natera™

2023 Annual report

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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, 2023

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: 001-37478

NATERA, INC.

(Exact Name of Registrant as Specified in its Charter)

Delaware	**01-0894487**
State or Other Jurisdiction of Incorporation or Organization	**(I.R.S. Employer Identification No.)**
13011 McCallen Pass Building A Suite 100 Austin, TX	**78753**
(Address of Principal Executive Offices)	**(Zip Code)**

(650) 980-9190

Registrant's Telephone Number, Including Area Code

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

Title of each class	**Trading Symbol**	**Name of each exchange on which registered**
Common Stock, par value $0.0001 per share	**NTRA**	**The Nasdaq Stock Market LLC (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 Section 15(d) of the Securities 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 every Interactive Data File required to be submitted 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 such files). Yes ☒ No ☐

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

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

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 equity held by non-affiliates of the registrant was approximately $5.26 billion based on the last reported sale price of $48.66 per share as reported on the Nasdaq Global Select Market on June 30, 2023, the last trading day of the most recently completed second fiscal quarter.

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

As of February 23, 2024, the number of outstanding shares of the registrant's common stock, par value $0.0001 per share, was 120,757,877.

DOCUMENTS INCORPORATED BY REFERENCE

Information required in response to Part III of this annual report on Form 10-K is hereby incorporated by reference to portions of the Registrant's proxy statement for its Annual Meeting of Stockholders to be held in 2024. The proxy statement will be filed by the registrant with the Securities and Exchange Commission within 120 days after the end of the registrant's fiscal year ended December 31, 2023.

Natera, Inc.

FORM 10-K FOR THE YEAR ENDED DECEMBER 31, 2023

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This report contains forward-looking statements. The forward-looking statements are contained principally in the sections titled “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” but are also contained elsewhere in this report. Forward-looking statements include information concerning our future results of operations and financial position, strategy and plans, and our expectations for future operations. Forward-looking statements include all statements that are not historical facts and, in some cases, can be identified by terms such as "believe," "may," "will," "estimate," "continue," "anticipate," "design," "intend," "expect," "could," "plan," "potential," "predict," "seek," "should," "would" or the negative version of these words and similar expressions.

Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements, including those described in "Risk Factors" and elsewhere in this report. Given these uncertainties, you should not place undue reliance on these forward-looking statements. Also, forward-looking statements represent our beliefs and assumptions only as of the date of this report. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all. You should read this report completely and with the understanding that our actual future results may be materially different from what we expect.

These forward-looking statements include, but are not limited to, statements concerning the following:

- our expectations regarding revenue, expenses and other operating results;
- our expectation that, for the foreseeable future, a significant portion of our revenues will be derived from sales of Panorama, Horizon, and Signatera;
- our ability to increase demand and reimbursement for our tests;
- our expectation that Panorama will be adopted for the screening of microdeletions and that third-party payer reimbursement will be available for this testing, including our expectations that the results from our single nucleotide polymorphism-based Microdeletion and Aneuploidy RegisTry, or SMART, Study may support broader use of and reimbursement for the use of Panorama for microdeletions;
- our expectations of the reliability, accuracy, and performance of our tests, as well as expectations of the benefits of our tests to patients, providers, and payers;
- our ability to successfully develop additional revenue opportunities, expand our product offerings to include new tests, and expand adoption of our current and future technologies through Constellation, our cloud-based distribution model;
- our efforts to successfully develop and commercialize, or enhance, our products;
- our ability to comply with federal, state, and foreign regulatory requirements, programs and policies, including potential legislation and a proposed rule from the FDA that would, if passed or adopted, would classify our tests as medical devices, and to successfully operate our business in response to changes in such requirements, programs and policies;
- our ability to respond to, defend, or otherwise favorably resolve litigation or other proceedings, including investigations, subpoenas, demands, disputes, requests for information, and other regulatory or administrative actions or proceedings;
- the effect of improvements in our cost of goods sold;
- our estimates of the total addressable markets for our current and potential product offerings;
- our ability and expectations regarding obtaining, maintaining and expanding third-party payer coverage of, and reimbursement for, our tests;
- the effect of changes in the way we account for our revenue;
- the scope of protection we establish and maintain for, and developments or disputes concerning, our intellectual property or other proprietary rights, including associated litigation costs we may incur and our assumptions regarding any potential liabilities associated with our existing litigation matters;
- our ability to successfully compete in the markets we serve;

- our reliance on collaborators such as medical institutions, contract laboratories, laboratory partners, and other third parties;
- our ability to operate our laboratory facilities and meet expected demand, and to successfully scale our operations;
- our reliance on a limited number of suppliers, including sole source suppliers, which may impact our ability to maintain a continued supply of laboratory instruments and materials and to run our tests;
- our expectations of the rate of adoption of our current or future tests by laboratories, clinics, clinicians, payers, and patients;
- our ability to complete clinical studies and publish compelling clinical data in peer-reviewed medical publications regarding our current and future tests, and the effect of such data or publications on professional society or practice guidelines or coverage and reimbursement determinations from third-party payers, including our SMART and CIRCULATE-Japan studies and our ongoing and planned trials in oncology and organ health;
- our reliance on our partners to market and offer our tests in the United States and in international markets;
- our expectations regarding acquisitions, dispositions and other strategic transactions;
- our expectations regarding the conversion of our outstanding 2.25% convertible senior notes due 2027, or the Convertible Notes, in the aggregate principal amount of $287.5 million and our ability to make debt service payments under the Convertible Notes if such Convertible Notes are not converted;
- our ability to control our operating expenses and fund our working capital requirements;
- the factors that may impact our financial results, including our revenue recognition assumptions and estimates; and
- anticipated trends and challenges in our business and the markets in which we operate.

Any forward-looking statement made by us in this report speaks only as of the date on which it is made. Except as required by law, we disclaim any obligation to update these forward-looking statements publicly, or to update the reasons actual results could differ materially from those anticipated in these forward-looking statements, even if new information becomes available in the future.

SUMMARY OF RISK FACTORS

The below is a summary of principal risks to our business and risks associated with ownership of our stock. This summary does not address all of the risks that we face. We encourage you to carefully review the full risk factors contained in this Annual Report on Form 10-K in their entirety for additional information regarding the material factors that make an investment in our securities speculative or risky. These risks and uncertainties include, but are not limited to, the following:

- if we are unable to increase demand for our tests – in particular Panorama, Horizon, and Signatera, which together represent the significant majority of our revenues – obtain favorable coverage and reimbursement determinations from third-party payers, and expand geographically, our business will be harmed;
- Panorama may not be adopted for broader use for the screening of microdeletions, or third-party payer reimbursement may not be available for this testing;
- if we are not successful in our efforts to develop additional revenue opportunities and expand our product offerings to include new tests, including in oncology and organ health, our business and prospects, as well as our stock price, will be adversely affected;
- we have incurred net losses since our inception, and anticipate that we will continue to incur losses for the foreseeable future;
- we have incurred substantial indebtedness that may decrease our business flexibility, access to capital, and/or increase our borrowing costs, which may adversely affect our operations and financial results;
- our quarterly results may fluctuate from period to period, which could adversely impact the value of our common stock;
- competition in our industry is intense, and if we are unable to compete successfully with respect to our current or future products or services, we may be unable to increase or sustain our revenues or achieve profitability;

- our estimates of the total addressable markets for our current and potential product offerings may turn out to be inaccurate, or the markets for our tests may not grow as we expect;
- we may be unable to obtain, maintain or expand third-party payer coverage of, and reimbursement for, our tests;
- if we are not successful in our research and development or clinical development activities, including clinical trials and publication of compelling data, our ability to commercialize our products, and therefore our competitive position, will be adversely impacted;
- our strategic or commercial partnerships, such as our agreements with BGI Genomics Co., Ltd., Foundation Medicine, Inc., and our pharmaceutical partners, may not be successful, and we may be unable to enter into additional partnerships in the future;
- we operate in a crowded technology area in which there has been substantial litigation and other proceedings regarding patent and other intellectual property rights, and we may fail to adequately protect or enforce our intellectual property relating to our tests, or fail to defend against infringement claims brought against us by other parties, or our assumptions regarding the costs and potential liabilities associated with our existing litigation matters may be incorrect;
- we rely on a limited number of suppliers, including sole source suppliers, which may impact our ability to maintain a continued supply of laboratory instruments and materials and to run our tests;
- we have experienced rapid growth, particularly in recent years, and may be unable to successfully scale our operations, which could harm our business and results of operations;
- we may engage in acquisitions, dispositions or other strategic transactions that could disrupt our business, cause dilution to our stockholders or reduce our financial resources;
- third-party payers, such as commercial health insurers and government insurance programs, may decide not to reimburse our existing or future products, may set the amounts of any reimbursements at prices that do not allow us to cover our expenses or may otherwise adopt policies and procedures that restrict or harm our business;
- if the FDA were to begin actively regulating our tests as medical devices, we could incur substantial costs and delays associated with trying to obtain premarket clearances or approvals and incur costs associated with complying with post-market controls; and
- difficult macroeconomic conditions may have an adverse effect on our business.

As used in this Annual Report on Form 10-K, the terms “Natera,” “Registrant,” “Company,” “we,” “us,” and “our” mean Natera, Inc. and its subsidiaries unless the context indicates otherwise.

PART I

Item 1. BUSINESS

Note: A glossary of terms used in this Form 10-K appears at the end of this Item 1.

Overview

We are a diagnostics company with proprietary molecular and bioinformatics technology that we are applying to change the management of disease worldwide. Our cell-free DNA, or cfDNA, technology combines our novel molecular assays, which reliably measure many informative regions across the genome from samples as small as a single cell, with our statistical algorithms which incorporate data available from the broader scientific community to identify genetic variations covering a wide range of serious conditions with high accuracy and coverage. We aim to make personalized genetic testing and diagnostics part of the standard of care to protect health and inform earlier and more targeted interventions that help lead to longer, healthier lives.

We focus on applying our technology to three main areas of healthcare – women's health, oncology and organ health. Since 2009, we have launched a comprehensive suite of products to improve patient care outcomes in these areas. In the women's health space, we develop and commercialize non- or minimally- invasive tests to evaluate risk for, and thereby enable early detection of, a wide range of genetic conditions, such as Down syndrome. In oncology, we commercialize, among others, a personalized blood-based DNA test to detect molecular residual disease, or MRD, and monitor for disease recurrence across a broad range of cancer types. Our third area of focus is organ health, where we offer tests to assess kidney, heart, and lung transplant rejection as well as genetic testing for chronic kidney disease. We intend to continue to enhance our existing products, expand our product portfolio, and launch new products in the future. We seek to enable even wider adoption of our technology through our global cloud-based distribution model. In addition to our direct sales force in the United States, we have a global network of over 100 laboratory and distribution partners, including many of the largest international laboratories. We are committed to generating peer-reviewed clinical evidence for our tests, and have 85 peer-reviewed publications in women's health, over 60 in oncology, and over 30 in organ health.

Our revenues were $1,082.6 million in 2023 compared to $820.2 million in 2022 and $625.5 million in 2021. Our product revenues were $1,068.5 million, $797.3 million, and $580.1 million for the years ended December 31, 2023, 2022, and 2021, respectively. Our net losses decreased to $434.8 million in 2023, from $547.8 million in 2022 and $471.7 million in 2021. We processed approximately 2.5 million tests in 2023, compared to approximately 2.1 million tests in 2022 and 1.6 million tests in 2021.

We are headquartered in Austin, Texas, and our laboratory facilities are located in Austin, Texas and San Carlos, California.

Our Solution

In women's health, oncology and organ health, the use of blood-based tests offers significant advantages over older and more invasive methods, but the significant technological challenge is that such testing often requires the measurement of very small amounts of relevant genetic material – fetal DNA in reproductive health, tumor DNA in oncology, and donor DNA in transplant rejection – circulating within a much larger blood sample. Our approach combines proprietary molecular biology and computational techniques to measure genomic variations in tiny amounts of DNA, as small as a single cell. Our core technology has, to date, been proven across these three diverse fields of women's health, oncology and organ health.

DNA is the molecule that carries genetic information in an organism. Differences in the specific sequence and structure of the chemical building blocks, or bases, that make up DNA drive biological diversity, including genetic mutations; certain variations can cause disease. An example of genetic diversity is a change in a single chemical base.

When single base changes are common in the population, that position on the chromosome is called a single nucleotide polymorphism, or SNP.

Our molecular biology techniques are based on measuring thousands of SNPs simultaneously using massively multiplexed polymerase chain reaction, or mmPCR, to multiplex, or target, many thousands of regions of the genome simultaneously in a single test reaction. Our method avoids losing molecules, which can happen when samples are split into separate reaction tubes, so that all relevant variants can be detected. To make sense of the resulting deep and rich set of biological data and deliver a test result, we have developed computationally intensive algorithms that combine the data generated by mmPCR with our internal databases and the vast and growing sources of publicly available genomic information to build highly detailed models of the genomic regions of interest. Our technologies allow us to achieve a high signal-to-noise ratio when detecting fragments of DNA at frequencies as low as a single copy, which allows us to deliver tests with a high degree of specificity and sensitivity. Furthermore, our tests can be applied to assess a range of conditions and disease types, including common fetal aneuploidies, microdeletions, triploidy, and inherited genetic conditions that could be passed on from parent to child; a broad range of cancer types; rejection of heart, lung, and kidney transplants; and genetic bases of kidney disease.

We believe our approach represents a fundamental advance in molecular biology. In women's health, this approach is distinct from the approach employed with other commercially available NIPTs, which use first-generation "quantitative", or counting, methods to compare the relative number of sequence reads from a chromosome of interest to a reference chromosome. Based on data published in the journals *Obstetrics & Gynecology*, *American Journal of Obstetrics & Gynecology*, *Prenatal Diagnosis*, and others, we believe Panorama is the most accurate NIPT commercially available in the United States. In oncology, with our Signatera circulating tumor DNA, or ctDNA, test that is custom designed for, informed by and specific to, the tumor DNA for each patient, we have demonstrated the ability to detect ctDNA with a high degree of sensitivity and specificity. In organ health, we have demonstrated the ability of our technology to measure the fraction of cell-free DNA that is donor-derived, or dd-cfDNA, which is DNA that is shed from a transplanted organ into circulation, each demonstrating a high area under the curve, or AUC, in validation studies in each of heart, lung, and kidney.

Our technology is compatible with standard equipment used globally and a range of next generation sequencing, or NGS, platforms, and we have optimized our algorithms to enable laboratories around the world to run tests locally and access our algorithms in the cloud using our Constellation platform. We sell our tests directly and partner with other clinical laboratories to distribute our tests globally. Currently, all of our products other than our Constellation cloud software product are laboratory developed tests, or LDTs. We perform commercial testing in our CLIA-certified laboratories.

Women's Health

We provide testing to support a spectrum of women's health needs, from family planning and prenatal testing to hereditary cancer screening.

Panorama

We launched Panorama, our non-invasive prenatal test, or NIPT, in 2013 and have since gone from being the fourth company to enter the NIPT market to being the market leader by volume in the United States. Panorama helps physicians assess the risk of fetal genetic abnormalities by non-invasively screening for fetal chromosomal abnormalities, including Down syndrome, Edwards syndrome, Patau syndrome, Turner syndrome and triploidy, which often result in intellectual disability, severe organ abnormalities and miscarriage. Panorama also screens for five of the most common genetic diseases caused by microdeletions – 22q11.2 deletion syndrome (DiGeorge syndrome), 1p36 deletion, Angelman syndrome, Cri-du-chat syndrome and Prader-Willi syndrome. Diseases caused by microdeletions are often not detected via common screening techniques such as ultrasound or hormone-based screening, yet the presence of a microdeletion can critically impact postnatal treatment. For example, when learning prior to birth that a newborn has 22q11.2 deletion syndrome, doctors will know to monitor the infant and administer calcium if needed to avoid seizures and permanent cognitive impairment, and will know to avoid administering routine vaccinations due to the immunodeficiency frequently

associated with this condition. Unlike Down syndrome, where the risk increases with maternal age, the risk of the five microdeletions that Panorama screens for is independent of maternal age. Based on data published in *Prenatal Diagnosis* and *American Journal of Obstetrics & Gynecology*, the combined prevalence of these targeted microdeletions is approximately one in 1,000 pregnancies, which collectively makes them more common than Down syndrome for women approximately 28 years of age or younger. In particular, 22q11.2 is the most common microdeletion; a key finding from our SNP-based Microdeletions and Aneuploidy RegisTry (SMART) study described below was a higher-than-expected prevalence of 22q11.2 deletion syndrome of one in 1,524 pregnancies in the study cohort.

Panorama can also identify fetal sex for single birth pregnancies as well as of each fetus in twin pregnancies, and has demonstrated the ability to identify fetal sex more accurately than competing NIPTs. This is partially a result of Panorama's unique ability to detect a vanishing twin, which is a known driver of fetal sex errors with the quantitative methods used by our competitors. The *American Journal of Obstetrics & Gynecology* noted that the ability of Panorama to identify additional fetal haplotypes is expected to result in fewer false positive calls and prevent incorrect fetal sex calls compared to other methods.

Panorama demonstrates the capabilities of our technology by employing our fundamentally unique approach of simultaneously measuring thousands of SNPs in a single test reaction to identify genetic variations in fetal DNA with a high degree of specificity and sensitivity, which we believe can give patients and their physicians a greater degree of comfort in choosing to forego unnecessary invasive procedures, limiting the resulting risk of spontaneous miscarriage associated with invasive procedures and lowering the total cost to the healthcare system of these procedures. Furthermore, with recent technological advances validated in the SMART study, Panorama leverages artificial intelligence to enable highly accurate results on samples for which a result would otherwise be difficult to determine. Panorama screens for common genetic conditions that affect both high-risk pregnancies, where maternal age is 35 years or older and which we estimate represent approximately 800,000 of the approximately 4.3 million pregnancies in the United States, and average-risk pregnancies, which we estimate represent approximately 3.5 million pregnancies in the United States.

Panorama is performed on a maternal blood sample and can be performed as early as nine weeks into a pregnancy, which is significantly earlier than traditional methods, such as serum protein measurement whereby doctors measure the presence and amount of certain hormones in the blood. Panorama starts with a simple blood draw from the mother, either in a doctor's office, in a laboratory or through a phlebotomist that travels to the patient, and the sample is sent to one of our CLIA-certified and CAP-accredited laboratories for processing. After Panorama generates its result, we provide the doctor or the laboratory with a report showing whether there is a high risk or low risk that abnormalities are present in the fetus.

