acquisition of a business between entities under common control since both NantHealth and the Company are controlled by NantWorks. Therefore, the Company recognized the assets, liabilities and non-controlling interests of TRM at the amount recognized by NantHealth upon its application of the acquisition method. The difference between these amounts and the $250 cash paid to NantHealth was credited to the Company's Series A-2 members' equity.

The following table summarizes the total consideration for the acquisition:

	Amounts
Cash	$ 250
Value assigned to 611 Series A-2 units	774
Non-controlling interest of 46.0%	873
Total consideration	$ 1,897

The value of the identifiable assets acquired for the TRM acquisition is shown in the table below:

	Amounts
Cash and cash equivalents	$ 221
Accounts receivable	106
Other assets	15
Current liabilities	(1,040)
Clinical study site relationships	1,400
Goodwill	1,195
Total fair value of net assets acquired	$ 1,897

(In thousands, except per unit amounts)

The estimated useful life of the acquired clinical study site relationships intangible is four years. The excess of the purchase price over the net tangible and intangible assets of approximately $1,195 was recorded as goodwill, which primarily reflects the expected future benefits to be realized upon integrating TRM's operations with those of the Company. The goodwill is not expected to be deductible for tax purposes. The Company recorded impairment on certain assets related to the TRM acquisition as of December 31, 2016 (see Note 5).

The fair value of the non-controlling interest was calculated as 46.0% of the total fair value of TRM's equity on the acquisition date.

2014 Acquisition

Five3G

On May 1, 2014, NantOmics converted its $200 convertible note issued by Five3G into one Five3G unit. Concurrently, the Company entered into an arrangement with certain of Five3G's members to acquire their 50.7% non-diluted equity interest which provided the Company with control of Five3G. After the transaction, the Company owned 89.4% of Five3G's equity interests on a non-diluted basis. The aggregate consideration for the acquisition was $17,437 and consisted of the issuance of 7,805 of NantOmics' Series A-1 units and $1,033 in cash. The acquisition of Five3G allows the Company to bring together molecular diagnostic capabilities with the intent of providing actionable intelligence and molecularly driven decision support for cancer patients and their providers at the point of care.

Immediately prior to acquiring the units from the members of Five3G, NantOmics owned 36 units of Five3G which represented an approximate 38.7% equity interest on a non-diluted basis. Upon completion of the acquisition of the 50.7% interest, NantOmics re-measured its previously owned investment in Five3G at fair value as of the acquisition date and recognized a gain on its previously held equity interest of $4,290. The fair value of the 36 units of Five3G was calculated as 38.7% of the total fair value of Five3G's equity on the acquisition date.

The following table summarizes the total consideration for the acquisition:

	Amounts
Cash	$ 1,033
Fair value of acquired 50.7% interest	7,805
Fair value of previously held 38.7% interest	6,749
Non-controlling interest of 10.6%	1,850
Total consideration	$ 17,437

The fair value of the identifiable assets acquired for the Five3G acquisition is shown in the table below:

	Amounts
Cash and cash equivalents	$ 41
Accounts receivable	41
Fixed assets	21
Current liabilities	(189)
Developed technology	9,900
Goodwill	7,623
Total fair value of net assets acquired	$ 17,437

The estimated useful life of the acquired developed technology intangible is seven years. The excess of the purchase price over the net tangible and intangible assets of approximately $7,623 was recorded as goodwill, which primarily reflects the expected future benefits to be realized upon integrating Five3G's operations with those of the Company. The goodwill is not expected to be deductible for tax purposes.

The fair value of the non-controlling interest was calculated as 10.6% of the total fair value of Five3G's equity on the acquisition date.

(In thousands, except per unit amounts)

4. Property and Equipment, net

Property and equipment as of December 31, 2016 and 2015 consisted of the following:

	December 31, 2016	December 31, 2015
Equipment and other	$ 35,073	$ 30,207
Equipment acquired under capital leases	1,639	1,639
Computer equipment and software	3,904	1,160
	40,616	33,006
Less: accumulated depreciation	(11,179)	(4,260)
Property and equipment, net	$ 29,437	$ 28,746

Depreciation expense was $6,919, $3,164 and $287 for the years ended December 31, 2016, 2015 and 2014, respectively.

5. Intangible Assets and Goodwill

Intangible Assets

As of December 31, 2016 and 2015, definite-lived intangible assets consisted of the following:

	December 31, 2016		
	Developed Technologies	Clinical Study Site Relationships	Total
Gross carrying amount	$ 14,600	$ —	$ 14,600
Accumulated amortization	(7,577)	—	(7,577)
Intangible assets, net	$ 7,023	$ —	$ 7,023

	December 31, 2015 (As Adjusted - See Note 14)		
	Developed Technologies	Clinical Study Site Relationships	Total
Gross carrying amount	$ 14,600	$ 1,400	$ 16,000
Accumulated amortization	(5,490)	(117)	(5,607)
Intangible assets, net	$ 9,110	$ 1,283	$ 10,393

During the year ended December 31, 2015, the Company recorded $1,400 of intangible assets related to clinical study site relationships as a result of the TRM acquisition (see Note 3). On December 31, 2016, the Company determined that a triggering event for this intangible asset had occurred given the nominal sales during the year and the Company's decision to reduce the amount of resources and investment in this asset group. The Company forecasted negative cash flows for this asset group and qualitatively determined that the intangible asset was fully impaired as of December 31, 2016. The impairment of $934 is classified within impairment on intangible assets in the consolidated and combined statement of operations and comprehensive loss.

During the year ended December 31, 2014, the Company recorded $9,900 of intangible assets related to developed technologies as a result of the Five3G acquisition (see Note 3). Developed technologies are amortized over a period of seven years.

(In thousands, except per unit amounts)

Amortization expense was $2,436, $2,203, and $1,614 for the years ended December 31, 2016, 2015 and 2014, respectively.

The estimated future amortization expense for the intangible assets that exist as of December 31, 2016 is as follows:

For the year ended December 31,	Amounts
2017	$ 2,086
2018	1,638
2019	1,414
2020	1,414
2021	471
	$ 7,023

Goodwill

The change in the net carrying amount of goodwill for the year ended December 31, 2016 is provided below.

	Amounts
Balance at December 31, 2015	$ 8,818
Impairment	(1,195)
Balance at December 31, 2016	$ 7,623

On December 31, 2016, the Company recorded an impairment charge of $1,195 related to the goodwill attributable to the clinical research reporting unit which arose from the acquisition of TRM (see Note 3). The Company forecasted negative cash flows for this reporting unit and determined to reduce the amount of resources and investment in this reporting unit. Therefore, the Company qualitatively determined that the goodwill was fully impaired and classified the $1,195 within impairment on intangible assets in the consolidated and combined statement of operations and comprehensive loss.

6. Cost Method Investments

During the year ended December 31, 2016, the Company made multiple investments in shares of preferred stock of private companies that are considered variable interest entities. See Note 13 for the disclosures related to the Company's involvement with other variable interest entities. The Company uses the cost method to account for these investments because the shares of each investee's preferred stock are not voting common stock, were not considered in-substance common stock and do not have readily determinable fair values.

Genos Research, Inc.

On May 9, 2016, the Company purchased 1,447 shares of Series A-1 preferred stock from Genos Research, Inc. ("Genos") at a price of $1,500, or $1.03672 per share. Genos provides high quality whole exome sequencing directly to consumers using next generation sequencing technology.

In connection with its initial investment, the Company committed to purchase an additional 4,341 shares of Genos' Series A-1 preferred stock at a purchase price of $4,500 if certain events occurred by September 6, 2016. The Company also had the option to purchase some or all of the 4,341 shares at a per share price of $1.03672 if the events did not occur by such date. On September 16, 2016, the Company partially exercised its option and thereby purchased 2,411 shares of Genos' Series A-1 preferred stock at a cash purchase price of $2,500 and extended the expiration date of its option to purchase the remaining 1,929 shares of Genos' Series A-1 preferred stock to January 20, 2017. Subsequent to these investments, certain factors arose that raised doubts about Genos' ability to continue operating as a going concern. As a result, the Company qualitatively determined that the investment was not recoverable and recognized other-than-temporary impairment for the full investment of $4,000 as of December 31, 2016. This amount is classified within impairments on equity investments on the consolidated and combined statement of operations and comprehensive loss.

(In thousands, except per unit amounts)

The shares of preferred stock owned by the Company as of December 31, 2016 represented approximately 37.9% of the outstanding equity of Genos on an as-converted, non-diluted basis and entitled the Company to appoint two directors to Genos' five-person Board of Directors. Since all significant decisions of Genos require a majority vote by the members of its Board of Directors, including decisions related to the hiring, firing and setting the compensation levels of all key executives and the approval of the annual operating budget, the Company does not have the power over the activities that most significantly impact the economic performance of Genos. Therefore, the Company is not considered the primary beneficiary and does not have a controlling interest in Genos as of December 31, 2016.

OptraSCAN, Inc.

On October 14, 2016, the Company purchased 4,900 shares of Series A preferred stock from OptraSCAN, Inc. ("OptraSCAN") at a cash purchase price of $5,000. OptraSCAN is an on-demand digital pathology company that was formed shortly before the Company's initial investment.

The shares of preferred stock owned by the Company as of December 31, 2016 represented 49.0% of the outstanding equity of OptraSCAN on an as-converted, non-diluted basis and entitled the Company to appoint two directors to OptraSCAN's five-person Board of Directors. Since all significant decisions of OptraSCAN require a majority vote by the members of its Board of Directors, including decisions related to the hiring, firing and setting the compensation levels of all key executives and the approval of the annual operating budget, the Company does not have the power over the activities that most significantly impact the economic performance of OptraSCAN. Therefore, the Company is not considered the primary beneficiary and does not have a controlling interest in OptraSCAN as of December 31, 2016.

The $5,000 carrying amount of this investment represents the Company's maximum exposure to loss as of December 31, 2016 as the Company has not committed to providing additional financial support to OptraSCAN. The Company did not estimate the fair value of this investment as of December 31, 2016 because it did not identify any events or changes in circumstances that would have a significant adverse effect on the fair value of the investment.

7. Fair Value Measurements

Assets and liabilities measured at fair value on a recurring basis as of December 31, 2016 and 2015 consisted of the following:

	December 31, 2016			
	Total fair value	Quoted price in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Assets:				
Cash equivalents	$ 5,012	$ 5,012	$ —	$ —
Marketable securities - trading	83	83	—	—
Marketable securities - available for sale	28,819	28,819	—	—

	December 31, 2015			
	Total fair value	Quoted price in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Assets:				
Cash equivalents	$ 5,006	$ 5,006	$ —	$ —
Marketable securities - trading	105,881	105,881	—	—

(In thousands, except per unit amounts)

The Company's goodwill and other intangible assets and its investments in non-marketable equity securities are measured at fair value on a non-recurring basis and are adjusted to fair value only if an impairment charge is recognized. On December 31, 2016, the Company impaired certain intangible assets and a cost method investment and adjusted these assets to fair value (see Notes 5 and 6). No impairments were recorded for these assets during the years ended December 31, 2015 and 2014.

8. Commitments and Contingencies

Lease Arrangements

The Company leases equipment under various non-cancellable capital leases and office space under various operating leases, which expire at various dates through March 2026. Rental expense associated with operating leases is charged to expense in the year incurred and is included in the consolidated and combined statements of operations and comprehensive loss. Rent expense totaled $1,686, $813, and $197 for the years ended December 31, 2016, 2015 and 2014, respectively.

The following is a schedule of the future minimum lease payments required under these leases as of December 31, 2016:

	Capital Leases	Operating Leases
For the year end December 31,		
2017	$ 296	$ 1,388
2018	81	1,586
2019	—	1,621
2020	—	1,345
2021	—	985
Thereafter	—	4,524
Total minimum lease payments	377	11,449
Less amount representing interest	(18)	
Capital lease obligation, net of interest	359	
Current portion of capital lease obligation	(293)	
Non-current portion of capital lease obligation	$ 66	

The Company classifies the current portion of capital lease obligations within other current liabilities and the non-current portion within other non-current liabilities. The Company is recognizing the total cost of its office leases ratably over the lease period. The difference between rent paid and rent expense is reflected as deferred rent and is classified within other non-current liabilities in the accompanying consolidated balance sheets.

Regulatory Matters

The Company is subject to regulatory oversight by the U.S. Food and Drug Administration and other regulatory authorities with respect to the development, manufacturing, and sale of some of the products. In addition, the Company is subject to the Health Insurance Portability and Accountability Act ("HIPAA"), the Health Information Technology for Economic and Clinical Health Act and related patient confidentiality laws and regulations with respect to patient information. The Company reviews the applicable laws and regulations regarding effects of such laws and regulations on its operations on an ongoing basis and modifies operations as appropriate. The Company believes it is in substantial compliance with all applicable laws and regulations. Failure to comply with regulatory requirements could have a significant adverse effect on the Company's business and operations.

Legal Matters

The Company is, from time to time, subject to claims and litigation arising in the ordinary course of business. The Company intends to defend vigorously any such litigation that may arise under all defenses that would be available to it. In the opinion of management, the ultimate outcome of proceedings of which management is aware, even if adverse to the Company, would not have a material adverse effect on the consolidated and combined financial statements. As legal proceedings are inherently unpredictable, the Company's assessments involve significant judgment regarding future events.

(In thousands, except per unit amounts)

9. **Income Tax**

The components of the provision (benefit) for income taxes are presented in the following table:

	Year Ended December 31,	
	2016	2015
Current:		
Federal	$ —	$ —
State	—	—
Total current provision	—	—
Deferred:		
Federal	3,429	3,431
State	594	324
Less: valuation allowance	(4,023)	(3,755)
Total deferred benefit	—	—
Provision for income taxes	$ —	$ —

The Company's provision for income taxes differs from the amount of income tax determined by applying the applicable federal and state statutory income tax rates to the loss before income taxes due to the valuation allowance for the full amount of the net deferred tax assets.

Since the losses of the pass-through entities flow directly to the members of the Company for tax purposes, no provision for income taxes has been reflected in the consolidated and combined financial statements for these entities.