The analytic and clinical validity of our technology demonstrated in NIPT has been described in more peer- reviewed publications covering more patients than our competitors. The SMART study, published in the *American Journal of Obstetrics and Gynecology*, evaluated the performance of cfDNA screening for aneuploidies T21, T18 and T13 as well as for 22q11.2 by tracking birth outcomes in the general population among women who presented clinically and elected Panorama microdeletions and aneuploidy screening as part of their routine care. Over 17,000 aneuploidy cases and over 18,000 22q11.2 deletion syndrome cases were analyzed. In particular, Panorama demonstrated sensitivity of approximately 99%, specificity of over 99.9%, and a PPV of 95% for T21 in the SMART study. Based on a publication in the *Journal of Clinical Medicine*, Panorama has demonstrated greater than 99% overall sensitivity and greater than 99.9% overall specificity for T21, T18 and T13. Furthermore, a paper published in *Obstetrics & Gynecology* reported that Panorama had a statistically significant lower false positive rate than other NIPT methods practiced by our U.S. competitors. In the SMART study, Panorama demonstrated sensitivity for 22q11.2 deletion syndrome of 83%, clinical PPV of approximately 53%, and a false positive rate of 0.05% using our updated artificial intelligence algorithm.

Panorama is also the only commercially available NIPT for twin pregnancies that can distinguish between each twin's DNA, and therefore can determine zygosity, or whether the twins are identical or fraternal, and the fetal sex of each twin. Determining zygosity early in a pregnancy can help guide the management of a pregnancy, as certain monozygotic, or identical twin, pregnancies are at higher risk for various complications such as twin-twin transfusion syndrome, where there is an unequal sharing of blood, and therefore unequal growth, between the twins. Panorama screens twin pregnancies for Down, Edwards and Patau syndromes and, for identical twins, Turner syndrome and 22q11.2 deletion syndrome,

among others. In validation studies, Panorama identified identical twins with over 99% sensitivity and specificity and achieved a combined sensitivity of over 99% and specificity of over 99% for Down, Edwards and Patau syndromes in twin pregnancies.

Horizon

Our Horizon carrier screening test helps individuals and couples determine if they are carriers of genetic variations that cause certain genetic conditions. Depending on the condition, if one or both parents are carriers, it could result in a child affected with the condition. Many people do not know they are a carrier for an inherited genetic condition until they have an affected child. These conditions are often rare and usually there is no family history, and although certain conditions are more common in certain ethnic groups, ethnicity may not be a reliable predictor of carrier status, as patients are increasingly of mixed or uncertain ethnicities. The industry's approach to carrier screening has accordingly evolved over time, from screening targeting specific ethnicities with a higher incidence of screened conditions, to pan-ethnic screening for certain conditions based on incidence and clinical utility, and most recently to expanded screening for many conditions simultaneously.

Horizon was created based on recommended screening guidelines from ACOG, ACMG, and the Victor Center for the Prevention of Jewish Genetic Diseases. Horizon screens for up to 445 inherited conditions across a selection of screening panels, including Cystic Fibrosis, Duchenne Muscular Dystrophy, or DMD, Spinal Muscular Atrophy, Fragile X Syndrome and other conditions, and performs with a 99% detection rate for most conditions.

The sample required for Horizon can be obtained simultaneously with the sample required for Panorama, which makes it easier for us to offer, and for patients to take, both tests. Horizon employs various methodologies to analyze the DNA from the individual's blood or saliva sample to determine if the individual is a carrier for the genetic conditions being screened. These methodologies include next generation sequencing to detect single nucleotide variants, insertions and deletions, and copy number changes, and PCR fragment analysis to detect certain genetic variants.

Other women's health products

While Panorama and Horizon represent the significant majority of our women's health revenues, we offer a portfolio of tests addressing reproductive and women's health. Our Vistara single-gene NIPT screens for 25 single-gene disorders that cause severe skeletal, cardiac and neurological conditions which affect quality of life, are often associated with cognitive disabilities and could benefit from medical and/or surgical intervention. The conditions screened by Vistara have a combined incidence of approximately 1 in 600, which is higher than that of Down syndrome as well as Cystic Fibrosis; however, these conditions may otherwise go undetected until after birth or into childhood as traditional NIPTs do not screen for these conditions, prenatal ultrasound findings are not a reliable indicator, and family history is not a good indicator of risk for these conditions, which are commonly caused by new, and not inherited, mutations. Screening for these conditions early in a pregnancy can facilitate early diagnosis, enable patients to be referred to MFMs and other specialists for targeted evaluations, to guide labor and delivery management, and to allow families to mobilize resources, ask questions and anticipate future needs. We have received a CE Mark for Vistara from the European Commission. In validation studies, Vistara demonstrated a combined analytical sensitivity and analytical specificity of greater than 99%.

Spectrum, our preimplantation genetic test for couples undergoing IVF, can improve the chance of a successful pregnancy while reducing the chance of miscarriage or of having a child with a chromosomal condition, by helping to identify the healthiest embryos during an IVF cycle. In particular, aneuploidy is common in human embryos—particularly as women age—and is the primary cause of failed IVF. In a study published in April 2018, a retrospective analysis of pregnancy outcomes demonstrated that use of Spectrum during IVF led to increased rates of implantation, clinical pregnancy, and live births. Spectrum incorporates our proprietary technology to confirm parentage, determine the parental origin of the chromosomal abnormality, and further screen for uniparental disomy, in which two copies of a chromosome come from the same parent.

Anora, our products of conception, or POC, test, analyzes miscarriage tissue from women who have experienced one or more pregnancy losses to determine whether there was an underlying chromosomal reason for the loss. Anora can

detect trisomy, triploidy, extra or missing chromosome pieces, and uniparental disomy. The Anora test is helpful to obstetricians, gynecologists and IVF physicians in supporting their patients' reproductive goals. Anora can help couples understand the likelihood of another miscarriage, their future reproductive options, and whether there are any steps that could help them avoid a miscarriage in future pregnancies.

Empower, our hereditary cancer screening test, screens for over 80 genes associated with increased risk for certain common hereditary cancers, such as breast, ovarian, endometrial, and colorectal cancers. Information from the test can lead to earlier detection of cancer, identify cancer risk-reducing strategies, inform surgical and therapeutic decisions following a cancer diagnosis, and provide an opportunity to notify family members who may be at similar risk for hereditary cancer.

Our non-invasive prenatal paternity product allows a couple to safely establish paternity without waiting for the child to be born. Testing can be done as early as nine weeks of gestation using a blood draw from the pregnant mother and alleged father. Our internal data indicates that the accuracy of this test is greater than 99.99%. We have licensed this technology to a third party to perform the test in its clinical laboratory.

Oncology

In oncology, we have been initially focused on detecting molecular residual disease, which we refer to as MRD, and recurrence monitoring in solid tumors, where we have generated data in over a dozen different cancer types and have published data in, among others, colorectal, bladder, breast, and lung cancer, as well as multiple myeloma and other tumor types. Molecular residual disease is the presence of small traces of cancer in the blood, such as ctDNA or microscopic pieces of tumor DNA that are often undetectable with standard imaging techniques. If left untreated, residual cancer cells can multiply and cause recurrence. MRD testing and molecular monitoring offers the potential for physicians to change or escalate treatment in patients who are MRD-positive, and to de-escalate or avoid unnecessary treatment in patients who are MRD-negative. It also holds potential as a surrogate endpoint in clinical trials. Based on our internal estimates, we believe that the total addressable market in the United States for recurrence and treatment monitoring for solid tumor cancers is over $15 billion.

Signatera

Signatera is our personalized ctDNA blood test for MRD assessment, surveillance of disease recurrence, and evaluation of treatment response in patients previously diagnosed with cancer. Each patient receives a custom assay that tracks the presence of 16 tumor-specific clonal mutations that are selected based on the unique mutational signature found in that patient's tumor tissue, which is intended to maximize accuracy for detecting the presence or absence of residual disease in a blood sample, even at variant allele frequency, or VAF, of mutations as low as 0.01% in the blood. We believe this tumor-informed approach is optimal in the MRD setting, in which it is common for tumor DNA to be present only at low frequencies immediately after treatment. Unlike static liquid biopsy panels (also known as therapy selection) or comprehensive genomic profiling, or CGP, which screen for a generic set of mutations independent of an individual's tumor, Signatera is not intended to match patients with any particular therapy. Rather, it is intended to detect and assess how much cancer is left in the body (offering both a qualitative and quantitative measurement), detect recurrence earlier, and help optimize treatment decisions. Signatera can detect residual disease earlier than clinical or radiological recurrence in patients with solid tumors who have received treatment.

We offer Signatera for research use only to cancer researchers and biopharmaceutical companies. We also offer Signatera commercially for clinical use as an LDT in our own CLIA-certified and CAP-accredited laboratory. Signatera is covered by Medicare for use in patients with certain forms of colorectal cancer, muscle invasive bladder cancer, and adjuvant and recurrence monitoring in advanced breast cancer. We have also received a final Medicare local coverage determination, or LCD, for the use of Signatera in immunotherapy response monitoring for all tumor types in any patient for whom immunotherapy is indicated. Signatera is also covered under the coverage policies of certain commercial third- party payers, including a pan-cancer coverage policy for adjuvant, recurrence monitoring and treatment monitoring for solid tumors. In addition, Signatera has been granted Breakthrough Device Designations by the FDA covering its use in various applications.

Signatera has been shown in various clinical studies – including close to 60 peer-reviewed publications as of February 1, 2024 – to identify MRD significantly earlier than standard diagnostic tools, and that Signatera test status is a significant indicator of long-term patient outcomes after surgery and treatment, relative to other clinical and pathological factors. In particular, we have demonstrated in studies across multiple tumor types, including colon, breast, lung and bladder, that a positive Signatera test result, without further treatment, has predicted relapse with an overall PPV of over 98%. Furthermore, a study published in *Clinical Cancer Research* demonstrated the ability of Signatera to assess the rate of change in quantity over time, or velocity, of ctDNA in early-stage colorectal cancer patients, providing additional information that may be used to predict patient survival and outcomes, further stratify MRD-positive patients, and inform disease management. We are continuing to generate data, building evidence of the clinical validity and utility of the test across multiple cancer types and in collaboration with leading universities and cancer centers, NIH's National Cancer Institute, or NCI, non-profit cancer research groups, and pharmaceutical companies.

Altera

Altera is our tissue based comprehensive genomic profiling test that provides insight into genomic alterations and biomarkers found in a patient's tumor, supporting treatment decisions and therapy selection by prioritizing potentially beneficial therapies based on the patient's tumor biomarkers and cancer type. Based on our internal estimates, therapy selection represents an approximate $6.0 billion market opportunity. Altera can be ordered as a stand-alone test, as well as in conjunction with our Signatera MRD test to combine therapy selection with ongoing monitoring.

Empower

We offer Empower, our hereditary cancer test, to oncologists, in addition to physicians through our women's health commercial channel. Because Empower screens for genetic mutations in genes that are associated with increased risk of certain hereditary cancers, information from the test can help determine if a patient who has been diagnosed with such a cancer is a carrier of a mutation associated with their cancer. This can inform surgical and therapeutic decisions, as well as provide an opportunity to notify family members who may be at similar risk for hereditary cancer.

Organ Health

Prospera

Our Prospera test is used to assess active rejection in patients who have undergone kidney, heart, or lung transplantation by measuring the fraction and quantity of dd-cfDNA in the recipient's blood, which can spike relative to background cfDNA when the transplanted organ is injured due to immune rejection. The current tools for assessing organ transplant rejection are either invasive (biopsies) or inaccurate (serum creatinine for kidney transplants, for example), resulting in an unmet need for better diagnostic tools to monitor for allograft rejection and improve patient management and outcomes. Many patients are still subjected to unnecessary biopsies, while other patients remain undiagnosed in the case of subclinical rejection, which can increase the risk of graft failure. Our Prospera test is designed for use by physicians to help rule in or rule out active rejection when evaluating the need for diagnostic testing or the results of an invasive biopsy, and thereby potentially lowering the overall costs associated with transplant care and improving graft survival. Based on our internal estimates, we believe the total addressable market in the United States for tests such as ours that assess kidney, heart and lung transplant rejection is approximately $3.0 billion.

Our Prospera Kidney test is designed to give physicians a comprehensive view of a patient's rejection status. Our clinical validation study for Prospera Kidney, conducted in collaboration with the University of California, San Francisco, a recognized leader in transplantation care, and published in the *Journal of Clinical Medicine,* demonstrated 89% sensitivity in detecting active rejection, with specificity of 73%, based on a cutoff of 1% dd-cfDNA. The assay performed particularly well in detecting T-cell mediated rejection, or TCMR, and subclinical rejection, both of which we believe are areas of unmet need. Our Prospera Kidney test has also demonstrated excellent performance in an analytical validation study that included donor-recipient pairs that were related, such as parents or siblings. Related-donor cases are challenging because it is technically difficult to differentiate between DNA patterns of close relatives; however, we were able to achieve a high degree of accuracy by leveraging our experience with SNP-based methods in the reproductive health setting.

This is promising for the estimated 52% of live kidney donations that are from a biological relative of the patient. The Prospera Kidney test is covered by Medicare for all kidney transplant recipients, including those with multiple kidney transplants.

A significant number of heart transplant patients experience acute rejection in their first year – over 31% of recipients aged 18 to 34, and over 18% of recipients aged 65 or older, who received a transplant in 2020 experienced acute rejection in their first year. Our Prospera Heart test assesses acute rejection, exhibiting sensitivity and specificity of 79% and 77%, respectively, as well as an overall AUC of 0.86, in our clinical validation study published in the *Journal of Heart and Lung Transplantation*. The Prospera Heart test is covered by Medicare for heart transplant patients.

Lung transplantation has a five-year survival rate of approximately 60%, and chronic lung allograft dysfunction, or CLAD, is a leading cause of death beyond the first year, affecting close to 50% of recipients by five years post-transplant. Because there are no known effective therapies for CLAD, a critical part of post-transplant management is identifying, avoiding, and treating known risk factors for CLAD, in particular acute rejection. Our Prospera Lung test exhibited strong performance in our clinical validation study, published in *Transplant Direct*, distinguishing antibody mediated and acute cellular rejection from stable patients with an AUC of 0.91, as well as distinguishing organ injury – including acute rejection, chronic rejection and infection (which can be more challenging) – from stable patients with an AUC of 0.76. The test is covered by Medicare for use in the surveillance setting for lung transplant patients.

As with oncology, we are continuing to generate data in multiple clinical studies designed to demonstrate clinical utility and other benefits of our Prospera test.

Renasight

Chronic kidney disease, or CKD, affects more than one in seven adults in the United States; however, the Centers for Disease Control and Prevention estimates that as many as nine in ten adults with CKD do not know that they have it, and as many as one in three adults with severe CKD do not know that they have it. Renasight is our kidney gene panel test to determine if there may be a genetic cause for an individual's CKD, or increased hereditary risk for kidney disease due to family history. The test uses a blood or saliva sample to test over 380 genes associated with CKD, ranging from common inherited kidney disorders to more rare conditions. Results from our Renasight test may provide valuable information to help manage CKD in a patient, such as identifying the cause of the disease and helping to predict its progression, informing more tailored interventions and treatments, or providing information to family members who may also be at risk for kidney disease.

We have published initial results from our Renasight Clinical Application, Review, and Evaluation (RenaCARE) study assessing the frequency and impact of genetic testing within the CKD population. Over 20% of patients in the study had a positive genetic finding, half of whom received a new or reclassified diagnosis and one-third of whom had a change in treatment plan.

Constellation

Our Constellation software forms the core of our cloud-based distribution model. Through this model, we have been able to expand access to our molecular and bioinformatics capabilities worldwide, enabling laboratories, under a license from us, to run the molecular workflows themselves and then access our computation-intensive bioinformatics algorithms through Constellation, which runs in the cloud, to analyze the results. We currently have licensing contracts with various laboratories in the United States and internationally who are using our Constellation platform commercially in NIPT and in prenatal paternity testing, and we may expand this distribution model to other products in the future. We also leverage Constellation to perform our internal commercial laboratory activities and research and development of our products.

We have received CE Marks from the European Commission for our Constellation software and for the key reagents that our laboratory licensees use to run their NIPT test prior to accessing our Constellation software. These CE

Marks enable us to offer Constellation in the European Union and other countries that accept a CE Mark. We are pursuing other regulatory approvals, as needed, to allow the international roll out of Constellation in regions that do not accept a CE Mark.

Commercial Capabilities

We have established a broad distribution channel, comprising our direct sales efforts as well as a worldwide network of over 100 laboratory and distribution partners. Our own direct sales force and managed care teams anchor our commercial engagement with physicians, laboratory partners, and payers, and sell directly to MFMs, OB/GYNs, physicians or physician practices, IVF centers, transplant centers, or integrated health systems. We strive to offer an excellent customer and patient experience through our field sales reps, medical science liaisons and medical affairs personnel, and our customer service and mobile phlebotomy offerings.

Where possible, we aim to maximize sales opportunities by educating the physician practices on the benefits of combining complementary tests from our portfolio of products. For example, in women's health, Panorama NIPT, our Panorama microdeletions panel, Vistara single-gene NIPT, and Horizon together can provide valuable information for pregnant women who have not had a carrier screen at the time they are ready to have an NIPT performed; these tests can all be run using one blood draw from the mother and can be ordered on one requisition form and with one shipment of the patient's samples by the physician. Also, because of the importance and demand for screening for 22q11.2 deletion syndrome, we have made that feature available as part of our basic Panorama panel, or as part of a broader microdeletions panel. In the year ended December 31, 2023, approximately three-quarters of customers who ordered the basic Panorama panel directly from us also ordered screening for 22q11.2 deletion syndrome or the full microdeletions panel, and approximately 43% of customers who ordered Panorama directly from us also ordered Horizon carrier screening.

In addition to our sales force, we market to physicians through channels and media, such as clinical journals, educational webinars, at conferences and tradeshows, and through e-mail and social media marketing campaigns. While we currently do not sell directly to patients, we do engage in brand awareness campaigns directed at patients to highlight our products. Our marketing and medical science liaison teams work extensively with key opinion leaders in the women's health, oncology and organ health fields.

Our partners' capabilities augment our direct sales capabilities, and where we have identified laboratory or distribution partners who share our focus on premium quality and service, we also contract with them to distribute our tests. In NIPT, we have partnered with leading academic and commercial laboratories and hospital systems in the United States given their relationships with MFMs and OB/GYNs, large distribution capabilities, and commercial infrastructure. These distribution partners also frequently have in-network contracts with key third-party payers. Outside of the United States, where our products are sold in over 80 countries, we currently sell predominantly through partner laboratories.