Deferred income taxes reflect temporary differences in the recognition of revenue and expenses for income tax reporting and financial statement purposes. Significant components of the Company's deferred tax assets as of December 31, 2016 and 2015 are as follows:

	December 31,	
	2016	2015
Deferred tax assets		
Net operating loss carryforwards	$ 19,269	$ 15,467
Equity Compensation	9	9
Accrual to cash differences	472	361
Depreciation and amortization	721	610
	20,471	16,447
Less: Valuation allowance	(20,471)	(16,447)
Net deferred tax assets	$ —	$ —

The realization of deferred tax assets may be dependent on the Company's ability to generate sufficient income in future years in the associated jurisdiction to which the deferred tax assets relate. The Company considers all available positive and negative evidence, including scheduled reversals of deferred tax liabilities, projected future taxable income, tax planning strategies, and recent financial performance. Based on the review of all positive and negative evidence, including a three year cumulative pre-tax loss, it was concluded that a full valuation allowance should be recorded against all net deferred tax assets at December 31, 2016 and 2015 as none of the deferred tax assets were more likely than not to be realized as of the balance sheet dates.

The Company paid no income taxes during the years ended December 31, 2016, 2015 and 2014. The Company has net operating loss ("NOL") carryforwards as of December 31, 2016 of approximately $49,011, which may be available to offset future taxable income. The Company's NOL carryforwards will expire, if not utilized, at various dates through 2036. Utilization of the NOL carryforwards may become subject to annual limitations due to ownership change limitations that could occur in the future as provided by Section 382 of the Internal Revenue Code of 1986, as amended, as well as similar state and foreign provisions. These ownership changes may limit the amount of the NOL carryforwards that can be utilized annually to offset future taxable income. The Company has not performed a comprehensive Section 382 study to determine any potential loss limitation in the United States resulting from past changes in ownership of its corporate subsidiary, and therefore it cannot be certain it will be able to fully utilize the NOL carryforwards.

10. **Members' Equity**

As of December 31, 2016 and 2015, the Company had three series of outstanding membership interests: Series A-1, Series A-2 and Series B units.

Rights and Preferences

Series A-1 and A-2 Units

Each holder of the outstanding Series A-1 units is entitled to one vote on each matter submitted to a vote of the members. The members vote together as a single class on all matters on which they are entitled to vote and all actions taken by the members will be deemed approved upon consent by the members representing a majority of the outstanding Series A-1 units. Except for the initial capital contributions, no members are obligated to make additional contributions. Series A-2 units do not have any voting rights. The Series A-1 and A-2 units have the characteristics noted below.

Non-liquidating distributions - Holders of the Series A-1 and A-2 units are entitled to receive distributions from the Company as determined by its board of directors (the "Board"). Any non-liquidating distributions will be made to all members based on their respective percentage interests as of the distribution date.

Capital proceeds and liquidating distributions - The Board may make distributions of cash proceeds arising from the sale or other disposition of assets ("Capital Proceeds") or upon liquidation, dissolution, or winding up of the Company ("Liquidating Distributions"). Prior to a qualified initial public offering ("IPO"), distributions of Capital Proceeds and Liquidating Distributions are made in the following order: first to the holders of the Series A-1 and A-2 units on a pro rata basis in proportion to the number of their Series A-1 and A-2 units, until their "Unreturned Capital" has been reduced to zero; second to the holders of Series B units (the "Series B Members") on a pro rata basis in proportion to the number of their Series B units until their "Unreturned Capital", if any, has been reduced to zero; and thereafter, to all members based on their respective percentage interests as of the distribution date. Each member's "Unreturned Capital" is the difference between (1) the aggregate capital contributions by that member and (2) any Capital Proceeds or Liquidating Distributions previously distributed to that member. As of December 31, 2016 and 2015, the holders of the Series A-1 and A-2 units had cumulative Unreturned Capital balances of $1,268,712.

Upon a qualified IPO, the priority rights of the holders of the Series A-1, A-2 and B units will immediately terminate and distributions of Capital Proceeds or Liquidating Distributions will be made to the holders of the Series A-1, A-2 and B units based on their respective percentage interests as of the distribution date, subject to the applicable hurdle amount for the Series B units.

Series B Non-Voting Units

The Company has reserved an aggregate of 150,000 Series B units for issuance to employees, consultants, contractors and other service providers of the Company and its subsidiaries in consideration for bona fide services provided to the Company. Series B units do not have any voting or information rights.

The Series B units are considered profits interests of the Company and do not represent an interest in the capital of the Company, and would not entitle the Series B Members to receive distributions if the Company were liquidated immediately after the grant. Instead, the Series B Members are entitled to receive a pro rata allocation of a portion of the profit and loss of the Company arising after the date of the grant and distributions made out of a portion of the profits of the Company arising after the grant date of the Series B units.

Series B Members will not be entitled to receive any distributions until the aggregate distributions made by the Company exceed a hurdle amount applicable to those Series B units. The hurdle amount is determined by the Board at the date of issuance of such units. After all other members have received distributions equal to the hurdle amount, the Series B Members will be entitled to receive their percentage interest of such excess distributions.

(In thousands, except per unit amounts)

11. **Equity Based Compensation**

The Company has various equity based compensation plans that it accounted for during the years ended December 31, 2016, 2015 and 2014, as described below.

NantOmics Profits Interests Plan

The Company has reserved 150,000 Series B units for issuance to employees, consultants, contractors and other service providers of the Company pursuant to the Profits Interests Plan. As of December 31, 2016 and 2015, there were 11,390 and 11,476 of outstanding Series B units, respectively.

As of December 31, 2016 and 2015, there were 2,933 and 3,019 outstanding Series B units, respectively, which provide their holders with the option to require the Company to purchase all of their vested Series B units at $1.484 per unit if the Company has not completed an initial public offering or a sale prior to June 30, 2019. These awards are measured at fair value at the end of each reporting period until settlement using both an option pricing method and a geometric Brownian motion and are classified within other non-current liabilities on the consolidated balance sheets as of December 31, 2016 and 2015.

The remaining Series B units do not provide the holders with an option to require the Company to purchase their vested units and are therefore classified as a component of members' equity in the consolidated balance sheets. The fair value of the equity-classified Series B units was estimated at the date of grant using both an option pricing method and a probability weighted expected return method.

The primary inputs used to estimate the fair values of the Series B units are presented below:

	December 31,		
	2016	**2015**	**2014**
Risk-free interest rate	0.85-1.35%	1.32%	1.05%-1.23%
Expected dividend yield	0.0%	0.0%	0.0%
Expected volatility	50%	70%	50%
Expected life in years	1-2.6	3.5	3.5

The estimated volatility was based on the historical equity volatility of comparable companies.

A summary of the Company's outstanding, nonvested, liability-classified Series B units and changes during the year ended December 31, 2016 is presented below:

Liability Classified Awards	**Number of Series B Units Outstanding**	**Weighted Average Grant Date Fair Value**
Nonvested outstanding, beginning of year	2,244	$0.45
Granted	—	$0.45
Vested	(725)	$0.45
Forfeited	(86)	$0.45
Nonvested outstanding, end of year	1,433	$0.45

A summary of the Company's outstanding, nonvested, equity-classified Series B units and changes during the year ended December 31, 2016 is presented below:

(In thousands, except per unit amounts)

Equity Classified Awards	Number of Series B Units Outstanding	Weighted Average Grant Date Fair Value
Nonvested outstanding, beginning of year	8,270	$0.34
Vested	(254)	$0.35
Nonvested outstanding, end of year	8,016	$0.34

During the years ended December 31, 2016, 2015, and 2014 the Company recognized total equity based compensation expense for the Series B units, including both the equity- and liability-classified awards, of $1,308, $916 and $327, respectively. As of December 31, 2016, total unrecognized equity based compensation expense of approximately $1,918 is expected to be recognized over a weighted average period of 2.0 years.

OncoPlex Equity Incentive Plan

As of December 31, 2014, OncoPlex had reserved approximately 1,792 shares of common stock for issuance under an Equity Incentive Plan, which authorized the granting of stock options to provide incentives to selected employees, executives, nonemployee directors, and independent contractors in the form of incentive stock options, non-qualified stock options, stock appreciation rights or restricted stock.

The fair value of each option award was estimated on the date of grant using an option pricing method assuming a risk-free interest rate of 1.66%, an expected dividend yield of 0.0%, an expected volatility of 80.0% and an expected life of 5 years.

On May 14, 2015, all unvested stock options held by existing shareholders of OncoPlex were cancelled concurrent with the Company's buyout of the OncoPlex non-controlling interests. All unrecognized equity based compensation expense was accelerated and recognized upon cancellation of the plan.

As of December 31, 2016, options for 10 shares at an exercise price of $2.35 were vested and exercisable and remained outstanding. These options have a remaining contractual term of 5.3 years.

The Company recorded $0, $377 and $251 of equity based compensation expense related to the OncoPlex Equity Incentive Plan during the years ended December 31, 2016, 2015 and 2014, respectively. During the years ended December 31, 2016, 2015 and 2014, the Company received $0, $1,829 and $0, respectively, from employees upon exercise of stock options. In accordance with Company policy, the shares were issued from a pool of shares reserved for issuance under the plan.

12. Employee Retirement Plan

The Company has various employee retirement plans that it accounted for during the years ended December 31, 2016, 2015 and 2014.

NantOmics and Five3G

The Company has a qualified defined contribution plan through a NantWorks Retirement Plan (the "NantWorks 401 (k) Plan") under Section 401(k) of the Internal Revenue Code covering eligible employees, including employees at certain of its subsidiaries, who have completed 30 days of service. Employee contributions to the NantWorks 401(k) Plan are voluntary. The Company contributes a 100% match up to 3.0% of the participant's eligible annual compensation, which contribution fully vests after three years of service. Participants' contributions are limited to their annual tax deferred contribution limit as allowed by the Internal Revenue Service. For the years ended December 31, 2016, 2015 and 2014, the Company's total matching contributions to the 401(k) Plan were $236, $110 and $38, respectively.

13. Related Party Transactions

Investment by NantHealth and Exclusive Reseller Agreement

On June 19 and June 30, 2015, the Company issued a total of 168,464 of Series A-2 units to NantHealth in exchange for $250,000. Additionally, the Company issued 611 Series A-2 units to NantHealth related to the acquisition of TRM (see Note 3). The Series A-2 units owned by NantHealth represent approximately 14.3% of the Company's total issued and outstanding membership interests. NantHealth is majority owned by NantWorks and is a transformational healthcare cloud-based IT company converging science and technology through a single integrated clinical platform, to provide actionable health information at the point of care.

In conjunction with the investment, the Company entered into an exclusive Reseller Agreement with NantHealth on June 19, 2015 and subsequently amended this agreement on May 9, 2016 (the “First Amended Reseller Agreement”). Under the First Amended Reseller Agreement, the Company granted to NantHealth the worldwide, exclusive rights to resell the Company’s genomic sequencing, quantitative proteomic analysis services and bioinformatics services, as well as related consulting and other professional services, to Institutional Customers. NantHealth does not have the right to resell such services for research or educational purposes, for consumer applications, for the development, evaluation, trial, analysis or regulatory approval of any pharmaceutical product or treatment or to individual patients or consumers, unless the Company grants such right to NantHealth on a case-by-case basis. Under the Amended Reseller Agreement, NantHealth is responsible for various aspects of delivering its sequencing and molecular analysis solutions, including patient engagement and communications with providers such as providing interpretations of the reports delivered to the physicians and resolving any disputes, ensuring customer satisfaction and managing billing and collections. On September 20, 2016, the Company and NantHealth further amended the First Amended Reseller Agreement (the "Second Amended Reseller Agreement"), which permits NantHealth to use vendors other than the Company to provide any or all of the services and clarifies that NantHealth is responsible for order fulfillment and branding.

The Second Amended Reseller Agreement grants to NantHealth the right to renew the agreement with exclusivity for up to three renewal terms, each lasting three years, if NantHealth achieves projected volume thresholds, as follows: (i) the first renewal option can be exercised if NantHealth sells at least 300 tests between June 19, 2015 and June 30, 2020; (ii) the second renewal option can be exercised if NantHealth sells at least 570 tests between July 1, 2020 and June 30, 2023; and (iii) the third renewal option can be exercised if NantHealth sells at least 760 tests between July 1, 2023 and June 30, 2026. If NantHealth does not meet the applicable volume threshold during the initial term or the first or second exclusive renewal terms, NantHealth has the right to renew for a single additional three year term, but only on a non-exclusive basis.

Under the Second Amended Reseller Agreement, the Company is entitled to a variable, per-service fee, depending on the net amount billed by NantHealth to its customer. NantHealth is obligated to pay to NantOmics non-cancellable annual minimum fees of at least $2,000 per year for each of the calendar years from 2016 through 2020 and, subject to NantHealth exercising at least one of its renewal options described above, at least $25,000 per year for each of the calendar years from 2021 through 2023 and at least $50,000 per year for each of the calendar years from 2024 through 2029. The Company invoices for its services on a monthly basis and such invoices are due and payable within 45 days of receipt. NantHealth has the right to terminate the agreement for convenience on six months’ prior written notice, and each party has the right to terminate the agreement in the event there is a material, uncured breach or ineligibility for federal healthcare programming by the other party.

For the years ended December 31, 2016 and 2015, the Company recognized $4,970 and $3,753, respectively, of revenue and had $3,650 and $3,111 of outstanding related party accounts receivable as of December 31, 2016 and 2015 related to the Reseller Agreement. Substantially all of the revenue recognized by the Company during the year ended December 31, 2015 and $2,286 of revenue during the year ended December 31, 2016 under the Reseller Agreement was related to a genomic sequencing services agreement between NantHealth and a research institution. Under that agreement, the institution agreed to pay NantHealth $10,000 in exchange for the sequencing services. At the request of the institution, certain public and private charitable 501(c)(3) non-profit organizations provided partial funding for the sequencing and related bioinformatics costs associated with the project. The Company’s Chairman and CEO serves as the CEO and a member of the board of directors of each of the organizations and by virtue of these positions, he may have influence or control over these organizations. The institution was not contractually or otherwise required to use NantHealth’s or the Company’s molecular profiling solutions or any of its other products or services as part of the charitable gift. The institution did not have a requirement to order or pay for the services unless it first received private donor funding for the project.