Enhanced User Experience

NateraCore is our suite of resources designed to enhance the patient and provider experience. Through this platform, we provide patient and provider educational materials, information about insurance coverage and test costs, test and phlebotomy, or blood draw, ordering capabilities, test results reporting, and next steps, in each case as applicable to a particular patient or test. These resources make available a completely remote testing option for patients, fulfilled through our online tools combined with a nationwide mobile phlebotomy network whereby a patient can request and schedule a phlebotomist visit at the patient's home or office. This capability proved to be especially important during the COVID-19 pandemic, enabling continuity of care for all patients despite pandemic-related restrictions and shutdowns, and particularly for those who may be immunocompromised or immune-suppressed.

We have also created provider portals that enable physicians to easily complete various tasks online such as electronic ordering and tracking tests, managing patient consents and results, accessing billing and other documentation, connecting with genetic counselors and other support, and ordering supplies and educational materials. We also provide a service to integrate with our customers' Electronic Medical Records, or EMR, systems to provide physicians a seamless experience of ordering tests and reviewing patient test results directly through their EMR systems.

We have an internal team of board-certified genetic counselors to support patients with pre- and post-test genetic information sessions, and physicians should they have any questions or require any support in interpreting the results.

In addition to our mobile phlebotomy service, we have a network of over 2,000 phlebotomy centers across the United States.

Competition

The markets in which we operate are characterized by innovation and rapid change, and we primarily face competition from various companies that develop and commercialize molecular diagnostic tests in women's health, oncology, and organ transplant rejection.

Our competitors in the NIPT space include Laboratory Corporation of America Holdings, or LabCorp; Myriad Genetics, Inc.; Quest Diagnostics Incorporated, or Quest; Illumina, through its subsidiary Verinata; BillionToOne Inc.; BGI; BioReference Health, LLC, a subsidiary of OPKO Health, Inc.; PerkinElmer Inc.; and Ambry Genetics, a subsidiary of Konica Minolta. We also compete against companies providing carrier screening tests such as LabCorp; Myriad Genetics, Inc.; Fulgent Genetics; BillionToOne Inc.; Quest; Ambry Genetics; and GenPath Diagnostics, a division of BioReference Health, LLC. Each of these companies offers comprehensive carrier screening panels.

In the field of oncology, we compete with various companies that offer or seek to offer competing solutions, such as NeoGenomics, Inc.; Invitae Corp., which acquired ArcherDX, Inc. and which was one of our primary competitors in both NIPT and carrier screening prior to our acquisition in January 2024 of certain of Invitae's reproductive health assets related to its NIPT and carrier screening business; Guardant Health, Inc.; Tempus Labs, Inc.; Personalis, Inc.; Exact Sciences Corp.; and Quest.

In organ health, our primary competitor is CareDx, Inc.

We expect additional competition as other established and emerging companies enter these markets, including through business combinations, and as new tests and technologies are introduced. These competitors could have greater technological, financial, reputational and market access resources than us. We believe the principal competitive factors in our molecular diagnostic testing markets include the following:

- test performance, as demonstrated in clinical and analytical studies and clinical trials as well as in commercial experience;
- comprehensiveness of coverage and ease of use, including user experience for both patients and providers;
- value of product offerings, including pricing and impact on other healthcare spending;
- scope and extent of reimbursement and payer coverage;
- effectiveness of sales and marketing efforts;
- breadth of distribution of products and partnership base;
- reputation among patients and providers for development and introduction of new, innovative products;
- operational execution, including test turn-around time and test failures;
- key opinion leader support; and
- brand awareness.

We believe that we compare favorably against our competitors based on various key differentiators, including in particular:

- our core technology, which can be applied across a range of conditions and disease types with a high degree of specificity and sensitivity;
- our continued investment in generating scientific data through clinical trials and publication in peer-reviewed studies;
- our strong commercial teams; and
- our user experience, including ease of use for patients through offerings such as mobile phlebotomy and for physicians through ordering efficiencies and EMR integrations, and patient and provider educational materials.

Intellectual Property

Our success and ability to compete depend in part on securing and preserving enforceable patent, trade secret, trademark and other intellectual property rights; operating without having competitors infringe, misappropriate or otherwise circumvent these rights; operating without infringing the proprietary rights of others; and obtaining and maintaining licenses for technology development and/or product commercialization. As of December 31, 2023, we held approximately 170 issued U.S. and foreign patents, which expire between November 2026 and November 2044, and approximately 250 pending U.S. and foreign patent applications. Our patents and patent applications relate generally to molecular diagnostics, and more specifically to biochemical and analytical techniques for obtaining and analyzing genetic information to detect genetic abnormalities in relatively small complex samples, such as cell-free fetal DNA or circulating tumor DNA. We intend to seek patent protection as we develop new technologies and products in this area.

We are or have recently been engaged in patent infringement lawsuits and other intellectual property disputes against various competitors in each of the industries in which we operate, some of which are infringement claims against us and some of which are claims we have asserted against third parties, as discussed in "Note 8—Commitments and Contingencies—Legal Proceedings" in the Notes to Consolidated Financial Statements. We may become subject to and/or initiate future intellectual property litigation as our product portfolio, and the level of competition in our industry segments, grow. The field of molecular diagnostics is complex and rapidly evolving, and we expect that we and others in our industry will continue to be subject to third-party infringement claims.

Reimbursement

We receive reimbursement for our tests from third-party payers, which includes commercial health insurers and federal health care programs (as defined under 42 U.S.C. 1320a-7b(f)). Laboratory tests, as with most other health care services, are classified for reimbursement purposes under a coding system known as Current Procedure Terminology, or CPT, which we and our customers must use to bill and receive reimbursement for our diagnostic tests. There are CPT codes associated with the particular tests that we provide to the patient, including for aneuploidies and microdeletions in NIPT, and for expanded carrier screening tests. Once the American Medical Association, or AMA, establishes a CPT code, the Centers for Medicare & Medicaid Services, or CMS, establishes payment levels and coverage rules under Medicare, while state Medicaid programs and commercial health plans establish rates and coverage rules independently in accordance with applicable rules. As such, the coverage and reimbursement rates for our diagnostic tests vary by third-party payer. CMS has established a pricing benchmark of $802 for aneuploidy and microdeletions testing, and approximately $2,450 for expanded carrier screening testing.

The Protecting Access to Medicare Act of 2014, or PAMA, introduced a multi-year pricing program and new payment methodology to calculate the rates for tests listed under the CLFS that are reimbursable by Medicare Part B. Under the new payment methodology, the Medicare Part B CLFS payment rate is derived from a volume-weighted median

of private payer rates for tests. This requires an "applicable laboratory" to report to CMS the private payment rates and the volume of tests associated with each payment rate for a specific data reporting period. We are required under PAMA to report to CMS the private payment rates and the volume of tests which are covered under Medicare Part B. PAMA authorizes CMS to impose civil monetary penalties – up to $12,551 per day in 2023 – for each failure to report or each misrepresentation or omission in reporting of required information.

We currently submit for reimbursement using CPT codes based on the guidance of coding experts and outside legal counsel. There is a risk that these codes may be rejected or withdrawn or that third-party payers will seek refunds of amounts that they claim were inappropriately billed to a specific CPT code or an incorrect diagnosis code. We do not currently have a specific CPT code assigned for all of our tests, and there is a risk that we may not be able to obtain specific codes for such tests, or if obtained, we may not be able to negotiate favorable rates for one or more of these codes. In particular, while we have obtained a CPT code for microdeletions and CMS has set a price for microdeletions testing, we have experienced low average reimbursement rates for microdeletions testing under this code, and we expect that this code will continue to cause our microdeletions reimbursement to remain low, at least in the near term, because third-party payers are declining to reimburse under the code or reimbursing at a low rate. The reimbursement rates for our broader Horizon screening panel have also declined as a result of the CPT code becoming effective in 2019, as carrier screening tests that had previously been reimbursed on a per-condition basis may be reimbursed as a combined single panel instead of as multiple individual tests.

We continue to believe that growing recognition from professional societies of the importance of microdeletions testing, combined with the performance of our microdeletions test and additional validation data from our SMART study on the sensitivity and specificity of our tests, will help drive broader reimbursement in the future.

Reimbursement by third-party payers may depend on a number of factors, including the payer's determination that tests using our technologies are: not experimental or investigational; medically necessary; demonstrated to lead to improved patient outcomes; appropriate for the specific patient; cost-saving or cost-effective; supported by peer-reviewed medical journals; and included in clinical guidelines. In making coverage determinations, third-party payers often rely on clinical guidelines issued by professional societies. NIPT has received positive coverage determinations for high-risk pregnancies and in such instances are reimbursed by most commercial health insurers, including United Healthcare, Aetna, Elevance Health (previously known as Anthem), Humana, Cigna and others. In recent years the reimbursement by third- party payers for use of NIPT for average-risk pregnancies has improved, as most professional societies now generally acknowledge that NIPT is the most sensitive screening option for, and/or are generally supportive of the use of NIPT in, average-risk pregnancies and high-risk pregnancies. Most commercial health insurers, as well as an increasing number of state Medicaid programs, have a positive coverage determination for NIPT for average-risk pregnancies.

As of December 31, 2023, we and our laboratory distribution partners had in-network contracts with health plans that accounted for over 231 million covered lives in the United States. Our target markets for each of women's health, oncology and organ health represent a smaller subset of these covered lives, because our markets exclude certain populations who would not be users of our tests (for example, our target market for NIPT excludes men, children and post- menopausal women).

Government Regulations

Our business is subject to and impacted by extensive and frequently changing laws and regulations in the United States (at both the federal and state levels) and internationally. Some of these laws and regulations are particular to our laboratory business while others relate to conducting business generally (e.g., export controls laws, U.S. Foreign Corrupt Practices Act and similar laws of other jurisdictions). Also, we are subject to inspections, audits and other inquiries by certain federal and state governmental agencies. Set forth below are highlights of certain key regulatory frameworks applicable to our business.

FDA

In the United States, medical devices are subject to extensive regulation by the FDA under the Federal Food, Drug, and Cosmetic Act, or FDC Act, and its implementing regulations, and other federal and state statutes and regulations. The laws and regulations govern, among other things, medical device development, testing, labeling, storage, premarket clearance, de novo classification or premarket approval, post-market requirements, labeling, advertising and promotion and product sales and distribution. Unless subject to an exemption, to be commercially distributed in the United States, medical devices must receive from the FDA prior to marketing, clearance of a 510(k) premarket notification submission , grant of a request for de novo classification, or approval of an application for premarket approval, or PMA.

An in vitro diagnostic product, or IVD, is a type of medical device that is intended for use in the diagnosis of diseases or conditions, including a determination of the state of health, in order to cure, mitigate, treat, or prevent disease or its sequelae. IVDs comprise reagents, instruments, and systems intended for use in the collection, preparation and examination of specimens from the human body. IVDs can be used to detect the presence of certain chemicals, genetic information or other biomarkers related to health or disease. IVDs include tests for disease prediction, prognosis, diagnosis, and screening (e.g., carrier screening). A subset of IVDs are known as analyte specific reagents, or ASRs. An ASR is a single reagent (e.g., antibody, specific receptor protein, ligand, nucleic acid sequence) that, through specific binding or chemical reaction with substances in a specimen, is intended for use in a diagnostic application for the identification and quantification of an individual chemical substance in biological specimens. Most ASRs are exempt from the premarket review processes but must comply with general controls, as described below, including applicable provisions of the quality system regulation, or QSR.

The FDC Act classifies medical devices into one of three categories based on the risks associated with the device and the level of control necessary to provide reasonable assurance of safety and effectiveness. Class I devices are deemed to be low risk and are subject to the fewest regulatory controls. Many Class I devices are exempt from FDA premarket review requirements. Class II devices, including some software products to the extent that they qualify as a device, are deemed to be moderate risk, and generally require 510(k) clearance. Class III devices are generally the highest risk devices and are subject to the highest level of regulatory control to provide reasonable assurance of the device's safety and effectiveness. Class III devices typically require a PMA by the FDA before they are marketed. A clinical trial is almost always required to support a PMA application and is sometimes required for 510(k) clearance. All clinical studies of investigational devices must be conducted in compliance with any applicable FDA and Institutional Review Board requirements. Devices that are exempt from FDA premarket review requirements must nonetheless comply with post- market general controls as described below, unless the FDA has chosen otherwise. Class III devices also include low or moderate risk for which a predicate device cannot be identified, as discussed below.

510(k) clearance pathway. To obtain 510(k) clearance, a manufacturer must submit a premarket notification demonstrating to the FDA's satisfaction that the proposed device is substantially equivalent to a legally marketed predicate device, which can be either a previously 510(k)-cleared device or a device that was in commercial distribution before May 28, 1976 for which the FDA has not called for submission of a PMA application. The FDA's 510(k) clearance pathway usually takes from three to 12 months from submission, but it can take longer, particularly for a novel type of product.

PMA pathway. The PMA pathway requires valid scientific evidence demonstrating to the FDA's satisfaction the safety and effectiveness of the device for its intended use. The PMA pathway is costly, lengthy, and uncertain. A PMA application must provide extensive preclinical and clinical trial data as well as information about the device and its

components regarding, among other things, device design, manufacturing, and labeling. As part of its PMA review process, the FDA will typically inspect the manufacturer's facilities for compliance with QSR requirements, which impose extensive testing, control, documentation, and other quality assurance procedures. The PMA review process typically takes one to three years from submission but can take longer.

De novo pathway. If no predicate device can be identified, a device is automatically classified as Class III, requiring a PMA application. However, the FDA on its own initiative or at the request of a manufacturer can reclassify as low- or moderate-risk device for which there is no predicate through the de novo classification process. If the device is reclassified as Class II, the FDA will identify "special controls" that the manufacturer must implement, which may include labeling, performance standards or other requirements. Subsequent applicants can rely upon the de novo product as a predicate when submitting a 510(k) premarket notification, unless the FDA exempts subsequent devices from the need for a 510(k). The de novo route is intended to be less burdensome than the PMA process. In October 2021, the FDA issued final regulations codifying the FDA's expectations for de novo requests, which went into effect in January 2022. In October 2021, the FDA also issued updated and final guidance on the de novo request and classification process, for the purpose of providing clarity and transparency regarding the de novo classification process. The de novo route has historically been used for many IVD products.

Post-market general controls. After a device, including a device exempt from FDA premarket review, is placed on the market, numerous regulatory requirements apply. These include: the QSR, labeling regulations, registration and listing, the Medical Device Reporting regulation (which requires that manufacturers report to the FDA if their device may have caused or contributed to a death or serious injury or malfunctioned in a way that would likely cause or contribute to a death or serious injury if it were to recur), and the Reports of Corrections and Removals regulation (which requires manufacturers to report to the FDA corrective actions made to products in the field, or removal of products once in the field if such actions were initiated to reduce a risk to health posed by the device or to remedy a violation of the FDC Act that presents a risk to health).

The FDA enforces compliance with its requirements through inspection and market surveillance. If the FDA finds a violation, it can institute a wide variety of actions, ranging from issuing a Form 483 Notice of Inspectional Observations or sending an untitled or public warning letter to enforcement actions such as fines, injunctions, and civil penalties; recall or seizure of products; operating restrictions, partial suspension or total shutdown of production; refusing requests for 510(k) clearance, de novo classification, or PMA approval of new products; withdrawing PMAs already granted; and criminal prosecution. For additional information, see "*Risk Factors—Reimbursement and Regulatory Risks Related to Our Business*."

Research use only. Research use only, or RUO, products are exempt from FDA medical device requirements provided their manufacturers comply with specified labeling and restrictions on distribution and promotion. The products must bear the statement: "For Research Use Only. Not for Use in Diagnostic Procedures." Manufacturers of RUO products cannot make any claims related to safety, effectiveness or diagnostic utility, and RUO products cannot be intended by the manufacturer for clinical diagnostic use. An RUO product promoted for diagnostic use may be viewed by the FDA as adulterated and misbranded under the FDC Act and the manufacturer of such product could be subject to FDA enforcement activities. Our LDTs use instruments and reagents labeled as RUO.

Laboratory-developed tests. The FDA considers LDTs to be tests that are designed, developed, validated and used within a single laboratory. The FDA historically has taken the position that it has the authority to regulate such tests as medical devices under the FDC Act but has historically exercised enforcement discretion and has not required clearance, de novo classification, or approval of LDTs prior to marketing. There have been various legislative initiatives in recent years regarding the FDA's approach to LDT oversight. In September 2023, the FDA announced a proposed regulation that would, if adopted, alter the FDA's historical exercise of enforcement discretion for LDTs by classifying LDTs as medical devices. The proposed regulation would likely subject LDTs to a more stringent regulatory framework, including premarket clearance or approval requirements, quality system regulations, and post-market surveillance obligations. Failure to comply with these and other FDA regulations could result in legal action, including fines and penalties as described above. The FDA has indicated it plans to finalize the proposed rule in the second quarter of 2024, though we cannot be certain that the FDA will finalize the proposed rule on this timeline or at all. In addition, in June 2021, Congress

introduced legislation called the Verifying Accurate, Leading-edge IVCT Development Act, or VALID Act, which would have established a new risk-based regulatory framework for in vitro clinical tests, or IVCTs, a category that would have included IVDs, LDTs, collection devices, and instruments used with such tests. This legislation was not enacted during that session of Congress but was reintroduced in March 2023, and its prospects for enactment are uncertain.

Clinical decision support software. In 2016, the 21st Century Cures Act, or the Cures Act, among other things, amended the medical device definition in the FDC Act to exclude certain software from FDA regulation, including clinical decision support, or CDS, software that meets certain criteria. Based on an FDA guidance document issued on September 28, 2022, the CDS exemption may not apply to Constellation. The final guidance interpreted the Cures Act more narrowly than did the draft guidance, which was issued on September 27, 2019. It is unclear how the FDA will apply the guidance document to currently marketed software and to software that may be developed in the future. It is also unclear whether the FDA will apply the final guidance to CDS software that is used by clinical laboratories as part of an LDT, since LDTs have historically been subject to FDA enforcement discretion.

Clinical Laboratory Improvement Amendments of 1988 and State Regulation

As a clinical laboratory, we are required to hold certain federal and state licenses, certifications or permits to conduct our business. As to federal certifications, in 1988, Congress passed the Clinical Laboratory Improvement Amendments of 1988, or CLIA, establishing more rigorous quality standards for all commercial laboratories that perform testing on human specimens for the purpose of providing information for the diagnosis, prevention, or treatment of disease or the assessment of the health or impairment of human beings. CLIA requires such laboratories to be certified by the federal government and mandates compliance with various operational, personnel, facility, administration, quality and proficiency testing requirements intended to ensure the accuracy, reliability and timeliness of patient test results. CLIA certification is also a prerequisite to be eligible to bill state and federal health care programs, as well as many commercial third-party payers, for laboratory testing services.

Our laboratories located in Austin, Texas and in San Carlos, California are CLIA certified, and must comply with all applicable CLIA regulations and standards. If a clinical laboratory is found to be out of compliance with CLIA standards, CMS may impose sanctions; suspend, limit or revoke the laboratory's CLIA certificate (and prohibit the owner, operator or laboratory director from owning, operating, or directing a laboratory for two or more years following license revocation); subject the laboratory to a directed plan of correction, on-site monitoring, civil monetary penalties, civil actions for injunctive relief, criminal penalties; or suspension or exclusion from the Medicare and Medicaid programs.

CLIA provides that a state may adopt laboratory licensure requirements and regulations that are more stringent than those under federal law, and requires compliance with such laws and regulations. A number of states have implemented their own more stringent laboratory regulatory requirements. State laws may require the laboratory to obtain state licensure and/or laboratory personnel to meet certain qualifications and obtain professional licensure, specify certain quality control procedures or facility requirements, or prescribe record maintenance requirements. Moreover, several states impose the same or similar state requirements on out-of-state laboratory testing specimens collected or received from, or test results reported back to, residents within that state. Therefore, we are required to meet certain laboratory licensing requirements for those states in which we offer services or from which we accept specimens, and that have adopted laboratory regulations beyond CLIA. For more information on state licensing requirements, see "—California Laboratory Licensing", "—New York Laboratory Licensing," and "—Other State Laboratory Licensing Laws."

Our laboratories have each also been accredited by the College of American Pathologists, or CAP, which means that our laboratories have been certified as following CAP standards and guidelines in operating the laboratory facility and in performing tests that ensure the quality of our test results.

California Laboratory Licensing

In addition to federal certification requirements for laboratories under CLIA, we are required under California law to maintain a California state license for both our San Carlos, California and Austin, Texas clinical laboratories, and to comply with California state laboratory laws and regulations, because our San Carlos facility is located in, and both facilities test specimens originating from, California. Similar to the federal CLIA regulations, the California state laboratory laws and regulations establish standards for the operation of a clinical laboratory and performance of test services, including the education and experience requirements of the laboratory director and personnel (including requirements for documentation of competency), equipment validations, and quality management practices. All testing personnel must maintain a California state license or be supervised by licensed personnel, and our laboratory director must maintain an additional license issued by the California Department of Public Health, or CDPH.

Clinical laboratories are subject to both routine and complaint-initiated on-site inspections by the state. If a clinical laboratory is found to be out of compliance with California laboratory standards, the CDPH, may suspend, restrict or revoke the California state laboratory license to operate the clinical laboratory (and exclude persons or entities from owning, operating, or directing a laboratory for two years following license revocation), assess civil money penalties, and/or impose specific corrective action plans, among other sanctions. Clinical laboratories must also provide notice to CDPH of any changes in the ownership, directorship, name or location of the laboratory. Failure to provide such notification may result in revocation of the state license and sanctions under the CLIA certificate. Any revocation of a CLIA certificate or exclusion from participation in Medicare or Medicaid programs may also result in suspension of the California state laboratory license.

New York Laboratory Licensing

Because we test specimens in both our Austin, Texas and San Carlos, California laboratories originating from, and return test results to, New York State, both of our laboratories are required to obtain a New York State laboratory permit and comply with New York State laboratory laws and regulations. We maintain a valid permit in the State of New York for the respective molecular genetic testing services furnished by each of our Austin and San Carlos laboratories. The New York State laboratory laws, regulations and rules are equal to or more stringent than the CLIA regulations and establish standards for the operation of a clinical laboratory and performance of test services, including education and experience requirements of a laboratory director and personnel, physical requirements of a laboratory facility, equipment validations, and quality management practices. The laboratory director(s) must maintain a Certificate of Qualification issued by the New York State Department of Health, or DOH, in the permitted test categories.

Our clinical laboratories are subject to proficiency testing and on-site survey inspections conducted by the Clinical Laboratory Evaluation Program, or CLEP, under the DOH. If a laboratory is found to be out of compliance with New York's CLEP standards, the DOH, may suspend, limit, revoke or annul the New York laboratory permit, censure the holder of the license or assess civil money penalties. Statutory or regulatory noncompliance may result in a laboratory's operator, owners and/or laboratory director being found guilty of a misdemeanor under New York law. Clinical laboratories must also provide notice to the CLEP of any changes in ownership, directorship, name or location of the laboratory. Failure to provide such notification may result in revocation of the state license and sanctions under the CLIA certificate. Any revocation of a CLIA certificate or exclusion from participation in the Medicare or Medicaid programs may result in suspension of the New York laboratory permit.

The DOH also must approve each LDT before the test is offered to patients located in New York. Each of our Austin and San Carlos clinical laboratories has received approval from New York's CLEP to offer our tests that are performed in those locations.

Other State Laboratory Licensing Laws

In addition to New York and California, certain other states require licensing of out-of-state laboratories under certain circumstances. We have obtained licenses in the states that we believe require us to do so based on our current operations, and believe we are in compliance with applicable state laboratory licensing laws, including Maryland,

Pennsylvania and Rhode Island. The State of Texas does not impose state licensure or registration requirements upon an independent laboratory facility or collection station outside of maintaining CLIA certification.

Potential sanctions for violation of state statutes and regulations can include significant monetary fines, the rejection of license applications, the suspension or loss of various licenses, certificates and authorizations, and in some cases criminal penalties, which could harm our business. CLIA does not preempt state laws that have established laboratory quality standards that are more stringent than federal law.

State Genetic Testing Laws

Many states have implemented genetic testing and privacy laws imposing specific patient consent requirements and protecting test results. Under some state laws, we are prohibited from conducting genetic tests without appropriate documentation of patient (or parental/guardian) consent from the physician ordering the test. As discussed in more detail in "Risk Factors—Reimbursement and Regulatory Risks Related to our Business—*If the validity of an informed consent from a patient intake for Panorama or our other tests is challenged, we could be precluded from billing for such testing, forced to stop performing such tests, or required to repay amounts previously received, which would adversely affect our business and financial results*," while we rely on physicians to obtain the required patient consent to perform genetic testing, the regulatory burden may be deemed to be our responsibility and such consents, or our compliance with applicable laws and regulations, could be challenged. Requirements of these laws and penalties for violations vary widely from state to state.

HIPAA and Other Privacy Laws

The privacy and security regulations under the Health Insurance Portability and Accountability Act of 1996, or HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH, establish uniform standards governing the conduct of certain electronic healthcare transactions and require certain entities, called covered entities, to comply with standards that include the privacy and security of protected health information, or PHI. HIPAA further requires business associates of covered entities—independent contractors or agents of covered entities that have access to PHI in connection with providing a service to or on behalf of a covered entity—to enter into business associate agreements with the covered entity and to safeguard the covered entity's PHI against improper use and disclosure. In addition, certain of HIPAA's privacy and security standards are directly applicable to business associates.

As a covered entity and as a business associate of other covered entities (with whom we have therefore entered into business associate agreements), we have certain obligations regarding the use and disclosure of any PHI that may be provided to us, and we could incur significant liability if we or our business associates fail to meet such obligations. Among other things, HITECH imposes civil and criminal penalties against covered entities and business associates for noncompliance with privacy and security requirements, which may include fines up to $250,000 per violation and/or imprisonment, and authorizes states' attorneys general to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorneys' fees and costs associated with pursuing federal civil actions. While HIPAA does not create a private right of action allowing individuals to file suit in civil court for violations of HIPAA, its standards have been used as the basis for duty of care cases in state civil suits such as those for negligence or recklessness in the misuse or breach of PHI. In addition, HIPAA mandates that the Secretary of the Department of Health and Human Services, or HHS, conduct periodic compliance audits of health care providers, such as us, and their business associates for compliance with the HIPAA privacy and security standards. HIPAA also tasks HHS with establishing a methodology whereby harmed individuals who were the victims of breaches of unsecured PHI may receive a percentage of the civil monetary penalty paid by the violator.

As noted above, we are required to comply with HIPAA standards promulgated by the U.S. Department of Health and Human Services, or HHS. First, we must comply with HIPAA's standards for electronic transactions, which establish standards for common healthcare transactions, such as claims information, plan eligibility, payment information and the use of electronic signatures. We must also comply with the standards for the privacy of individually identifiable health information, which limit the use and disclosure of most paper and oral communications, as well as those in electronic form, regarding an individual's past, present or future physical or mental health or condition, or relating to the provision of

healthcare to the individual or payment for that healthcare, if the individual can or may be identified by such information. Additionally, we must comply with HIPAA's security standards, which require us to ensure the confidentiality, integrity and availability of all electronic PHI that we create, receive, maintain or transmit, to protect against reasonably anticipated threats or hazards to the security of such information, and to protect such information from unauthorized use or disclosure.

As a health care provider, we are also subject to Section 4004 of the 21st Century Cures Act, or Cures Act, and regulations promulgated by HHS related to patient access to electronic PHI, or EHI, to promote interoperability and to ensure the access, exchange, or use of EHI.

Various U.S. states have implemented similar restrictive requirements regulating the use and disclosure of health information and other personal information that are not necessarily preempted by HIPAA or that regulate different information than HIPAA. For example, in 2020 California enacted the California Consumer Privacy Act, which creates numerous new privacy requirements, such as greater notice and transparency obligations and consumer rights relating to the access to, deletion of, and sharing of personal information collected by certain businesses and their service providers. Also, the California Confidentiality of Medical Information Act, which protects the confidentiality of individually identifiable medical information obtained by health care providers and their contractors, is much broader than HIPAA and the data protected is also broader than HIPAA. In addition, Massachusetts law requires that any company that obtains personal information of any resident of the Commonwealth of Massachusetts implement and maintain a security program that adequately protects such information from unauthorized use or disclosure. State privacy laws continue to evolve. Several other states' privacy laws came into effect in 2023, and more are expected to come into effect. For example, the Colorado Privacy Act, the Virginia Consumer Data Protection Act, the Utah Privacy Act, and the Connecticut Data Privacy Act, and updates to the California Consumer Privacy Act, all became effective in 2023, and the Texas Data Privacy and Security Act is expected to come into effect in 2024.

There are also comprehensive foreign privacy and security laws and regulations that impose robust requirements on the processing of personal information, including health information. In particular, the EU's General Data Protection Regulation, or GDPR, became effective in 2018. The GDPR applies not only to organizations within the EU, but also applies to organizations outside of the EU, such as Natera, that offer goods or services to EU data subjects or that process personal data of EU data subjects. The GDPR specifies higher potential liabilities for certain data protection violations, and we anticipate that it will result in a greater compliance burden for us as we conduct our business, particularly through our Constellation cloud-based distribution model, in the European Union. Fines for non-compliance can range from the greater of 2% of annual global revenues or €10 million, up to the greater of 4% of annual global revenues or €20 million.

As a business that operates both internationally and throughout the United States, any unauthorized use or disclosure of personal information, even if it does not constitute PHI, by us or our third-party contractors, including disclosure due to data theft or unauthorized access to our or our third-party contractors' computer networks, could subject us to costs, fines or penalties that could adversely affect our business and results of operations, including the cost of providing notice, credit monitoring and identity theft prevention services to affected consumers.

Healthcare Fraud and Abuse Laws

Federal and state governmental authorities scrutinize arrangements between healthcare providers and potential referral sources to ensure that the arrangements are not designed as a mechanism to induce patient care referrals for items or services billable to governmental health care programs and commercial health plans. Law enforcement authorities, courts and Congress have demonstrated a willingness to look behind the formalities of a transaction to determine the underlying purpose of payments between healthcare providers and actual or potential referral sources. The penalties for violations under these laws can be both civil and criminal in nature. The Federal Civil Penalties Inflation Adjustment Act Improvements Act of 2015 provides for an annual, automatic adjustment of civil monetary penalties authorized under the Social Security Act to account for inflation, which are published in the Federal Register annually.

The federal Anti-Kickback Statute makes it a felony for a provider or supplier, including a laboratory, to knowingly and willfully offer, pay, solicit or receive remuneration, directly or indirectly, in order to induce business that is reimbursable under any federal health care program. Generally, courts have taken a broad interpretation of the scope of

the federal Anti-Kickback Statute, holding that the statute may be violated if merely one purpose of a payment arrangement is to induce future referrals. A violation of the federal Anti-Kickback Statute may result in imprisonment for up to ten years and/or criminal or civil fines – up to $104,330 (or $27,018 for each wrongful act) in 2023 – and exclusion from participation in federal health care programs. Claims submitted in violation of the federal Anti-Kickback Statute may not be paid by a federal health care program, and any person collecting any amounts with respect to any such prohibited claim is obligated to refund such amounts. Although the federal Anti-Kickback Statute applies only to federal health care programs, most U.S. states have passed laws substantially similar to the federal Anti-Kickback Statute pursuant to which similar types of prohibitions are made applicable to all commercial health plans or any health care services, depending on the state. Conduct which violates the federal Anti-Kickback Statute or similar laws also triggers liability under the Federal False Claims Act, which prohibits knowingly presenting or causing to be presented a false, fictitious or fraudulent claim for payment to the U.S. Government and can result in additional penalties and fines.

The HHS Office of Inspector General, or OIG, has issued Special Fraud Alerts on arrangements for the provision of clinical laboratory services and relationships between, among others, laboratories and referral sources. The Special Fraud Alerts set forth a number of practices allegedly engaged in by some clinical laboratories and healthcare providers that raise issues under the federal fraud and abuse laws, including the federal Anti-Kickback Statute. The OIG emphasized in the Special Fraud Alerts that when one purpose of such arrangements is to induce referrals of government program-reimbursed laboratory testing, both the clinical laboratory and the healthcare provider (e.g., physician) may be liable under the federal Anti-Kickback Statute, and may be subject to civil and/or criminal prosecution and exclusion from participation in any federal health care programs.

Recognizing that the federal Anti-Kickback Statute is broad and may technically prohibit many innocuous or beneficial arrangements within the healthcare industry, HHS has issued a series of regulatory "safe harbors" for certain payment arrangements which are not considered improper remuneration under the federal Anti-Kickback Statute if one can demonstrate compliance with each element of the safe harbor. Although full compliance with these safe harbors ensures protection 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 payment is *per se* illegal or that prosecution under the federal Anti-Kickback Statute will be pursued.

While we believe that we are in compliance with the federal Anti-Kickback Statute and similar state fraud and abuse laws that are applicable to us, there can be no assurance that our relationships with physicians, hospitals and other customers or vendors will not be subject to scrutiny or will survive regulatory challenge under such laws. If imposed for any reason, enforcement and sanctions under the federal Anti-Kickback Statute or any similar state statute could have a negative effect on our business.

The federal Civil Monetary Penalty Law pertaining to health care fraud and abuse prohibits, among other things, the offer or payment of remuneration to a Medicare beneficiary that the offeror or payer knows or should know is likely to influence the beneficiary to order or receive a reimbursable item or service from a particular provider, practitioner, or supplier; contracting with an individual or entity that the person knows or should know is excluded from participation in a federal health care program; and knowingly making or causing to be made any false statement, omission, or misrepresentation of a material fact in any application, bid, or contract to participate or enroll as a provider of services or a supplier under a federal health care program. A violation of the federal Civil Monetary Penalty statute may result in maximum civil fines – up to $120,816 in 2023 – plus treble damages and exclusion from participation in any federal health care program.

Because we operate a laboratory facility located in California and licensed by California's DHS, California law is applicable to our business arrangements. California's state anti-kickback statutes, Business and Professions Code Section 650 (which applies to all categories of payors) and Insurance Code Section 754, and its Medi-Cal anti-kickback statute, Welfare and Institutions Code Section 14107.2, are analogous to, and have been interpreted by the California Attorney General and California courts in substantially the same way as the federal government and the courts have interpreted, the federal Anti-Kickback Statute. A violation of Section 650 is punishable by up to one year of imprisonment, a fine up to $50,000, or both imprisonment and a fine. A violation of Section 14107.2 is punishable by imprisonment and fines of up to $10,000. The California Insurance Code includes similar prohibitions against any consideration for the

referral or procurement of patients if a claim is submitted to a commercial insurer, CA Ins. Code § 750, which is punishable by criminal penalties mirroring those that apply to violations of Business and Professions Code Section 650.

Because each of our laboratories holds a New York CLEP permit, we must comply with New York state laboratory statutes and regulations, which include anti-kickback provisions, Public Health Law Section 587, and Medicaid anti-kickback provisions, 18 NYCRR Section 515.2, related to laboratory services. The New York DOH may suspend, limit, revoke or annul the New York laboratory permit or otherwise discipline the permit holder for a violation.

Because we operate a laboratory facility located in Texas, our business arrangements are subject to certain Texas laws. Texas's primary anti-kickback statute, Texas Patient Solicitation Act (Tex. Occ. Code § 102.001) (which applies to all categories of payors), provides for an exception to any business arrangement that complies with the federal Anti- Kickback Statute or any regulation adopted under that law. Even if a business arrangement is compliant with the Texas Patient Solicitation Act, disclosure to the patient is required. A violation of Section 102.001 or 102.006 is punishable by civil penalties (up to $10,000 per violation). The Texas Medicaid anti-kickback laws, 1 TAC 371.1669, cross-references the Texas Patient Solicitation Act and include other prohibited self-referrals that are grounds for enforcement and sanctions. The Texas Insurance Code includes criminal penalties for similar prohibitions related to improper referral or procurement of patients if a claim is submitted to a commercial insurer.

In addition to the requirements that are discussed above, there are other healthcare fraud and abuse laws that could have an impact on our business.

The federal False Claims Act prohibits a person from knowingly submitting or causing to be submitted false claims or making a false record or statement in order to secure payment by the federal government. Conduct which violates another fraud and abuse law identified in this section may also result in liability under the federal False Claims Act as a result of the submission of claims pursuant to a prohibited payment arrangement. In addition to actions initiated by the government itself, the federal False Claims Act authorizes actions to be brought on behalf of the federal government by a private party having knowledge of the alleged fraud (sometimes referred to as a "whistleblower") under a qui tam complaint.

Because qui tam complaints are initially filed under seal in federal court, the action may be pending for some time before the defendant is even aware of the action. If the government is ultimately successful in obtaining redress in the matter or if the private party plaintiff succeeds in obtaining redress without the government's involvement, then the private party plaintiff will receive a percentage of any recovery and penalty imposed. Violation of the federal False Claims Act may result in fines of up to three times the actual damages sustained by the government, plus mandatory civil penalties – up to approximately $27,018 in 2023 – per false claim or statement, imprisonment or both, reimbursement of the whistleblower's attorneys' fees, and possible exclusion from any federal health care programs. The penalties will continue to be adjusted, increasing each year to reflect changes in the inflation rate, pursuant to the 2015 Bipartisan Budget Act.