Sequencing Agreement with NantKwest, Inc.

On June 18, 2015, the Company entered into a genomic and proteomic sequencing agreement with NantKwest, Inc. (“NantKwest”), a company that is controlled by NantOmics’ Chairman and CEO. The Company is entitled to receive from NantKwest a fixed, per-sample fee, determined based on the type of services being provided. The Company invoices NantKwest on a monthly basis for services performed in the preceding month and invoices are payable within 30 days of receipt. The agreement has an initial term of five years and renews automatically for successive one year periods, unless terminated earlier. For the years ended December 31, 2016 and 2015, the Company recognized related party revenue of $238 and $0, respectively, under this arrangement in the consolidated and combined statements of operations and comprehensive loss. No receivables were outstanding from NantKwest as of December 31, 2016 and 2015.

Sequencing Agreement with Windber Research Institute

On February 8, 2016, the Company entered into a sequencing services agreement with Windber Research Institute, doing business as the Chan Soon-Shiong Institute of Molecular Medicine at Windber ("CSSIMMW"). The agreement has an initial term of five years, unless terminated earlier. Amounts invoiced to CSSIMMW by the Company are payable within 30 days of receipt unless an order form specifies otherwise. The initial order form under the agreement provides that CSSIMMW pay the Company $176 in exchange for certain sequencing services provided by the Company. The Company performed all of its services under the initial order form and recognized related party revenue of $176 for the year ended December 31, 2016 in the consolidated and combined statements of operations and comprehensive loss. No receivables were outstanding from CSSIMMW as of December 31, 2016.

Master Services Agreement with Altor BioScience Corporation

On October 10, 2016, the Company entered into a master services agreement ("MSA") with Altor BioScience Corporation ("Altor") for the provision of certain laboratory services by the Company to Altor. The Company's Chairman and CEO owns greater than 20% of Altor as of December 31, 2016. The MSA has an initial term of five years or until termination or expiration without renewal of the last work order still in effect at the end of five years after the effective date, whichever is longer and unless terminated sooner. All amounts invoiced to Altor by the Company are payable within 30 days of receipt. Under the MSA, Altor has granted to the Company an exclusive, perpetual and royalty free license to any and all rights, including intellectual property rights, arising in the performance of the services in certain diagnostic fields. The Company has not recognized any amounts related to the MSA in the consolidated and combined financial statements as of and for the year ended December 31, 2016.

NantWorks Shared Service Agreement

The consolidated and combined financial statements include significant transactions with NantWorks involving services provided to the Company pursuant to a Shared Services Agreement, such as public relations, information technology and cloud services, human resources and administration management, finance and risk management, facilities, procurement and travel, and corporate development and strategy. The costs of services have been directly charged or allocated to the Company by NantWorks using methods management believes are reasonable. These methods include reasonable estimates of percentages of NantWorks' employees' time or specific man hours, square footage percentage of shared facilities and infrastructure costs dedicated to the Company activities and specific reimbursement for services performed by third parties for NantWorks for the direct benefit of the Company. The Company was billed for such services at cost, without mark-up or profit for NantWorks, but including reasonable allocations of employee benefits, facilities and other direct or fairly allocated indirect costs that relate to the employees providing the services. The Company incurred $2,945, $2,726 and $598 of expenses during the years ended December 31, 2016, 2015 and 2014, respectively, related to general and administrative services provided by NantWorks. Such charges and allocations are not necessarily indicative of what would have been incurred if the Company had hired a third party to perform these services.

Purchase of Property and Equipment

On June 24, 2016, the Company entered into an agreement with NantHealth UK, Ltd. ("NantHealth UK"), a wholly owned subsidiary of NantHealth, whereby the Company purchased storage and other computer equipment from NantHealth UK in exchange for a cash payment of $144. The purchase price represented the net book value of the equipment as of the effective date. The Company accounted for the asset acquisition at carryover basis because NantHealth UK and the Company are under common control. The amount owed to NantHealth UK is classified within related party payables on the consolidated balance sheet as of December 31, 2016.

Related Party Notes Receivable

On September 4, 2015, Mox Networks, LLC ("Mox"), an affiliate of the Company, executed a demand promissory note in favor of the Company. The principal amount of the initial advance made by the Company to Mox totaled $10,000. On February 24 and March 8, 2016, the Company advanced an additional $5,559 and $14,000, respectively, to Mox under the demand promissory note executed on September 4, 2015. The note receivable bears interest at a per annum rate of 8.0%, compounded annually and computed on the basis of the actual number of days elapsed and a year of 365 or 366 days, as the case may be. As of December 31, 2016, and December 31, 2015, the total interest receivable on this note was $2,262 and $255, respectively, is included in related party notes receivable on the consolidated balance sheet. The unpaid principal and any accrued and unpaid interest on the note receivable are due and payable by Mox on demand by the Company. Mox may prepay the outstanding amount at any time, either in whole or in part, without premium or penalty and without the prior consent of the Company.

The Company does not have any representation on Mox's Board of Directors and does not otherwise have the power over the activities that most significantly impact its economic performance. As a result, while Mox is a variable interest entity, the Company is not considered the primary beneficiary of Mox. The unpaid principal and accrued and unpaid interest on the note receivable represents the Company's maximum exposure to loss as of December 31, 2016 as the Company had not committed to providing additional financial support to Mox. See Note 6 for disclosures related to the Company's involvement with other variable interest entities.

On January 4, 2016, NantCapital, an affiliate of the Company, executed a demand promissory note in favor of the Company. The principal amount of the advance made by the Company to NantCapital totaled $112,666. The note receivable bears interest at a per annum rate of 5.0%, compounded annually and computed on the basis of the actual number of days elapsed and a year of 365 or 366 days, as the case may be. As of December 31, 2016, the total interest receivable on this note was $5,587 and is included in related party notes receivable on the consolidated balance sheet. The unpaid principal and any accrued and unpaid interest on the note receivable are due and payable by NantCapital on demand by the Company in either (i) cash, (ii) equity of NantHealth, to the extent such equity is owned by NantCapital, (iii) Series A-2 units of the Company or (iv) any combination of the foregoing, all at the option of the Company. Subject to the preceding sentence, NantCapital may prepay the outstanding amount at any time, either in whole or in part, without premium or penalty and without the prior consent of the Company.

Investment in NantHealth

On January 22, 2016, NantHealth executed a demand promissory note in favor of the Company. The principal amount of the initial advance made by the Company to NantHealth totaled $20,000. On March 8, 2016, the Company made a second advance to NantHealth for $20,000. Prior to the note converting into shares of NantHealth's common stock as discussed below, the note receivable bore interest at a per annum rate of 5.0%. In May and June of 2016, NantHealth executed amendments to the demand promissory note in favor of the Company which provide that all unpaid principal of each advance owed to the Company and any accrued and unpaid interest would convert automatically into shares of NantHealth's common stock after pricing of NantHealth's initial public offering and immediately after conversion of NantHealth from a limited liability company to a corporation, based on the initial public offering price of NantHealth's common stock. On June 1, 2016, approximately $40,590 of principal and accrued interest on the note was converted into approximately 2,899 shares of NantHealth's common stock, representing approximately 2.4% of NantHealth's common stock then outstanding.