The Eliminating Kickbacks in Recovery Act of 2018, or EKRA, was passed as part of the Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment for Patients and Communities Act (referred to as the SUPPORT Act). Similar to the federal Anti-Kickback Statute, EKRA creates criminal penalties for knowing or willful payment or offer, or solicitation or receipt, of any remuneration, whether directly or indirectly, overtly or covertly, in cash or in kind, in exchange for the referral or inducement of laboratory testing unless a specific exception applies. Unlike the federal Anti- Kickback Statute, EKRA is not limited to federal health care programs and extends the prohibitions to services covered by commercial health plans. Additionally, not all of the safe harbors available under the federal Anti-Kickback Statute are not reiterated under EKRA, and certain EKRA exceptions conflict with the federal Anti-Kickback Statute safe harbors. Therefore, on its face, compliance with a federal Anti-Kickback safe harbor may not guarantee protection under EKRA. As currently drafted, EKRA potentially expands the universe of arrangements that could be subject to government enforcement under federal fraud and abuse laws. Violation of EKRA carries potential penalties of up to $200,000 in fines and imprisonment of up to ten years for each occurrence, and potential exclusion from participation in any federal health care program. Because EKRA is a relatively new law, there is very little additional guidance to indicate how and to what extent it will be interpreted, applied and enforced by the government. Currently, there is no proposed regulation interpreting or implementing EKRA, nor any public guidance released by a federal agency concerning EKRA. The only

case law issued to date involves decisions interpreting the EKRA as it applies to compensation of laboratory sales personnel hired as independent contractors, and the courts differ on interpretation and application of the law. We cannot assure you that our relationships with physicians, hospitals, customers, or sales personnel will not be subject to scrutiny or will survive a challenge under EKRA. If imposed for any reason, sanctions under EKRA could have a negative effect on our business.

We are also subject to the Physician Self-Referral law, commonly known as the Stark Law, which prohibits, with certain exceptions, an ownership or financial arrangement with a physician (or a physician's immediate family member) in exchange for the referral of designated health services, including clinical laboratory services, or presenting or causing to be presented claims to Medicare and Medicaid for such services referred by the physician. The Stark Law is a strict liability statute, which means proof of specific intent to violate the law is not required. Any person who presents or causes to be presented a claim to the Medicare or Medicaid programs in violation of the Stark Law may be subject to civil monetary penalties – up to $29,899 in 2023 – per claim submission, an assessment of up to three times the amount claimed, and exclusion from participation in any federal health care program. A person who engages in a scheme to circumvent the Stark Law's referral prohibition may be fined – up to $199,338 in 2023 – for each such arrangement or scheme. Claims 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 claim is obligated to refund such amounts. Actions which violate the Stark Law may be bootstrapped to involve liability under the federal False Claims Act.

Further, in addition to the privacy and security regulations stated above, HIPAA created two federal crimes: healthcare fraud and false statements relating to healthcare matters. The healthcare fraud statute prohibits knowingly and willfully executing a scheme to defraud any healthcare benefit program, including private payers, or to obtain, by means of false or fraudulent pretenses, representations or promises, any money or property owned by or under the control of any health care benefit program in connection with the delivery of or payment for health care benefits, items or services. A violation of this statute is a felony and may result in fines, imprisonment or exclusion from government sponsored programs. The false statements statute prohibits knowingly and willfully falsifying, concealing or covering up 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. A violation of this statute is a felony and may result in fines or imprisonment.

Finally, federal law prohibits any entity from offering or transferring to a Medicare or Medicaid beneficiary any remuneration that the entity knows or should know is likely to influence the beneficiary's selection of a particular provider, practitioner or supplier of Medicare or Medicaid payable items or services, including waivers of copayments and deductible amounts (or any part thereof), if any apply, and transfers of items or services for free or for other than fair market value. Entities found in violation may be liable for civil monetary penalties – up to $100,000 (or $24,164 for each wrongful act) in 2023. Although we believe that our business activities and practices, including our sales and marketing practices, are in material compliance with all applicable federal and state laws and regulations, relevant regulatory authorities may disagree, and violation of these laws or our exclusion from such programs as Medicare, Medicaid and other federal health care programs as a result of a violation of such laws could have a material adverse effect on our business, results of operations, financial condition and cash flows.

Many states, including California, also have state "physician self-referral" prohibitions and other laws that are not limited to Medicare and Medicaid referrals, with which we must comply. We are subject to California's Physician Ownership and Referral Act, or PORA, which generally prohibits us from billing a patient or any governmental or commercial third-party payer for any laboratory services when the physician ordering the service, or any member of such physician's immediate family, has a "financial interest" with us, unless the arrangement meets an exception (CA Business and Professions Code Section 650.02). The term "financial interest" is defined broadly and includes any type of ownership interest, debt, loan, lease, compensation, remuneration, discount, rebate, refund, etc. between the ordering physician and the entity receiving the referral. The exceptions to PORA track certain of the Stark Law exceptions, including an exception for personal service arrangements and for ownership of publicly traded entities. A violation of PORA is punishable by civil and criminal penalties (civil penalties and criminal fines vary depending on the nature of the violation, but may reach up to $15,000 per violation).

Other states may have self-referral restrictions with which we have to comply that differ from those imposed by federal and California law.

We are also subject to applicable state client billing laws, which specify whether a person that did not perform the service is permitted to submit the claim for payment and if so, whether the non-performing person is permitted to mark up the cost of the services in excess of the price the purchasing provider paid for such services. California has an anti- markup statute with which we must comply, which prohibits providers from charging for any laboratory test that it did not perform unless the provider (a) notifies the patient, client or customer of the name, address, and charges of the laboratory performing the test, and (b) charges no more than what the provider was charged by the clinical laboratory which performed the test except for any other service actually rendered to the patient by the provider (for example, specimen collection, processing and handling) (CA Business and Professions Code Section 655.5). This provision applies, with certain limited exceptions, to licensed persons such as physicians and clinical laboratories regulated under the Business and Professions Code. A violation of this provision can lead to imprisonment and/or a fine of up to $10,000. Other states have similar anti-markup prohibitions with which we must comply. In addition, many states also have "direct-bill" laws, which means that the services actually performed by an individual or entity must be billed by such individual or entity, thus preventing ordering physicians from purchasing services from a laboratory and rebilling for the services they order. For example, California has a direct bill rule specific to anatomic pathology services that prohibits any provider from billing for anatomic pathology services if those services were not actually rendered by that person or under his or her direct supervision with some exemptions (CA Business and Professions Code Section 655.7).

While we have attempted to comply with the federal, Texas, California and New York fraud and abuse laws and similar laws of other states and non-U.S. jurisdictions that are applicable to our business, it is possible that some of our arrangements could be subject to regulatory scrutiny at some point in the future, and we cannot provide assurance that we will be found to be in compliance with these laws following any such regulatory review.

Human Capital Management

As of December 31, 2023, our global workforce comprised 3,293 employees, of whom 3,282 were full time employees. We also engage consultants and temporary employees. We have not been subject to labor action or union activities, and our management considers its relationships with employees to be good.

Our global voluntary turnover rate for 2023 was approximately 22.04%. Based on self-identification data, in 2023, women comprised approximately 61.7% of our global workforce, approximately 65% of global new hires, and over 61% of internal promotions. Also based on self-identification data, minorities comprised approximately 32% of our U.S. workforce.

We are committed to attracting, retaining, developing, and nurturing a diverse workforce, which we believe is necessary in order to deliver upon our mission of changing the management of disease worldwide. Our development, performance, and compensation programs are designed to attract and reward talented, diverse individuals who possess the skills necessary to support our business objectives, assist in the achievement of our strategic goals and ultimately create long term value for our stockholders. In addition to base pay, our compensation and benefits programs, which can vary by region, can include annual bonuses, stock-based compensation awards, a 401(k) plan with employee matching opportunities, healthcare and insurance benefits, health savings and flexible spending accounts, paid time off, parental leave, and employee assistance programs. We work to ensure pay equity by annually assessing our compensation practices and working with external compensation consultants to design and benchmark our programs.

We operate in an industry in which competition for highly qualified personnel is intense. In addition to our compensation programs, we are highly focused on talent acquisition, retention and development. We periodically conduct employee engagement surveys, the results of which inform internal company and management goals to help ensure impactful and meaningful actions in response to feedback received. Our annual employee evaluation process helps us to support developing employees as well as identify and cultivate high performers, and we have various initiatives underway to further develop leaders and managers. In 2023, employees completed an annual employee engagement survey, the results of which indicated that 84% of employees are proud to work at Natera, 81% of employees are excited about the future of Natera, and 81% of employees view their manager as a great role model for employees.

Embracing diversity is one of our core values, as we believe that a broad range of perspectives and experiences is necessary to drive innovation and leadership. To this end, it is important to us to create an inclusive culture of belonging that represents a broad spectrum of backgrounds. We have two employee resource groups, or ERGs, committed to furthering our efforts in this area. Women of Natera and our Diversity & Inclusion Group both serve as resources to the organization in fostering a culture of inclusion and diversity by providing a platform of networking, ongoing learning and exchange to support professional development and promote workplace equality and diversity. In 2023, over 93% of people managers completed annual diversity training in furtherance of our 2025 Environmental, Social and Governance, or ESG, goals.

Sustainability

We recognize that in our work to improve the state of disease globally, it is important to develop and maintain a strong ethos of sustainability, responsibility, and stewardship with respect to environmental matters. We have policies and programs in place to comply with the requirements set forth in applicable local, state, and federal environmental policies, laws and regulations parameters set forth in such applicable policies, laws and regulations in the course of conducting our operations. However, we cannot predict how changes in these laws and regulations, or the development of new laws and regulations, will affect our business operations or the cost of compliance. Climate change may impact our business by increasing operating costs due to additional regulatory requirements, physical risks to our facilities, energy limitations, and disruptions to our supply chain. We consider such potential risks in our business continuity planning, including reviewing investment opportunities in renewable energy, and reducing energy and water consumption, greenhouse gas emissions, and waste production.

As part of our sustainability and ESG program, we have an executive steering committee responsible for overseeing sustainability projects to reduce the environmental impact of our laboratory operations, our corporate offices, and our supply chain. Our environmental sustainability program addresses, among others, emissions reduction; water and energy conservation; sustainability in supply chain management; waste reduction; employee engagement; and sustainable building design and operations. In particular, we have established Scope 1, 2 and 3 intensity reduction targets as part of our broader climate action plan as outlined in our 2025 ESG goals. Progress on the 2025 ESG goals are presented to the board twice annually, in addition to updates regarding climate impacts and broader ESG strategy discussions. Additional information can be found in our annual ESG Report located on our website at www.natera.com/esg. We do not incorporate the information on, or accessible through, our website into this Annual Report on Form 10-K or any other report we file with or furnish to the SEC, and you should not consider any information on, or accessible through, our website as part of this Annual Report on Form 10-K or any other report we file with or furnish to the SEC.

The Company does not conduct animal testing.

Glossary of Terms

ACOG – the American Congress of Obstetricians and Gynecologists.

ACMG – the American College of Medical Genetics and Genomics.

Allograft – the transplant of an organ or tissue from one individual to another individual of the same species who is not genetically identical.

AMA – American Medical Association.

AUC – area under the receiver operating curve; a measure of the diagnostic performance of a test, based on sensitivity and specificity.

cfDNA – cell-free DNA.

CLIA – Clinical Laboratory Improvement Amendments.

CMS – Centers for Medicare and Medicaid Services.

CNV – copy number variation; a genetic mutation in which relatively large regions of the genome have been deleted or duplicated.

CPT – Current Procedure Terminology; codes used by doctors and health care professionals for identifying medical services and procedures.

ctDNA – circulating tumor DNA; tumor DNA circulating in a blood sample.

CS test – carrier screening test.

dd-cfDNA – donor-derived cell-free DNA; DNA that is shed into the blood of a transplant recipient from a transplanted organ undergoing rejection.

DNA – deoxyribonucleic acid.

FDA – Food and Drug Administration.

Fetal aneuploidy – an inherited genetic condition in which a fetus has a different number of chromosomes than are typical.

IVD – in vitro diagnostic; tests that can be used in any laboratory that has the appropriate qualifications and authorizations.

IVF – in vitro fertilization.

LDT – laboratory developed test; tests that are designed, developed, validated and used within a single laboratory.

MFM – maternal fetal medicine; an MFM physician specialist is an obstetrician who has completed a medical education specialty in high-risk pregnancy.

Microdeletion – a deletion of a region of DNA from one copy of one chromosome.

mmPCR – massively multiplexed polymerase chain reaction.

NGS – next-generation sequencing; a DNA sequencing technology.

NIPT – non-invasive prenatal test.

No-call – the inability to update the prior risk, or the standard risk assigned based on maternal and gestational age, in order to provide a high-risk or low-risk test result due to insufficient information in the sample.

OB/GYN – obstetrician-gynecologist; a doctor who specializes in women's health.

PPV – positive predictive value; the likelihood that a positive result on a test indicates a true positive result in the patient.

Sensitivity – the likelihood that an individual with a condition will be correctly found to have that condition. Sensitivity is calculated as the ratio between the number of individuals that test positive for the condition over the total number of individuals in the tested cohort who actually have the condition.

SNP – single nucleotide polymorphism; a position on the chromosome at which single DNA base changes are common in the population.

SNV – single nucleotide variant; a genetic mutation in which a single chemical base in DNA has changed.

Specificity – the likelihood that an individual without a condition will be correctly found not to have that condition. Specificity is calculated as the ratio between the number of individuals that test negative for a condition over the total number of individuals in the tested cohort who do not have the condition.

Triploidy – a type of fetal aneuploidy in which an individual has three copies of every chromosome instead of two.

Corporate Information

Our principal executive office is located 13011 McCallen Pass, Building A Suite 100, Austin, Texas. Our website address is www.natera.com. We do not incorporate the information on, or accessible through, our website into this Annual Report on Form 10-K or any other report we file with or furnish to the SEC, and you should not consider any information on, or accessible through, our website as part of this Annual Report on Form 10-K or any other report we file with or furnish to the SEC.

Our annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Sections 13(a) and 15(d) of the Securities Exchange Act of 1934, as amended, may be obtained free of charge at the Investor Relations section of our website, http://investor.natera.com, as soon as reasonably practicable after we electronically file such material with, or furnish it to, the Securities and Exchange Commission, or SEC. Additionally, the SEC maintains an internet site that contains reports, proxy and information statements and other information. The address of the SEC's website is www.sec.gov.

ITEM 1A. RISK FACTORS

Investing in our common stock involves a high degree of risk. You should consider carefully the risks and uncertainties described below, together with all of the other information in this report, including the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and related notes, before investing in our common stock. The risks and uncertainties described below are not the only ones we face. If any of the following risks actually occurs, our business, financial condition, results of operations and prospects could be materially and adversely affected. In that event, the price of our common stock could decline and you could lose part or all of your investment.

Risks Related to Our Business and Industry

If we are unable to successfully grow revenues for our products or services, and if our efforts to further increase the use and adoption of our products or to develop new products and services in the future do not succeed, our business will be harmed.

Our ability to successfully grow revenues for our products and services is uncertain and subject to many risks, as further described in these Risk Factors. In particular, the significant majority of our revenues are derived from sales of our Panorama NIPT, our Horizon carrier screening, or HCS, test, and our Signatera test, and we expect this to continue to be the case for the foreseeable future. As such, any adverse impact we experience with respect to these tests could result in an impact to our overall revenues, or a component of such overall revenues. For example, a decline in our reimbursement rates for, and therefore our average selling price of, Horizon, could result in a decline in our overall blended average selling price.

Continued and additional market demand for our tests, and reimbursement for our tests, particularly for NIPT for the average-risk population and for microdeletions, are key elements to our future success. The market demand for NIPTs,

carrier screening tests and our other tests continue to evolve. We cannot guarantee that physicians will recommend and order our tests, and our laboratory distribution partners and licensees may not actively or effectively market our tests. Our ability to increase sales and establish significant levels of adoption and reimbursement for our tests is uncertain, and it may be challenging for us to achieve profitability for many reasons, including, among others:

- the market for our tests may not grow as we expect; in particular, NIPTs may not gain acceptance for use as a screen for microdeletions, which would limit the market for Panorama, and we may fail to compete successfully in this market, whatever its size;

- if we are unable to demonstrate that our tests are superior to competing tests, laboratories, clinics, clinicians, physicians, payers and patients may not adopt the use of our tests on a broad basis, and may not be willing to pay the price premium over competing tests that we have, to date, been able to achieve;

- third-party payers, such as commercial insurance companies and government insurance programs, may decide not to reimburse for our tests, such as for the screening of microdeletions, may set the amounts of any reimbursements at prices that do not allow us to cover our expenses, or may otherwise adopt regulations, programs, policies or procedures that restrict or harm our business; for example, with respect to Panorama, many third-party payers currently have negative coverage determinations or otherwise do not reimburse for microdeletions screening and we expect low reimbursement rates for microdeletions screening to continue, at least in the near term; also, most state Medicaid programs currently either reimburse at low rates or do not reimburse for our tests;

- billing operations, including managing various requirements by third-party payers to obtain reimbursement for our tests, are complex and time-consuming, and if we are unable to successfully manage such requirements, we may experience reduced and/or delayed reimbursement for our tests, which may impact our results of operations, as has happened in the past with respect to evolving prior authorization requirements;

- the results of our SMART Study evaluating the performance of Panorama may fail to convince laboratories, clinics, clinicians, physicians or patients of the benefits of utilizing Panorama for microdeletions and may not increase reimbursement for Panorama;

- the results of our clinical trials and any additional clinical and economic utility data that we may develop, present and publish in the future, or that comes from the commercial use of our tests, may be inconsistent with our existing data and may raise questions about the performance of our tests, or may fail to convince laboratories, clinics, clinicians, physicians, payers or patients of the value of our tests;

- we may experience supply constraints, including those due to the failure of our key suppliers to provide required sequencers and reagents in sufficient amounts or of adequate quality or disputes with our key suppliers, including those with respect to the required sequencers and reagents from our supplier, Illumina, Inc., or Illumina, who is also one of our main NIPT competitors through its subsidiary, Verinata Health Inc., or Verinata, and with whom we have historically been involved in patent proceedings;

- we may experience increased cost of product revenues, and cost of licensing and other revenues, as a percentage of total revenues, as has been the case in previous fiscal periods;

- the U.S. Food and Drug Administration, or the FDA, or other U.S. or foreign regulatory or legislative bodies may adopt new regulations or policies, or take other actions that impose significant restrictions on our ability to market and sell our tests, including requiring FDA clearance or approval for the sale of our tests (for example, the VALID Act or a proposed rule published by the FDA in September 2023), as further discussed in the risk factor entitled "*Regulatory and Compliance Risks—If the FDA were to begin actively regulating our tests, we could incur substantial costs and delays associated with trying to obtain premarket 510(k) clearance, de novo classification, or premarket approval and incur costs associated with complying with post market controls*") or of the sequencers, reagents, kits and other consumable products that we purchase from third parties in order to perform our testing;

- our laboratory partners may choose to develop their own tests that are competitive with ours or offer tests provided by our competitors due to pricing or other reasons as has happened in the past, or otherwise fail to effectively market our tests; and competitors may develop and commercialize more effective and/or less expensive tests that deliver comparable results to our tests;

- we may fail to adequately protect or enforce our intellectual property relating to our tests, leading to increased competition; or other parties may claim that the practice of our technology by us or our licensees and collaborators infringes such other party's intellectual property rights, as certain of our competitors have claimed in lawsuits filed against us, as discussed further in "Note 8—Commitments and Contingencies—Legal Proceedings" in the Notes to Consolidated Financial Statements; if we are required to pay litigation judgments or settlements or pay license fees in order to license third-party intellectual property rights due to actual or alleged infringement based on our running our tests, our results of operations or financial condition could be adversely impacted;

- we may be unable to dedicate adequate resources to the maintenance and further technological advancement of our current tests that are necessary for such tests to be competitive in the marketplace because of the demands placed on our research and development and product teams with respect to our continuously expanding portfolio of products and programs, in particular our efforts and focus on developing our oncology and organ health product offerings;

- in the event that it is in our commercial or financial interest or we are forced to transition sequencing platforms for Panorama, we may be unable to do so in a commercially sustainable way and that could survive claims of infringement of intellectual property rights of Illumina and other competitors, in a timely manner or at all; and

- we may not be successful in commercializing our cloud-based distribution model.

If we are not able to increase adoption of and grow revenues for our products or services, our business, operating results and financial condition will be harmed.

We have incurred net losses since our inception and we anticipate that we will continue to incur losses for the foreseeable future, which could harm our future business prospects.

We have incurred net losses each year since our inception in 2003. To date, we have financed our operations primarily through convertible debt and other debt instruments, our initial public offering, and our registered public equity offerings. Our net loss for the years ended December 31, 2023, 2022 and 2021 was $434.8 million, $547.8 million, and $471.7 million, respectively. As of December 31, 2023, we had an accumulated deficit of $2.4 billion. We may continue to experience such losses in the future as we continue to devote a substantial portion of our resources to efforts to increase the adoption of, and reimbursement for, our products, improve these products, and research and develop and commercialize new products.

In addition, the rate of growth in our revenues has fluctuated in the past, and may continue to do so in future periods. In particular, such rate of growth may be negative, flat, or may grow more slowly than we expect, including if the rate of growth of our test volumes slows. A significant element of our business strategy is to maintain increased in-network coverage with third-party payers; however, the negotiated fees under our contracts with third-party payers are typically lower than the list price of our tests, and in some cases the third-party payers that we contract with have negative coverage determinations for some of our offerings, in particular Panorama for microdeletions screening. Therefore, being in-network with third-party payers has in the past had, and may in the future have, an adverse impact on our revenues and gross margins, especially if we are unable to increase the adoption of, and obtain favorable coverage determinations for reimbursement for, our products. Furthermore, a CPT code for microdeletions went into effect beginning in January 2017. We have experienced low average reimbursement rates for microdeletions testing under this code, and our microdeletions reimbursement may continue to remain low, at least in the near term, either due to reduced reimbursement, or third-party payers declining to reimburse, under the microdeletions code, which has had and will likely continue to have an adverse effect on our revenues. In addition, a CPT code for expanded carrier screening went into effect beginning in January 2019,

and has had, and may continue to have, an adverse effect on our reimbursement rates for our broader Horizon carrier screening panel, for which we previously primarily received reimbursement on a per condition basis, as those tests may be reimbursed as a combined single panel instead of as multiple individual tests.

As further discussed in the risk factor entitled "*—We may not be successful in commercializing our cloud-based distribution model*," our results of operations may be adversely affected if we do not sell a sufficient volume of tests under our cloud-based distribution model to offset the lower revenues per test performed under that model. Our ability to forecast our future operating results, including revenues, cash flows and profitability, is limited and subject to a number of uncertainties. We have also encountered and will continue to encounter risks and uncertainties frequently experienced by rapidly growing companies in the life sciences and technology industry, such as those described in this report. If our assumptions regarding these risks and uncertainties are incorrect or these risks and uncertainties change, or if we do not address these risks successfully, our operating and financial results may differ materially from our expectations, and our business may suffer.

Uncertainty in the development and commercialization of our enhanced or new tests or services could materially adversely affect our business, financial condition and results of operations.

Our success will depend in part on our ability to effectively introduce and increase market adoption of enhanced or new offerings. In recent years we have developed and launched several new products or enhanced versions of existing products, including our first offerings in oncology and in organ health, and we expect to continue our efforts in all of these areas. The development and launch of enhanced or new tests requires the completion of certain clinical development and commercialization activities that are complex, costly, time-intensive and uncertain, and requires us to accurately anticipate the preferences and needs of patients, clinicians, payers, and other counterparties, as well as emerging technology and industry trends. This process is conducted in various stages, and each stage presents the risk that we will not achieve our goals.

We may not be successful in our current or future efforts to develop and commercialize cell-free DNA tests in industries that are newer to us. Moreover, we have limited experience forecasting our future financial performance from our new products in these industries that are newer to us, and our actual results may fall below our financial guidance or other projections, or the expectations of analysts or investors, which could cause the price of our common stock to decline. We may experience research and development, regulatory, marketing and other difficulties that could delay or prevent our introduction of enhanced or new tests and result in increased costs and the diversion of management's attention and resources from other business matters, such as from our existing product offerings. For example, any tests that we may enhance or develop may not prove to be clinically effective in clinical trials or commercially, or may not ultimately meet our desired target product profile, be offered at acceptable cost and with the sensitivity, specificity and other test performance metrics necessary to address the relevant clinical need or commercial opportunity; our test performance in commercial experience may be inconsistent with our validation or other clinical data; we may not be successful in achieving market awareness and demand, whether through our own sales and marketing operations or through collaborative arrangements; healthcare providers may not order or use, or third-party payers may not reimburse for, any tests that we may enhance or develop; or we may otherwise have to abandon a test or service in which we have invested substantial resources. In particular, we are subject to the risk that the biological characteristics of the genetic mutations we seek to target, and upon which our technologies rely, are uncertain and difficult to predict. For example, in our efforts to detect and analyze circulating tumor DNA in plasma for MRD assessment and recurrence surveillance, our success depends on tumors shedding mutant DNA into the bloodstream in sufficient quantities such that our technology can detect such mutations, as well as patients having sufficient tumor tissue to design our custom ctDNA test for each patient. As further discussed in the risk factor entitled "*If our products do not perform as expected, our operating results, reputation and business will suffer*," we may also experience unforeseen difficulties when implementing updates to our processes, as we have occasionally experienced with Panorama, Horizon, and our other tests.

We cannot assure you that we can successfully complete the clinical development of any new or enhanced product, or that we can establish or maintain the collaborative relationships that may be essential to our clinical development and commercialization efforts. Clinical development requires large numbers of patient specimens and, for certain products, requires large, prospective, and controlled clinical trials. We may not be able to enroll patients or collect a sufficient number of appropriate specimens in a timely manner; or we may experience delays during clinical development due to

slower than anticipated enrollment, which we experienced in the past with our SNP-based Microdeletions and Aneuploidy RegisTry, or SMART, Study, or due to changes in study design or other unforeseen circumstances, such as our decisions in the past to expand our SMART Study; or we may be unable to afford or manage the large-sized clinical trials that some of our planned future products may require.

The publication of clinical data in peer-reviewed journals is a crucial step in commercializing and obtaining reimbursement for tests such as ours, and our inability to control when, if ever, results are published may delay or limit our ability to derive sufficient revenues from any test that is the subject of a study. Peer-reviewed publications regarding our tests may be limited by many factors, including delays in the completion of, poor design of, or lack of compelling data from, clinical studies, as well as delays in the review, acceptance and publication process. If our tests or the technology underlying our current or future tests do not receive sufficient favorable exposure in peer-reviewed publications, the rate of clinician adoption of our tests and positive reimbursement coverage determinations for our tests could be negatively affected. Further, the data collected from any studies we complete in the future may not be favorable or consistent with our existing data or may not be statistically significant or compelling to the medical community or to third-party payers seeking such data for purposes of determining coverage for our tests. For example, while we have published results from our SMART Study, we cannot assure you that such results or publications will convince laboratories, clinics, clinicians, physicians or patients of the benefits of utilizing Panorama for microdeletions. We also cannot be certain whether, or to what extent, the SMART Study may impact insurance coverage and reimbursement for microdeletions testing. Similarly, certain results of the CIRCULATE-Japan study have recently been published, and we cannot assure you that such results will impact professional society or practice guidelines, or coverage and reimbursement determinations from third-party payers, as we anticipate.

In addition, as further described in the risk factor entitled "*—If the FDA were to begin actively regulating our tests, we could incur substantial costs and delays associated with trying to obtain premarket clearance or approval and incur costs associated with complying with post-market controls,*" development of the data necessary to obtain regulatory clearance and approval of a test is time-consuming, requires us to incur significant costs, and carries with it the risk of not yielding the desired results. The performance achieved in published studies may not be repeated in later studies that may be required to obtain FDA premarket clearance or approval or regulatory approvals in foreign jurisdictions. Limited results from earlier-stage verification studies may not predict results from studies in larger numbers of subjects drawn from more diverse populations over longer periods of time. Unfavorable results from ongoing preclinical and clinical studies may delay, limit or prevent regulatory approvals or clearances or commercialization of our product candidates, or could result in delays, modifications or abandonment of ongoing analytical or future clinical studies, or abandonment of a product development program, any of which could have a material adverse effect on our business, operating results or financial condition.

These and other factors beyond our control could result in delays or other difficulties in the research and development, approval, production, launch, ongoing commercialization or distribution of enhanced or new tests and could adversely affect our competitive position and results of operations.

Our quarterly results may fluctuate from period to period, which could adversely impact the value of our common stock.

Our quarterly results of operations, including our revenues, gross margin, net loss and cash flows, have varied and may continue to vary from period to period as a result of a variety of factors, many of which are outside of our control, including those listed elsewhere in this "Risk Factors" section, and as a result, period-to-period comparisons of our operating results may not be meaningful. Our quarterly results should not be relied upon as an indication of future performance. In addition, to the extent that we continue to spend considerably on our internal sales and marketing and research and development efforts, we expect to continue to incur costs in advance of achieving the anticipated benefits of such efforts. Fluctuations in quarterly results and key metrics may cause our results to fall below our financial guidance or other projections or goals, or the expectations of analysts or investors, which could adversely affect the price of our common stock. We also face competitive pricing and reimbursement pressures, and we may not be able to maintain our premium pricing in the future, which would adversely affect our operating results.

Competition in our industry is intense; if we are unable to compete successfully with respect to our current or future products or services, we may be unable to increase or sustain our revenues or achieve profitability.

We compete primarily in the molecular testing field, which is characterized by rapid technological changes, frequent new product introductions, reimbursement challenges, emerging competition, intellectual property disputes and litigation, price competition, aggressive marketing practices, evolving industry standards and changing customer preferences. Our principal competition in women's health comes from existing testing methods, technologies and products that are used by OB/GYNs, MFM specialists or IVF centers. These include other NIPTs and carrier screening tests offered by our competitors, as well as established, traditional first-line prenatal screening methods, such as serum protein measurement, where doctors measure certain hormones in the blood, and invasive prenatal diagnostic tests like amniocentesis, which have been used for many years and are therefore difficult to displace or supplement. We also face competition in the fields of oncology and organ health from other companies, which may be larger, more established, or have more experience or more resources than we do. In addition, new testing methods may be developed which may displace or be preferred over NIPTs, such as whole genome sequencing or single cell analysis with respect to NIPTs, or tracking more tumor-specific variants and/or other biomarkers in addition to ctDNA, or testing without the need for a sample of the tumor tissue, with respect to MRD testing. We cannot assure you that research, discoveries or other advancements by other companies will not render our existing or potential products and services uneconomical or result in products and services that are superior or otherwise preferable to our current or future products and services. It is possible that competition in all of the markets in which we operate will continue to increase.

Some of our competitors' products and services are sold at a lower price than ours, which could cause sales of our tests and services to decline or force us to reduce our prices. Our current and future competitors could have greater technological, financial, reputational and market access advantages than us, and we may not be able to compete effectively against them. Increased competition is likely to result in pricing pressures, which could harm our revenues, operating income or market share. We have increasingly been subject to litigation with our competitors; for example, as disclosed elsewhere in these risk factors, we are or have recently been in active litigation with competitors in each of the women's health, oncology and organ health fields, which involve considerable costs to us as well as management time and attention. If we are unable to compete successfully, we may be unable to increase or sustain our revenues or achieve profitability. See the section entitled "*Business–Overview–Competition*" for additional information on our competitors.

We may not be successful in commercializing our cloud-based distribution model.

We utilize a cloud-based distribution model to deploy our bioinformatics technology for use by other laboratories. Under this model, clinical laboratories around the world, including in the U.S., license our technology to develop and run their own NIPT or other molecular testing assays in their own facilities as LDTs, and then access our proprietary algorithms through our cloud-based Constellation software to analyze the assay results. In the diagnostics industry, the market for cloud-based solutions and services is not as mature as the market for on-premise enterprise software, and it remains uncertain whether and to what extent our cloud-based distribution model will achieve and sustain high levels of customer demand and market acceptance. The rate of adoption of our cloud-based distribution model continues to be slower than we anticipated, and depends on a number of factors, including the cost, performance and perceived value associated with our solution, as well as our ability to address security, privacy and regulatory requirements or concerns. In particular, all of our licensees under our cloud-based distribution model are required to use Illumina sequencers and reagents to run their tests that they develop based on our technology. As further described in the risk factor entitled "*—We rely on a limited number of suppliers or, in some cases, single suppliers, for some of our laboratory instruments and materials and may not be able to find replacements or immediately transition to alternative suppliers*," we are aware that Illumina has required our licensees to pay an additional license fee in certain jurisdictions in order to secure a supply agreement for the sequencers and reagents necessary to run NIPT under our cloud-based distribution model. Furthermore, Illumina competes with us through its subsidiary Verinata, and may not charge a similar license fee for Verinata's licensed-based offering to other laboratories. As a result, our potential or current licensees may be unable to commercially launch their tests under our cloud-based distribution model in a financially viable manner, which has dissuaded and could continue to dissuade potential or current licensees from licensing from us or launching a test based on our technology. In addition, if a test developed by any of our licensees under our cloud-based distribution model in the United States is found not to be an LDT, the licensee may not be able to market its test, and we would not receive the anticipated revenues from that licensee.

We also do not know whether, over the long term, this model will result in benefits or cost savings at the levels that we anticipate or at all. For example, to the extent that any of our laboratory customers for whom we currently perform

our tests entirely in our laboratory transition to our cloud-based distribution model, our revenues from such customers will decrease because we are not able to charge as high an amount per test as when we perform the entire test ourselves. If the lower revenues per test performed is not offset by a sufficient increase in volume of tests sold, our overall revenues will be lower, and our results of operations may be adversely affected.

Among the risks to our business and results of operations from our Constellation model are the following:

- our and our licensees' ability to obtain required regulatory authorizations from the FDA and international regulatory agencies as further described in the risk factor entitled "*Regulatory and Compliance Risks— Failure to obtain necessary regulatory approvals may adversely affect our ability to expand our operations internationally, including our ability to continue commercializing our cloud-based distribution model*;"

- supply constraints, including with respect to the blood collection tubes that are used for many of our tests, such as Panorama, Signatera and Prospera, and that are supplied by Streck, Inc., or Streck, as further described in the risk factor entitled "*—We rely on a limited number of suppliers or, in some cases, single suppliers, for some of our laboratory instruments and materials and may not be able to find replacements or immediately transition to alternative suppliers*;"

- allegations or potential third-party claims that the tests, based on our technology, developed by our licensees violate such third parties' intellectual property rights;

- licensing portions of our proprietary technology to third parties that may not take the same security precautions as we do to protect this information; and

- an inability to achieve anticipated benefits and costs savings.

If we or other cloud-based solution providers experience security incidents, loss of customer data or disruptions in delivery or other problems, the market for cloud-based solutions in the diagnostics industry, including our solutions, may be adversely affected. Such events could also result in potential lawsuits and liability claims, or, as further described in the risk factor entitled "*—Security breaches, loss of data and other disruptions, including with respect to cybersecurity, could compromise sensitive information related to our business or prevent us from accessing critical information and expose us to liability, which could adversely affect our business and reputation*," could subject us to federal and state privacy laws and regulations or expose us to regulatory action or liability, any of which could have a material adverse effect on our business. If there is a reduction in demand for cloud-based solutions caused by technological challenges, weakening economic conditions, security or privacy concerns, competing technologies and products or other challenges, we may not be successful in executing our Constellation business model, and our results of operations may be adversely affected.

We rely on internal and third-party data centers and platforms to host our laboratory and cloud-based software, and any interruptions of service or failures may impair our laboratory operations or the delivery of our cloud-based services and harm our business.

We currently maintain a data center at our laboratory facilities in San Carlos, California. In addition, our proprietary bioinformatics algorithms are a crucial component of our test processing, and combine information derived from our mmPCR assay workflows with publicly available data from the broader scientific community to analyze and return test results. We host the significant majority of these algorithms on a cloud-based software platform pursuant to an agreement with DNAnexus, Inc., or DNAnexus, and both we and our Constellation licensees access our algorithms through the DNAnexus platform. The DNAnexus platform is hosted on third-party data center hosting facilities operated by Amazon Web Services, or AWS, located primarily in the United States and in the European Union. We also host our algorithms on AWS platforms directly. Our algorithms are currently used to run many of our tests and certain of our research and development activities, as well as for our Constellation licensees. In the event of any technical problems that may arise in connection with our on-site data center, the DNAnexus platform or the AWS servers on which the DNAnexus platform is hosted, or the AWS servers that host our data directly, or difficulties in or termination of our relationship with DNAnexus, we could experience interruptions in our laboratory operations or our cloud-based services, and we and our Constellation licensees may be unable to access our proprietary algorithms and therefore be unable to process tests or conduct any other activities that require access to such algorithms. These types of problems may be caused by a variety of

factors, including infrastructure changes, human or software errors, viruses, security attacks, fraud, spikes in customer usage and denial of service issues. We do not have any backup platform, server or other means to host our algorithms, and may be unable to find and implement an alternative platform that is satisfactory for our needs on commercially reasonable terms, in a timely manner, or at all. Interruptions in our operations or service may reduce our revenue, cause us to issue refunds, result in the loss of customers, cause laboratory licensees to terminate their contracts with us, adversely affect our ability to attract new laboratory licensees, or harm our reputation. We could also be exposed to potential lawsuits and liability claims.

If our products do not perform as expected, our operating results, reputation and business will suffer.