As of December 31, 2016, the Company's investment in NantHealth had a cost basis of $40,590 and a fair value of $28,819. Although the investment has only been in a loss position since September 19, 2016, the Company concluded that the unrealized $11,771 loss was other-than-temporary based on the decline in the fair value of NantHealth's common stock subsequent to the initial public offering. The Company currently does not intend to dispose of its NantHealth common stock and expects that the fair value of its investment will recover. The other-than-temporary impairment of $11,771 is classified within impairments on equity investments in the consolidated and combined statement of operations and comprehensive loss for the year ended December 31, 2016.

Related Party Payables

As of December 31, 2016 and 2015, the Company had related party payables of $3,923 and $6,232, respectively. The related party payables balance at December 31, 2016 primarily consisted of $3,026 of borrowings from an affiliate, $442 owed to NantWorks pursuant to the Shared Services Agreement, and $235 for accrued and unpaid interest on the related party promissory notes. For December 31, 2015, the related party payables primarily consisted of $3,026 of borrowings from an affiliate, $1,423 owed to NantWorks pursuant to the Shared Services Agreement and $1,427 for accrued and unpaid interest on the related party promissory notes.

Related Party Promissory Notes Payable

On May 1, 2014, the Company executed a convertible demand promissory note with NantWorks. The outstanding principal amount of advances made by the related party to the Company pursuant to these notes totaled $296 and $9,779 as of December 31, 2016 and 2015, respectively. On January 22 and March 30, 2016, the Company transferred to NantWorks marketable securities having a fair value of $8,730 and made a cash payment of $1,236 as a partial repayment of multiple advances made pursuant to the convertible demand promissory note in favor of NantWorks. The repayment amounts consisted of $9,483 of principal and $483 of accrued interest. The note bears interest at a per annum rate of 3.0%, compounded annually and computed on the basis of the actual number of days in a year. NantWorks may, at its sole discretion, and at any time, convert the aggregate amount of the unpaid principal and any accrued and unpaid interest on the convertible promissory note into equity securities of the Company. As of December 31, 2016 and 2015, the total interest outstanding on this note amounted to $7 and $416, respectively, and is included in related party payables in the consolidated balance sheets.

On March 5, 2015, the Company executed a demand promissory note with an affiliate. The principal amount of the advance made by the related party to the Company totaled $15,000 as of December 31, 2015. The note bears interest at a per annum rate of 8.0%. As of December 31, 2015, the total interest outstanding on this note amounted to $991 and is included in related party payables on the consolidated balance sheet. On March 30, 2016, the Company transferred marketable securities having a fair value of $16,292 as complete repayment of the demand promissory note with the affiliate. The repayment amount consisted of $15,000 of principal and $1,292 of accrued interest. As a result, there is no balance outstanding under this promissory note as of December 31, 2016.

On September 14, 2016, the Company executed a demand promissory note with Nant Capital, LLC ("NantCapital"). The principal amount of advances made by NantCapital to the Company pursuant to these notes totaled $20,392 as of December 31, 2016. The note bears interest at a per annum rate of 5.0%, compounded annually and computed on the basis of 365 or 366 days, as the case may be. As of December 31, 2016, the total interest outstanding on this note amounted to $204, and is included in related party payables on the consolidated balance sheet.

On April 27, 2011, TRM executed a demand promissory note with an affiliate. The principal amount of the advance made by the related party to TRM totaled $75 as of December 31, 2016. The note bears interest at a per annum rate of 5.0%, compounded annually. As of December 31, 2016, the total interest outstanding on this note amounted to $24 and is included in related party payables on the consolidated balance sheet.

The unpaid principal and any accrued and unpaid interest on the convertible promissory note and all of the promissory notes with the related parties are due and payable on demand. The Company and TRM may prepay the outstanding amounts at any time, either in whole or in part, without premium or penalty.

Deemed Capital Contribution by Parent

In 2016, the Company benefited from the use of certain equipment owned by an entity controlled by NantWorks. The Company recorded a non-cash expense of $630 and a corresponding capital contribution on behalf of NantWorks in the consolidated and combined financial statements for the year ended December 31, 2016. The amount of the expense represents the depreciation expense that the Company would have recognized had it owned such assets during the period of use.

14. **Change in Method of Accounting for Patent Costs**

As disclosed in Note 1, Description of Business and Basis of Presentation - Change in Method of Accounting for Patent Costs, on December 31, 2016, the Company elected to change its method of accounting for patent and patent application costs to expense them as incurred rather than capitalizing them as intangible assets and amortizing them using the straight-line method over the estimated useful lives of the patents. The Company has adjusted the comparative consolidated and combined financial statements of prior years to retrospectively apply the new method of accounting for patent costs as shown below (in thousands):

Consolidated Balance Sheet	As Reported	Effect of Change	As Adjusted
As of December 31, 2016 *			
Intangible assets, net	$ 9,092	$ (2,069)	$ 7,023
Accumulated deficit	(85,432)	(1,681)	(87,113)
Non-controlling interests	(154)	(388)	(542)
As of December 31, 2015			
Intangible assets, net	11,793	(1,400)	10,393
Accumulated deficit	(41,939)	(1,125)	(43,064)
Non-controlling interests	2,416	(275)	2,141
As of December 31, 2014			
Intangible assets, net	12,253	(1,058)	11,195
Accumulated deficit	(15,621)	(836)	(16,457)
Non-controlling interests	3,476	(222)	3,254

* This period has not been reported, therefore, the numbers are As Computed.

Consolidated and Combined Statements of Operations and Comprehensive Loss	As Reported	Effect of Change	As Adjusted
Year Ended December 31, 2016*			
Selling, general and administrative	$ 10,483	$ 669	$ 11,152
Net loss and comprehensive loss	(46,018)	(669)	(46,687)
Net loss attributable to non-controlling interests	(2,570)	(113)	(2,683)
Net loss attributable to NantOmics	(43,448)	(556)	(44,004)
Year Ended December 31, 2015			
Selling, general and administrative	11,291	342	11,633
Net loss and comprehensive loss	(28,108)	(342)	(28,450)
Net loss attributable to non-controlling interests	(1,790)	(53)	(1,843)
Net loss attributable to NantOmics	(26,318)	(289)	(26,607)
Year Ended December 31, 2014			
Selling, general and administrative	8,879	231	9,110
Net loss and comprehensive loss	(10,968)	(231)	(11,199)
Net loss attributable to non-controlling interests	(2,530)	(50)	(2,580)
Net loss attributable to NantOmics	(8,438)	(181)	(8,619)

* This period has not been reported, therefore, the numbers are As Computed.