Our success depends on the market's confidence that we can provide reliable, high-quality testing results. There is no guarantee that the accuracy and reproducibility we have demonstrated to date will continue as our test volumes continue to increase and our product portfolio continues to expand. We believe that our customers are particularly sensitive to test limitations and errors, including inaccurate test results and the need on occasion to perform second blood draws, or redraws, on patients, for which Panorama has in the past experienced a higher rate than advertised for other NIPTs. As a result, if our tests do not perform as expected or favorably in comparison to competitive tests, our operating results, reputation, and business will suffer. We may also become subject to legal claims arising from such limitations, errors, or inaccuracies.

Our tests use a number of complex and sophisticated biochemical and bioinformatics processes, many of which are highly sensitive to external factors. An operational, technological or other failure in one of these complex processes, or fluctuations in external variables, may result in sensitivity or specificity rates that are lower than we anticipate or that vary between test runs, a higher than anticipated number of tests that require redraws or fail to produce results, or longer than expected turnaround times, which we have experienced and will likely continue to experience on occasion as a result of issues with laboratory equipment, components or materials or otherwise. In addition, we regularly evaluate and refine our testing processes, and any refinements we make may not improve our tests as we expect and may result in unanticipated issues that may adversely affect our test performance as described above, which we have experienced in the past. Such operational, technical and other difficulties may impact the commercial attractiveness of our products, may increase our costs or divert our resources, including management's time and attention, from other projects and priorities, or may subject us to legal claims. Furthermore, any changes to our testing process may require us to use new or different suppliers or materials with whom or which we are unfamiliar, and which may not perform as we anticipate, and could cause delays, downtime or other operational issues.

We rely on third-party laboratories to perform portions of our service offerings.

Certain of our tests, or components of our tests, are performed by third-party laboratories. These third-party laboratories are subject to contractual obligations to perform these services for us but are not otherwise under our control. We therefore do not control the capacity and quality control efforts of these third-party laboratories other than through our ability to enforce contractual obligations on volume and quality systems, and we have no control over such laboratories' compliance with applicable legal and regulatory requirements. We also have no control over the timeliness of such laboratories' performance of their obligations to us. Third-party laboratories that we have contracted with have in the past had, and occasionally continue to have, issues with delivering results to us or resolving issues with us, including within the time frames we expected or established in our contracts with them, which sometimes results in longer than expected turnaround times for, or negatively impacts the performance of, these tests and services. We have had to review and, in some cases, revise our processes, procedures and agreements with our business partners to address unforeseen operational issues and other contingencies, and will likely continue to do so as our business grows. Any natural or other disaster, acts of war or terrorism, shipping embargoes, labor unrest or political instability or similar events at one or more of our third-party laboratories' facilities that causes a loss of capacity would heighten the risks that we face. We may not have sufficient alternative backup if one or more of the third-party laboratories that we contract with are unable to satisfy their obligations to us with sufficient performance, quality and timeliness. Changes to or termination of our agreements or inability to renew our agreements with these third-party laboratories or enter into new agreements with other laboratories that are able to perform such portions of our service offerings could impair, delay or suspend our efforts to market and sell these tests and services. In the event of any adverse developments with these third-party laboratories or their ability to perform their obligations to us in a timely manner and in accordance with the standards that we and our customers expect,

our ability to service our customers may be delayed, interrupted or otherwise adversely affected, which could result in a loss of customers and harm to our reputation. Furthermore, when these issues arise, we have had to expend time, management attention and other resources to address and remedy such issues. In addition, certain third-party payers, including some state Medicaid payers, that we are under contract with may take the position that sending out testing to third-party laboratories and billing for such tests is contrary to the terms of our provider agreement and may refuse to pay us for the testing. If any of these events occur, our business, financial condition and results of operations could suffer. Further, some state laws impose anti-markup restrictions that prevent an entity from realizing a profit margin on outsourced testing. If we or our subsidiaries are unable to markup outsourced testing, our revenues and operating margins may suffer.

If either of our CLIA-certified laboratory facilities becomes inoperable, we will be unable to perform our tests and our business will be harmed.

We currently operate laboratory facilities in Austin, Texas and in San Carlos, California, both of which process Panorama, Horizon, and Signatera tests, which together represent the significant majority of our revenues. Our other tests that we perform are currently only able to be performed at one, but not both, of our laboratories, and are primarily performed at our San Carlos location, and we currently otherwise have no backup or redundant facility to perform these tests. Our San Carlos laboratory is situated near active earthquake fault lines, and both of our laboratories are located in areas that have in recent years experienced, and are likely to experience in the future, severe weather events. Either of our laboratories may be harmed or rendered inoperable, or samples could be damaged or destroyed, by natural or manmade disasters, including earthquakes, severe weather, flooding, power outages and contamination, including as a result of a health pandemic, which may render it difficult or impossible for us to perform our tests for some period of time. An inability to perform our tests or the backlog of tests that could develop if either our San Carlos or Austin laboratory is inoperable for even a short period of time may result in the loss of customers and an adverse effect on our revenues or harm our reputation.

We rely on a limited number of suppliers or, in some cases, single suppliers, for some of our laboratory instruments and materials and may not be able to find replacements or immediately transition to alternative suppliers.

We have sourced and will continue to source components of our technology, including sequencers, reagents, tubes and other laboratory materials, from third parties. In particular, our sequencers, many of our reagents, including for Panorama, Horizon and Signatera as described below, and our blood collection tubes, are sole sourced.

For example, our molecular diagnostics tests are currently only validated to perform on Illumina's sequencing platform; in addition, Illumina is currently the sole supplier of our sequencers and related reagents for Panorama, Horizon, Signatera and Prospera, along with certain hardware and software, pursuant to a supply agreement that expires in August 2033. Without sequencers and the related reagents, we would be unable to run our tests and commercialize our products. In addition, all of the licensees under our Constellation cloud-based distribution model do not have alternatives other than to use Illumina sequencers and reagents to run the tests that they develop based on our technology. In addition, Illumina and Sequenom, which was acquired by LabCorp, have entered into a patent pooling agreement pursuant to which both parties have pooled their intellectual property directed to NIPT. We understand from public filings that under the patent pooling agreement, Illumina has the exclusive worldwide rights to, among other things, license third-party laboratories to develop and sell NIPTs utilizing the pooled intellectual property and to enforce the pooled intellectual property against suspected infringers. Illumina has granted us certain rights to Illumina's intellectual property related to NIPT, including the pooled intellectual property, for running our own tests; however, we do not have an express license to grant rights under the pooled intellectual property to the licensees under our Constellation cloud-based distribution model. We are aware that Illumina has required our licensees, in order to secure a supply agreement for the sequencers and reagents necessary to run NIPT under our cloud-based distribution model, to pay an additional fee for a license under the pooled intellectual property in jurisdictions in which Illumina believes certain of the pooled intellectual property is enforceable. This additional fee has dissuaded and could continue to dissuade potential or current licensees from licensing from us or launching a test based on our technology. In addition, we have in the past been involved in patent infringement litigation against Illumina, which we and Illumina have settled. In addition, Illumina competes with us in the NIPT market through its subsidiary, Verinata. We understand Illumina supplies the same or similar sequencers and consumables to Verinata. Because of Illumina's ownership of Verinata, we face increased risk and uncertainty regarding continuity of a successful working relationship with Illumina under our supply agreement, as well as in our ability to compete with Verinata in the marketplace in view of economic advantages enjoyed by Verinata with respect to the cost of sequencers and related

consumables. Our failure to maintain a continued supply of the sequencers and reagents, along with the right to use certain hardware and software, would adversely impact our business, financial condition, and results of operations. Validating alternative sequencing platforms requires significant resources, expenditures and time and attention of management, and there is no guarantee that we will be successful in implementing any alternative sequencing platforms in a commercially sustainable way. We also cannot guarantee that we will appropriately prioritize or select alternative sequencing platforms on which to focus our efforts, in particular given our limited product and research and development resources and various business initiatives, which could result in increased costs and delayed timelines or otherwise impact our business and results of operations.

In addition, our Panorama test is currently only validated to be performed using Streck's blood collection tubes, and we use only Streck tubes for the primary analysis of Signatera results, and for our Prospera test. Streck is the sole supplier of the blood collection tubes included in Panorama and our other cell-free DNA tests under a supply arrangement with Streck under which we are required to exclusively use Streck tubes for Panorama. Similarly, all of the licensees under our cloud-based distribution model also have no current alternative but to use these blood collection tubes to run the tests that they develop based on our technology.

Furthermore, our sequencers, sourced from Illumina, as well as certain other reagents we use for Panorama and our other tests, are intended for research use only and are labeled as RUO. As discussed further in the risk factor entitled *"Regulatory and Compliance Risks—Changes in the way the FDA regulates the reagents, other consumables, and testing equipment we use when developing, validating, and performing our tests could result in delay or additional expense in bringing our tests to market or performing such tests for our customers,*" the FDA may determine that a product labeled RUO is, nonetheless, intended to be used diagnostically, and could take enforcement action against the manufacturer of the product. If this were to occur with respect to Illumina or any of our other suppliers of RUO products, we could be required to obtain one or more alternative sources of these products, and we may not be able to do so on commercially reasonable terms, a commercially reasonable timeframe, or at all. In addition, Streck's blood collection tubes have not been registered as a medical device in all countries in which we market our Panorama test. As discussed in the risk factor entitled "*Regulatory and Compliance Risks—Failure to obtain necessary regulatory approvals may adversely affect our ability to expand our operations internationally, including our ability to continue commercializing our cloud-based distribution model,"* the regulatory authorities in some of these countries may determine that such registration is required, which could impact our ability to offer Panorama in such countries. Furthermore, because our licensees under our cloud-based distribution model also exclusively use such sole-sourced components to run the tests they develop based on our technology, and our laboratory distribution partners must use certain of such sole-sourced components in order to utilize our tests, any enforcement action against the supplier by the FDA or any other regulatory authority in the jurisdictions in which our licensees and laboratory distribution partners are located could have an adverse impact on our business.

Because we rely on third-party manufacturers, we do not control the manufacture of these components, including whether such components will meet our quality control requirements, nor the ability of our suppliers to comply with applicable legal and regulatory requirements. In many cases, our suppliers are not contractually required to supply these components to the quality or performance standards that we require. If the supply of components we receive does not meet our quality control or performance standards, we may not be able to use the components, or if we use them not knowing that they are of inadequate quality, our tests may not work properly or at all, or may provide erroneous results, and we may be subject to significant delays caused by interruption in production or manufacturing or to lost revenue from such interruption or from spoiled tests. This occasionally occurs with respect to certain reagents. In addition, any natural or other disaster, acts of war or terrorism, shipping embargoes, labor unrest or political instability or similar events at our third-party manufacturers' facilities that cause a loss of manufacturing capacity would heighten the risks that we face.

In the event of any adverse developments with our sole suppliers, or if any of our sole suppliers modifies any of the components they supply to us, our ability to supply our products may be interrupted, and obtaining substitute components could be difficult or require us to re-design or re-validate our products. In addition, if we obtain FDA clearance, approval or de novo classification for any of our tests as an in vitro diagnostic, or IVD, such issues with suppliers or the components that we source from suppliers could affect our commercialization efforts for such an IVD, as further described in the risk factor entitled "*Regulatory and Compliance Risks—If the FDA were to begin actively regulating our tests, we could incur substantial costs and delays associated with trying to obtain premarket clearance or approval and incur costs*

associated with complying with post-market controls." Our failure to maintain a continued supply of components, or a supply that meets our quality control requirements, or changes to or termination of our agreements or inability to renew our agreements with these parties or enter into new agreements with other suppliers, particularly in the case of sole suppliers such as Streck and Illumina, could result in the loss of access to important components of our tests and impact our test performance or affect our ability to perform our tests in a timely manner or at all, which could impair, delay or suspend our commercialization activities. In the event that we transition to a new supplier from any of our sole suppliers, doing so could be time-consuming and expensive, may result in interruptions in our ability to supply our products to the market, could affect the performance of our tests or could require that we re-validate our affected tests using replacement equipment and supplies, which could delay the performance of our tests and result in increased costs. Any of these occurrences could have a material adverse effect on our business, financial condition and results of operations.

We rely on commercial courier delivery services to transport samples to our facilities in a timely and cost-efficient manner and if these delivery services are disrupted, our business may be harmed.

Our core business depends on our ability to quickly and reliably deliver test results to our customers. We typically receive blood samples for analysis at our laboratory facilities within days of collection from the patient. Disruptions in delivery service – whether due to error by the courier service, labor disruptions, bad weather, natural disaster, terrorist acts or threats or for other reasons – some of which we have experienced in the past, could adversely affect specimen integrity, our ability to process or store samples in a timely manner and to service our customers, and ultimately our reputation and our business. In addition, if we are unable to continue to obtain expedited delivery services on commercially reasonable terms, our operating results may be adversely affected.

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

In the ordinary course of our business, we collect and store sensitive data, including legally-protected personal information, such as test results and other patient health information, credit card and other financial information, insurance information, and personally identifiable information. We also store sensitive intellectual property and other proprietary business information, including that of our customers, payers and collaboration partners. We are highly dependent on information technology networks and systems, including a combination of on-site systems, managed data center systems and cloud-based data center systems, and the Internet, to securely process, transmit, and store a wide variety of business-critical information, including research and development information, commercial information and business and financial information. We also communicate sensitive data, including patient data, telephonically, through our website, through facsimile, through integrations with third-party electronic medical records systems, and through relationships with third-party vendors and their subcontractors, both in the United States and internationally. The laws of some foreign countries do not protect data privacy to the same extent as the laws of the United States.

The secure processing, storage, maintenance and transmission of this critical information are vital to our operations and business strategy. Although we take measures to protect sensitive information from unauthorized access, use or disclosure, our information technology and infrastructure, and that of our technology and other third-party service providers and their subcontractors, are nevertheless inherently vulnerable to, and from time to time experience, cyber-attacks by hackers or viruses or breaches due to employee error, technical error, malfeasance or other disruptions. Any such breach or interruption, whether of our systems or that of our third-party service providers or their subcontractors, could compromise our data security, and the information we store could be inaccessible by us or could be accessed by unauthorized parties, publicly disclosed, lost or stolen. Any such interruption in access, improper access, disclosure, modification, or other loss of information could result in legal claims or proceedings, liability or penalties under laws and regulations that protect the privacy of personal information, such as the Health Insurance Portability and Accountability Act of 1996, or HIPAA, European data privacy regulations, such as the General Data Protection Regulation, or GDPR, or state privacy regulations, such as the California Consumer Privacy Act. We may be required to comply with state breach notification laws, become subject to mandatory corrective action, or be required to verify the correctness of database contents. Unauthorized access, loss or dissemination could also disrupt our operations, including our ability to perform tests, provide test results, bill payers or patients, process claims and appeals, provide customer assistance services, conduct research and development activities, develop and commercialize tests, collect, process and prepare company financial

information, provide information about our tests, and manage the administrative aspects of our business, any of which could damage our reputation and adversely affect our business. In addition, these breaches and other inappropriate access can be difficult to detect, and any delay in identifying them may compound these adverse consequences. Any such breach could also result in the compromise of our trade secrets and other proprietary information, which could adversely affect our competitive position.

We are also subject to the risks described above as a result of our relationships with third-party vendors and their subcontractors, whose systems may be breached and may cause our sensitive data, including patient data, to be compromised. We have on occasion experienced such disruptions by way of third-party vendors. For example, in 2020 we were notified of a data security incident that affected a third-party vendor, which affected a number of our patients whose protected health information was stored in such third-party vendor's systems. The third-party vendor notified the affected individuals as required by HIPAA.

Our cloud-based distribution model adds additional data privacy risk, as certain personal health and other information may be sent to and stored in the cloud by our laboratory licensees, many of which are located outside of the United States. We contractually prohibit our licensees from sending personally-identifiable information to our cloud servers, and the vendor that hosts our software in the cloud is contractually required to comply with data privacy laws, such as HIPAA and GDPR. However, we cannot be certain that these third parties will comply with the terms of our agreements, nor that they will not experience security breaches or other disruptions.

The marketing, sale, and use of our tests could result in substantial damages arising from product liability, professional liability, or other claims that exceed our resources.

The marketing, sale and use of our tests could lead to product liability claims against us if someone were to allege that our test failed to perform as it was designed or as claimed in our promotional materials, was performed pursuant to incorrect or inadequate laboratory procedures, if we delivered incorrect or incomplete test results or our test failed to produce a result, or if someone were to misinterpret test results. In addition, we may be subject to liability for errors in, a misunderstanding of, or inappropriate reliance upon, the information we provide, or for failure to provide such information, in connection with our marketing and promotional activities or as part of the results generated by our tests. For example, Panorama could provide a low-risk result which a patient or physician may rely upon to make a conclusion about the health of the fetus, which may, in fact, have the condition for which we delivered a low-risk result because the Panorama result was a so-called false negative. Similarly, Panorama could provide a so-called false positive, which is a high-risk result for a fetus that may not, in fact, have the relevant condition. Even though Panorama and our other tests are highly accurate, they are not 100% accurate and we may report false negative or false positive results, which may subject us to lawsuits claiming product or professional liability or other claims, as has happened in the past and may happen in the future. A product liability or professional liability claim could result in substantial damages and be costly and time-consuming for us to defend. Although we maintain product and professional liability insurance, our insurance may not fully protect us from the financial impact of defending against product liability or professional liability claims or any judgments, fines or settlement costs arising out of any such claims. Any product liability or professional liability claim brought against us, with or without merit, could increase our insurance rates, cause our insurance coverage to be terminated, or prevent us from securing insurance coverage in the future. Additionally, any product liability or professional liability lawsuit could harm our reputation, result in a cessation of our services, or cause our partners to terminate our agreements with them, any of which could adversely impact our results of operations.

If we are unable to successfully scale our operations, our business could suffer.

Our overall test volumes grew from approximately 1,570,000 to 2,066,500 and further to 2,496,100 tests processed during the years ended 2021, 2022 and 2023, respectively, and since 2009 we have launched over 15 product offerings or indications. In addition, we regularly evaluate and refine our testing process, often significantly updating our workflows. As our test volumes and product portfolio continue to grow, we will need to continue to ramp up our testing capacity and implement increases in scale, such as increased headcount, additional or new equipment, laboratory space and qualified laboratory personnel, increased office and laboratory space, expanded customer service capabilities, billing and systems process improvements, enhanced controls and procedures, and an expanded internal quality assurance program and technology platform. The value of our tests to patients and physicians depends on our ability to perform the

tests on a timely basis and at an exceptionally high standard of quality, and on maintaining our reputation for such timeliness and quality. Failure to implement necessary procedures, transition to new facilities, equipment or processes or to hire the necessary personnel in a timely and effective manner could result in higher processing costs or an inability to meet market demand, or could otherwise affect our operating results, as we have experienced in the past.