(In thousands, except per unit amounts)

Consolidated and Combined Statements of Cash Flows	As Reported	Effect of Change	As Adjusted
Year Ended December 31, 2016*			
Net loss	$ (46,018)	$ (669)	$ (46,687)
Amortization	2,680	(244)	2,436
Other	293	—	293
Net cash used in operating activities	(27,028)	(913)	(27,941)
Purchases of intellectual property rights	(913)	913	—
Net cash used in investing activities	(108,542)	913	(107,629)
Year Ended December 31, 2015			
Net loss	(28,108)	(342)	(28,450)
Amortization	2,369	(166)	2,203
Other	90	(91)	(1)
Net cash used in operating activities	(9,148)	(599)	(9,747)
Purchases of intellectual property rights	(599)	599	—
Net cash used in investing activities	(66,093)	599	(65,494)
Year Ended December 31, 2014			
Net loss	(10,968)	(231)	(11,199)
Amortization	1,745	(131)	1,614
Other	69	(72)	(3)
Net cash used in operating activities	(10,518)	(434)	(10,952)
Purchases of intellectual property rights	(434)	434	—
Net cash used in investing activities	(1,694)	434	(1,260)

* This period has not been reported, therefore, the numbers are As Computed.

15. **Subsequent Events**

The Company has evaluated subsequent events through March 31, 2017, the date on which the consolidated and combined financial statements were available to be issued. There are no significant events that require disclosure in these consolidated and combined financial statements, except as follows:

Secured Note Purchase Agreement with Genos

The Company entered into a secured note purchase agreement with Genos whereby the Company purchased convertible notes with a principal amount of $675 and $500 on January 24 and February 15, 2017, respectively. The notes bear simple interest at 8.0% per year and, unless earlier converted, the outstanding principal and accrued interest on each note becomes due and payable by Genos on demand by the Company at any time after April 15, 2017. Prepayment of principal, together with accrued interest, may not be made by Genos prior to the maturity date without the Company's consent. Genos granted to the Company a continuing security interest in and to all of Genos' right, title and interest to certain assets, including its software and intellectual property rights. Except in respect of the collateral, the notes are subordinate in right of payment to all unsecured indebtedness and other contractual obligations of Genos. The notes automatically convert into shares of Genos' preferred stock upon the closing of certain qualified equity financings or certain qualified capital raising transactions by Genos and are convertible at the option of the Company in the absence of the occurrence of such events.

Borrowings from Related Parties

On January 24, 2017, the Company executed a demand promissory note in favor of an entity controlled by the Company's Chairman and CEO. The related party made advances to the Company totaling $1,160 in January and February 2017. The note payable bears interest at a per annum rate of 5.0%, compounded annually and computed on the basis of 365 or 366 days, as the case may be. The unpaid principal and any accrued and unpaid interest on the note payable are due and payable by the Company on demand by the related party. The Company may prepay the outstanding amount at any time, either in whole or in part, without premium or penalty and without the prior consent of the related party.

In January, February and March 2017, NantCapital made multiple advances to the Company totaling $9,025 under the demand promissory note executed on September 14, 2016. Other than the additional advances, all terms of the note payable remained the same (see Note 13).

Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of the end of the period covered by this report. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of such date. Our disclosure controls and procedures are designed to ensure that information required to be disclosed in the reports we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and that such information is accumulated and communicated to management, including the Chief Executive Officer and Chief Financial Officer, to allow timely decisions regarding required disclosure.

Our disclosure controls and procedures are designed to provide reasonable assurance of achieving their objectives of ensuring that information we are required to disclose in the reports we file or submit under the Exchange Act is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosures, and is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. There is no assurance that our disclosure controls and procedures will operate effectively under all circumstances.

Management's Annual Report on Internal Control Over Financial Reporting and Attestation Report of the Registered Public Accounting Firm

This Annual Report on Form 10-K does not include management's assessment regarding internal control over financial reporting or an attestation report of our independent registered public accounting firm due to a transition period established by rules of the SEC for newly public companies. Further, our independent public accounting firm will not be required to formally attest to the effectiveness of our internal control over financial reporting as long as we are an "emerging growth company" pursuant to the provisions of the JOBS Act.

Changes in Internal Control Over Financial Reporting

There were no changes to our internal control over financial reporting that occurred during the quarter ended December 31, 2016 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information required by this item will be contained in our definitive proxy statement to be filed with the Securities and Exchange Commission on Schedule 14A in connection with our 2017 Annual Meeting of Stockholders, or the Proxy Statement, which is expected to be filed not later than 120 days after the end of our fiscal year ended December 31, 2016, and is incorporated herein by reference.

Item 11. Executive Compensation

The information required by this item will be contained in the Proxy Statement under the heading “Executive Compensation" and "Director Compensation,” and is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required by this item will be contained in the Proxy Statement under the headings “Security Ownership of Certain Beneficial Owners and Management” and “Equity Compensation Plan Information,” and is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by this item will be contained in the Proxy Statement under the headings “Security Ownership of Certain Beneficial Owners and Management” and “Equity Compensation Plan Information,” and is incorporated herein by reference.

Item 14. Principal Accounting Fees and Services

The information required by this item will be contained in the Proxy Statement under the heading “Principal Accounting Fees and Services” and is incorporated herein by reference.

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a) The consolidated financial statements schedules and exhibits filed as part of this Annual Report on Form 10-K are as follows:

(1) Consolidated financial statements

Reference is made to the consolidated financial statements identified in the “Index to Financial Statements” under Part II, Item 8 of this Annual Report.

(2) Financial Statement Schedules

All other schedules not listed above have been omitted because the information required to be set forth therein is not applicable or is otherwise in the consolidated financial statements or notes thereto.

(3) Exhibits

The documents listed in the Exhibit Index of this Annual Report are incorporated by reference or are filed with this Annual Report, in each case as indicated therein (numbered in accordance with Item 601 of Regulation S-K).

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the Registrant has duly caused this Annual Report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized.

NantHealth, Inc.

Date: March 31, 2017

By:	/s/ Patrick Soon-Shiong
Name:	Patrick Soon-Shiong
Its:	Chairman, Chief Executive Officer and Director (Principal Executive Officer)

By:	/s/ Paul Holt
Name:	Paul Holt
Its:	Chief Financial Officer (Principal Financial and Accounting Officer)

POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints Patrick Soon-Shiong and Paul Holt, and each of them, as his or her true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his substitutes, may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this Annual Report on Form 10-K has been signed below by the following persons on behalf of the Registrant in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Patrick Soon-Shiong Patrick Soon-Shiong	Chairman, Chief Executive Officer and Director (Principal Executive Officer)	**March 31, 2017**
/s/ Paul Holt Paul Holt	Chief Financial Officer (Principal Financial and Accounting Officer)	**March 31, 2017**
/s/ Michael S. Sitrick Michael S. Sitrick	Director	**March 31, 2017**
/s/ Kirk K. Calhoun Kirk K. Calhoun	Director	**March 31, 2017**
/s/ Mark Burnett Mark Burnett	Director	**March 31, 2017**
/s/ Edward Miller Edward Miller	Director	**March 31, 2017**
/s/ Michael Blaszyk Michael Blaszyk	Director	**March 31, 2017**

Exhibits Index

The exhibits listed in the accompanying index to exhibits are filed as part of, or incorporated by reference into, this Annual Report on Form 10-K.

		Incorporated by Reference			
Number	Exhibit Title	Form	File No.	Filing Date	Filed Herewith
3.1	Amended and Restated Certificate of Incorporation.	10-Q	001-37792	August 15, 2016	
3.2	Amended and Restated Bylaws.	10-Q	001-37792	August 15, 2016	
10.1.1+	Second Amended and Restated NantOmics Exclusive Reseller Agreement, dated as of September 20, 2016, by and between the Registrant and NantOmics, LLC.	10-Q	001-37792	November 10, 2016	
10.1.2+	Amended and Restated NantOmics Exclusive Reseller Agreement, dated as of May 9, 2016, by and between the Registrant and NantOmics, LLC.	S-1/A	333-211196	June 1, 2016	
10.2+	NantHealth License Agreement, dated June 19, 2015, by and between the Registrant and NantOmics, LLC, as amended.	S-1/A	333-211196	June 1, 2016	
10.3#	2016 Equity Incentive Plan and form of agreement thereunder.	S-1	333-211196	May 6, 2016	
10.4#	2016 Executive Incentive Compensation Plan.	S-1	333-211196	May 6, 2016	
10.5	Amended and Restated Promissory Note, between Registrant and NantCapital LLC, dated May 9, 2016.	S-1/A	333-211196	May 11, 2016	
10.6	Amended and Restated Promissory Note, between Registrant and NantOmics, LLC, dated May 23, 2016.	S-1/A	333-211196	May 24, 2016	
10.7	Side Letter Agreement, between Registrant and NantWorks, LLC, dated May 22, 2016.	S-1/A	333-211196	May 23, 2016	
10.8	Indenture, dated December 21, 2016, between NantHealth, Inc. and U.S. Bank National Association.	8-K	333-211196	December 20, 2016?	
10.9	Form of 5.50% Convertible Senior Note due 2021 (included in Exhibit 4.1).	8-K	333-211196	December 21, 2016	
10.10	Purchase Agreement, dated December 15, 2016, by and among NantHealth, Inc. and J.P. Morgan Securities LLC and Jefferies LLC, as representative of the initial purchasers named therein.	8-K	333-211196	December 21, 2016	
10.11	Purchase Agreement, dated December 15, 2016, by and between NantHealth, Inc. and Cambridge Equities, L.P..	8-K	333-211196	December 21, 2016	
10.12	Second Amended and Restated Promissory Note, dated December 15, 2016, by and between NantHealth, Inc. and Nant Capital LLC.	8-K	333-211196	December 21, 2016	
21.1	Subsidiaries				X
23.1	Consent of Ernst & Young LLP				X

Number	Exhibit Title	Incorporated by Reference			Filed Herewith
		Form	File No.	Filing Date	
23.2	Consent Mayer Hoffman McCann, P.C.				X
24.1	Power of Attorney (Contained on Signature Page to this Annual Report on Form 10-K).				X
31.1	Certification of Principal Executive Officer required by Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				X
31.2	Certification of Principal Financial Officer required by Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				X
32.1 *	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				X
32.2 *	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				X
101.INS**	XBRL Instance Document.				X
101.SCH**	XBRL Taxonomy Extension Schema Document.				X
101.CAL**	XBRL Taxonomy Extension Calculation Linkbase Document.				X
101.DEF**	XBRL Taxonomy Extension Definition Linkbase Document.				X
101.LAB**	XBRL Taxonomy Extension Label Linkbase Document.				X
101.PRE**	XBRL Taxonomy Extension Presentation Linkbase Document.				X

Represents a management contract or compensatory plan.

+ Confidential treatment requested with respect to certain portions of this exhibit. Omitted portions filed separately with the Securities and Exchange Commission.

* As contemplated by SEC Release No. 33-8212, these exhibits are furnished with this Annual Report on Form 10-K and are not deemed filed with the Securities and Exchange Commission and are not incorporated by reference in any filing of NantHealth, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date hereof and irrespective of any general incorporation language contained in such filings.

** XBRL (eXtensible Business Reporting Language) information is furnished and not filed or a part of a registration statement or prospectus for purposes of sections 11 or 12 of the Securities Act of 1933, as amended, is deemed not filed for purposes of section 18 of the Securities Exchange Act of 1934, as amended, and is otherwise not subject to liability under these sections.

EXECUTIVE TEAM

Patrick Soon-Shiong, M.D., FRCS (C), FACS
Chairman of the Board of Directors and
Chief Executive Officer

Paul Holt
Chief Financial Officer

BOARD OF DIRECTORS

Michael S. Sitrick
Board Member

Kirk K. Calhoun
Board Member

Mark Burnett
Board Member

Edward Miller, M.D.
Board Member

Michael Blaszyk
Board Member

CORPORATE HEADQUARTERS
NantHealth, Inc.
9920 Jefferson Boulevard
Culver City, California 90232
(310) 883-1300
www.nanthealth.com

ANNUAL MEETING OF STOCKHOLDERS
Tuesday, June 13, 2017 at 10:00 a.m.
Brentwood Country Club
590 South Burlingame Avenue
Los Angeles, California 90049

COMMON STOCK LISTING
Nasdaq Global Select Market
Ticker Symbol: NH

INVESTOR RELATIONS
NantHealth, Inc.
Investor Relations
9920 Jefferson Boulevard
Culver City, California 90232
investors@nanthealth.com

TRANSFER AGENT
For questions regarding your account, changes of address or the consolidation of accounts, please contact the NantHealth's transfer agent:

American Stock Transfer & Trust Company, LLC
6201 15th Avenue
Brooklyn, New York 11219
(800) 937-5449
info@amstock.com

INDEPENDENT AUDITORS
Ernst & Young LLP
Los Angeles, California

LEGAL COUNSEL
Wilson Sonsini Goodrich & Rosati, P.C.
San Diego, California

NOTE ON FORWARD LOOKING STATEMENTS
This annual report contains forward-looking statements within the meaning of the United States securities laws. Such forward-looking statements are subject to risks and uncertainties that could cause NantHealth's actual results to differ materially from those indicated by these forward-looking statements. Risks and uncertainties include, but are not limited to: our ability to successfully integrate a complex learning system to address a wide range of healthcare issues; our ability to successfully amass the requisite data to achieve maximum network effects; appropriately allocating financial and human resources across a broad array of product and service offerings; raising additional capital as necessary to fund our operations; achieving significant commercial market acceptance for our sequencing and molecular analysis solutions; establish relationships with, key thought leaders or payors' key decision makers in order to establish GPS Cancer as a standard of care for patients with cancer; our ability to grow the market for our Systems Infrastructure, NantOS and NantOS apps; successfully enhancing our Systems Infrastructure, NantOS or NantOS apps to achieve market acceptance and keep pace with technological developments; customer concentration; competition; security breaches; bandwidth limitations; our ability to continue our relationship with NantOmics; our ability to obtain regulatory approvals; dependence upon senior management; the need to comply with and meet applicable laws and regulations; and unexpected adverse events. NantHealth undertakes no obligation to update any forward-looking statement in light of new information or future events, except as otherwise required by law. Information on the risks and uncertainties that could affect NantHealth's results is included in the Annual Report on Form 10-K included herewith.

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