In addition, our efforts to scale our operations may be unable to keep pace with an increase in the frequency of our launches of new or enhanced products and services. Particularly in recent years, we have expanded into markets or industries new to us with new products, significant product enhancements, and expanded indications. As we continue to launch additional offerings and product enhancements, we will need to manage our resources among various initiatives, and such competing priorities could lead to delays in one or more of our business initiatives. Conversely, to the extent that we scale our operations, infrastructure and other resources but do not ultimately meet our anticipated timelines in our product development efforts, we will experience higher costs and expenses than necessary until our project timelines and operational resources become aligned. We may also, intentionally or unintentionally, allocate resources to new products or initiatives in a manner disproportionate to the amount of revenue that such initiatives generate compared to our existing or core offerings. We cannot assure you that our efforts to scale our commercial operations will not negatively affect the quality of our test process or results, or that we will be successful in managing the growing complexity of our business operations.

To execute our growth plan, we must attract and retain highly qualified personnel. Competition for these personnel is intense, especially for sales, scientific, medical, laboratory, research and development and other technical personnel, and especially in the San Francisco Bay Area where we have an office and laboratory facilities, and the turnover rate of such personnel can be high. We have from time to time experienced, and we expect to continue to experience, difficulty in hiring and retaining employees with appropriate qualifications. Many of the companies with which we compete for highly qualified personnel have greater resources than we have. If we hire employees from competitors or other companies, their former employers may attempt to assert that these employees or we have breached their legal obligations to their former employers, which occurs from time to time. In addition, job candidates and existing employees in the San Francisco Bay Area often consider the value of the equity awards they receive in connection with their employment. To the extent that our current or potential employees perceive the value of our equity awards to be low, our ability to recruit, retain and motivate highly skilled employees may be adversely affected, which could then have an adverse effect on our business and future growth prospects. Furthermore, to the extent that we are unable to retain our employees and they leave our company to join one of our competitors, we cannot assure you that any invention, non-disclosure or non-compete agreements we have in place will provide meaningful protection against a departing employee's unauthorized use or disclosure of our confidential information, as further discussed in "*—Risks Relating to our Intellectual Property— If we are not able to adequately protect our trade secrets and other proprietary information, the value of our technology and products could be significantly diminished*."

In addition, our growth may place a significant strain on our operating and financial systems and our management, sales, marketing and administrative resources. As a result of our growth, our operating costs may escalate faster than we anticipate, we may face difficulties in obtaining additional office or laboratory space, and some of our internal systems may need to be enhanced or replaced. If we cannot effectively manage our expanding operations and our costs, we may not be able to grow successfully or we may grow at a slower pace, and our business could be adversely affected.

If our sales, distribution, development or other partnerships are not successful and we are not able to offset the resulting impact through our own efforts or through agreements with new partners, our commercialization activities may be impaired and our financial results could be adversely affected.

Part of our business strategy is to develop relationships with laboratory and other partners to develop or sell our products, both in the United States and internationally. For example, we have entered into an agreement with BGI Genomics pursuant to which, among others, we will commercialize Signatera in China on BGI Genomics's sequencing platform; and an agreement with Foundation Medicine to develop and commercialize personalized circulating tumor DNA monitoring assays for use by biopharmaceutical and clinical customers who order Foundation Medicine's companion diagnostic cancer test. Developing and commercializing products with third parties reduces our control over such development and commercialization efforts and subjects us to the various risks inherent in a joint effort with a third party, such as delays, operational issues, technical difficulties and other contingencies outside of our influence or control. Distributing Panorama, Signatera and our other products through partners reduces our control over our revenues, our

market penetration and our gross margin on sales by the partner if we could have otherwise made that sale through our direct sales force. The financial condition of these third parties could weaken, or they could terminate their relationship with us and/or stop selling our products, as has happened in the past; reduce their marketing efforts in respect of our products; develop and commercialize or otherwise sell competing products in addition to or in lieu of our tests, as has also occurred; merge with or be acquired by a competitor of ours or a company that chooses to de-prioritize or cease the efforts to develop, sell or otherwise partner with us on our products; or otherwise breach their agreements with us. For example, as further described in "*Note 3—Revenue Recognition—Licensing and Other Revenues—Qiagen*" of our consolidated financial statements, we had entered into a license, distribution and development agreement with Qiagen pursuant to which, among others, Qiagen would distribute an NIPT based on our Panorama test on a sequencer to be developed by us and Qiagen; however, Qiagen thereafter discontinued the development of its Next Generation Sequencing Platform and instead partnered with Illumina to develop next-generation sequencing based tests. Furthermore, our laboratory partners may misappropriate our trade secrets or use our proprietary information in such a way as to expose us to litigation and potential liability; and our compliance risk may increase to the extent that we are responsible, or deemed responsible, for our partners' sales and marketing activities. Disagreements or disputes with our partners, including disagreements over customers, proprietary rights or our or their compliance with contractual obligations, might cause delays or impair the commercialization of Panorama, Signatera or our other tests, lead to additional responsibilities for us with respect to new tests, or result in litigation or arbitration, any of which would divert management attention and resources and be time-consuming and expensive. As is typical for companies in our industry, we are continually evaluating and pursuing various strategic or commercial partnerships, relationships, or collaborations, some of which may involve the sale and issuance of our common stock, which could result in additional dilution of the percentage ownership of our stockholders and could cause the price of our common stock to decline.

If our partnerships are not successful, our ability to increase sales of our products and to successfully execute our strategy could be compromised.

Our financial condition and results of operations may be adversely affected by international regulatory and business risks.

As we expand our operations, including by offering our tests in other countries, we are increasingly subject to varied and complex foreign and international laws and regulations due to operating, offering our products, or contracting with employees, contractors and other service providers in various other countries. Compliance with these laws and regulations often involves significant costs and may require changes in our business practices that may result in reduced revenues and adversely affect our operating results.

We are subject to the Foreign Corrupt Practices Act of 1977, as amended, or the FCPA, which prohibits companies and their intermediaries from making payments in violation of law to non-U.S. government officials for the purpose of obtaining or retaining business or securing any other improper advantage. Our reliance on independent laboratories to sell Panorama and other products internationally demands a high degree of vigilance in maintaining our policy against participation in corrupt activity, because these distributors could be deemed to be our agents and we could be held responsible for their actions. Other U.S. companies in the medical device and pharmaceutical field have faced criminal penalties under the FCPA for allowing their agents to deviate from appropriate practices in doing business with foreign government officials. We are also subject to similar anti-bribery laws in the jurisdictions in which we operate, including the United Kingdom's Bribery Act of 2010, which also prohibits commercial bribery and makes it a crime for companies to fail to prevent bribery. These laws are complex and far-reaching in nature. Any violations of these laws, or allegations of such violations, could disrupt our operations, involve significant management distraction, involve significant costs and expenses, including legal fees, and we could be subject to severe penalties, including criminal and civil penalties, disgorgement, and other remedial measures, any of which could result in a material adverse effect on our business, prospects, financial condition, or results of operations.

In addition, our international activities are subject to U.S. economic and trade sanctions, which restrict or otherwise limit our ability to do business in certain designated countries. Other limitations, such as restrictions on the import into the United States or the export to other countries of tissue or genetic data necessary for us to perform our tests, or restrictions on importation and circulation of blood collection tubes or other equipment or supplies by countries outside of the United States, may limit our ability to offer our tests internationally. We may also face competition from companies located in the countries in which we or our partners or licensees offer our tests, and in which we may be at a competitive disadvantage because the country may favor a local provider or for other reasons.

By operating internationally, we may experience longer accounts receivable payment cycles and difficulties in collecting accounts receivable; realize lower margins due to lower pricing in many countries; incur potentially adverse tax consequences, including the complexities of foreign value added tax systems, tax inefficiencies related to our corporate structure and restrictions on the repatriation of earnings; experience financial accounting and reporting burdens and complexities; experience difficulties in staffing and managing foreign operations, including under labor and employment laws and regulations that are new or unfamiliar to us; be subject to trade barriers such as tariffs, quotas, preferential bidding or import or export licensing requirements; be exposed to political, social and economic instability abroad, including terrorist attacks and security concerns; be exposed to fluctuations in currency exchange rates; and experience reduced or varied protection for intellectual property rights and practical difficulties in enforcing intellectual property and other rights, including with respect to assignment of inventions to us by our consultants in foreign jurisdictions.

Outside of the United States we enlist local and regional laboratories, contract employees and other contracted service providers to assist with various aspects of our business operations, including blood draws, engineering, sales, marketing, billing and customer support. Subject to regulatory clearance where required, we also contract with international licensees to run the molecular portion of our tests in their own labs and then access our algorithm for analysis of the resulting data through our cloud-based Constellation platform. Locating, qualifying and engaging additional distribution partners and local laboratories with local industry experience and knowledge is necessary to effectively market and sell our tests outside of the United States. We may not be successful in finding, attracting and retaining such distribution partners or laboratories, or we may not be able to enter into such arrangements on favorable terms. Sales practices and other activities utilized by our distribution partners, contract employees and other service providers, some of which may be locally acceptable, may not comply with relevant standards required under United States laws that apply to our operations overseas, including through third parties, which could create additional compliance risk. Our training and compliance program and our other internal control policies and procedures, and our contractual terms with these third parties, may not always protect us from acts committed by our employees, contractors, partners or agents abroad. Non-compliance by us or our employees, contractors, partners or agents, whether maliciously or in error, of any applicable laws or regulations could result in fines or penalties, or adversely affect our ability to operate and grow our business. Even if we are able to effectively manage our international operations, if our distribution partners and local and regional laboratory licensees are unable to effectively manage their businesses, our business and results of operations could be adversely affected. Furthermore, the legal landscape governing advertising, promotional and other marketing activities can vary widely from jurisdiction to jurisdiction, and is often more complex, less clear or less developed than in the United States. If our marketing activities are found to be in violation of local laws, regulations or practices, we may be subject to fines and other penalties, and may be required to cease marketing or commercialization activities in such jurisdiction. If our sales and marketing efforts are not successful outside of the United States, we may not achieve market acceptance for our tests outside of the United States, which would harm our business.

Operating internationally requires significant management attention and financial resources. We cannot be certain that the investment and additional resources required to increase international revenues or expand our international presence will produce desired levels of revenues or profitability.

If we lose the services of our founder and Executive Chairman, our Chief Executive Officer, or other members of our senior management team, we may not be able to execute our business strategy.

Our success depends in large part upon the continued service of our senior management team. In particular, our founder and Executive Chairman, Matthew Rabinowitz, as well as Steve Chapman, our Chief Executive Officer, are critical to our vision, strategic direction, culture, products and technology. In addition, we do not maintain key-man insurance for Dr. Rabinowitz, Mr. Chapman or any other member of our senior management team. The loss of our founder and Executive Chairman, our Chief Executive Officer, or one or more other members of our senior management team could have an adverse effect on our business.

We may engage in acquisitions, dispositions or other strategic transactions that could disrupt our business, cause dilution to our stockholders or reduce our financial resources.

From time to time, we may enter into transactions to acquire or dispose of businesses, products or technologies or to engage in other strategic transactions, such as our recent acquisition of certain reproductive health assets related to

Invitae Corp.'s NIPT and carrier screening business. We may not be able to complete such transactions on favorable terms or at all. Any acquisitions or other strategic transactions we consummate may not strengthen our competitive position, and these transactions may be viewed negatively by customers or investors. We may decide to incur debt in connection with an acquisition or issue shares of our common stock or other equity securities to the stockholders of the acquired company, which would cause dilution to our existing stockholders. We could incur losses resulting from such strategic transactions, including undiscovered liabilities of an acquired business that are not covered by any indemnification we may obtain from the seller. In addition, we may not be able to successfully integrate any acquired personnel, technologies and operations into our existing business in an effective, timely and non-disruptive manner. Any dispositions may also cause us to lose revenue and may not strengthen our financial position. Strategic transactions may also divert management attention from day-to-day responsibilities, increase our expenses, result in accounting charges, and reduce our cash available for operations and other uses. We cannot predict the number, timing or size of future strategic transactions or the effect that any such transactions might have on our operating results.

We are involved in legal proceedings, regulatory investigations and inquiries and other legal matters, which may have an adverse effect on our business, financial condition, results of operations and prospects.

We are involved in legal matters, including investigations, subpoenas, demands, disputes, litigation, requests for information, and other regulatory or administrative actions or proceedings, including those with respect to intellectual property, testing and test performance, billing, reimbursement, marketing, short seller and media allegations, employment, and other matters. See Note 8—*Commitments and Contingencies—Legal Proceedings* for a description of our legal matters. An independent committee of our board of directors initiated and completed an internal investigation into the allegations made in a March 2022 short seller report, with the assistance of the law firm of WilmerHale LLP, or WilmerHale. WilmerHale had access to company executives, personnel, records, communications, and documents. Based on the investigation, the independent committee, on behalf of the board, concluded that the allegations of wrongdoing against the Company in the report were unfounded.

We are responding to ongoing regulatory and governmental investigations, subpoenas and inquiries, and contesting our current legal matters, and cannot provide any assurance as to the ultimate outcome with respect to any of the foregoing. There are many uncertainties associated with these matters. Such matters may cause us to incur costly litigation and/or substantial settlement charges, divert management attention, result in adverse judgments, fines, penalties, injunctions or other relief, and may result in loss of customer or investor confidence regardless of their merit or ultimate outcome. For example, in January 2024, a jury verdict of $57 million was awarded against us in a patent infringement lawsuit filed by Ravgen, Inc. In addition, the resolution of any intellectual property litigation may require us to make royalty payments, which could adversely affect gross margins in future periods. If any of the foregoing were to occur, our business, financial condition, results of operations, cash flows, prospects, or stock price could be adversely affected.

We may need to raise additional capital, and if we cannot do so when needed or on commercially acceptable terms, we will be required to slow or cease our investment in our product development and commercialization plans, which would have an adverse effect on our business.

We have incurred net losses since our inception, and we anticipate net losses and negative operating cash flows for the near future. While we have introduced multiple products that are generating revenues, these revenues may not be sufficient to fund all of our operations, including our product development and commercialization plans. Consequently, we will need to generate additional revenues to achieve future profitability and may need to raise additional funds through public or private equity or debt financings, corporate collaborations or licensing arrangements to continue to fund or expand our operations.

Our actual liquidity and capital funding requirements will depend on numerous factors, including:

- our ability to achieve broader commercial success with our tests and product offerings;
- the costs and success of our research, development, and commercialization efforts for potential new products and additional indications for, and enhancements to, current products;

- our ability to obtain more extensive coverage and reimbursement for our tests, including for microdeletions screening in NIPT, as well as in additional indications in oncology and organ health as we continue to invest in expanding our offerings in these fields;

- our ability to generate sufficient revenues from our cloud-based distribution model;

- our ability to collect on our accounts receivable;

- our need to finance capital expenditures and further expand our clinical laboratory operations;

- our ability to manage our operating costs;

- costs and expenses to protect or enforce our intellectual property rights or to defend against infringement claims brought against us, including any associated litigation settlements or judgments we are required to pay; and

- the timing and results of any regulatory authorizations that we are required to obtain for our tests.

Additional capital, if needed, may not be available on satisfactory terms or at all. Furthermore, any additional capital raised through the sale of equity or equity-linked securities, or grant of equity or equity-linked securities in connection with any debt financing, will dilute stockholders' ownership interests in us and may have an adverse effect on the price of our common stock. In addition, the terms of any financing may adversely affect stockholders' holdings or rights. Debt financing, if available, may include restrictive covenants, and may impose other constraints on us and our operations. To the extent that we raise capital through collaborations and licensing arrangements, it may be necessary to relinquish some rights to our technologies or grant licenses on terms that may not be favorable to us.

If we are not able to obtain adequate funding when needed, we may be required to delay or slow our investment in the development and commercialization of our products and significantly scale back our business and operations, which would have an adverse effect on our business. In addition, we may have to work with a partner on one or more of our tests or programs, which could lower the economic value of those programs to our company.

We have incurred substantial indebtedness that may decrease our business flexibility, access to capital, and/or increase our borrowing costs, which may adversely affect our operations and financial results.

In April 2020, we issued $287.5 million aggregate principal amount of 2.25% Convertible Senior Notes due 2027, or the Convertible Notes. Our indebtedness may:

- limit our ability to borrow additional funds for working capital, capital expenditures, acquisitions or other general business purposes;

- limit our ability to use our cash flow or obtain additional financing for future working capital, capital expenditures, acquisitions or other general business purposes;

- require us to use a substantial portion of our cash flow from operations to make debt service payments;

- limit our flexibility to plan for, or react to, changes in our business and industry;

- place us at a competitive disadvantage compared to our less leveraged competitors; and

- increase our vulnerability to the impact of adverse economic and industry conditions.

Further, the indenture governing the Convertible Notes does not restrict our ability to incur additional indebtedness and we and our subsidiaries may incur substantial additional indebtedness in the future, subject to the restrictions contained in any future debt instruments existing at the time, some of which may be secured indebtedness.

As of December 31, 2023, we have $80.4 million of outstanding balance of the Credit Line including accrued interest. The Credit Line is secured by a first priority lien and security interest in the Company's money market and marketable securities held in its managed investment account with UBS. The Company is required to maintain a minimum of at least $150.0 million in its UBS accounts as collateral. UBS has the right to demand full or partial payment of the Credit Line obligations and terminate the Credit Line, in its discretion and without cause, at any time.

Recent macroeconomic pressures resulting from ongoing geopolitical or other matters may have an adverse impact on our business, financial results and prospects.

The COVID-19 pandemic has had a significant negative impact on the macroeconomic environment, such as decreases in per capita income and level of disposable income, inflation, rising interest rates, and supply chain issues. Ongoing geopolitical matters have also contributed to difficult macroeconomic conditions and exacerbated supply chain issues, resulting in significant economic uncertainty as well as volatility in the financial markets, particularly in the United States. Such conditions may adversely impact our business, financial results, and prospects. In addition, such macroeconomic conditions could impact our ability to access the public markets as and when appropriate or necessary to carry out our operations or our strategic goals. We cannot predict the ongoing extent, duration or severity of these conditions, nor the extent to which we may be impacted.

In the event of health epidemics or outbreaks in the future, our operations could be disrupted and our business adversely impacted. Such disruptions or impacts may be similar to those we faced during the COVID-19 pandemic, such as mandated business closures in impacted areas, limitations with employee resources due to stay at home orders or sickness of employees or their families, reduced demand for certain of our products, or supply constraints.

Ethical, legal and social concerns related to the use of genetic information could reduce demand for our tests.

DNA testing, like that conducted using Panorama, Horizon, Signatera, and our other products, 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 or prohibit testing for genetic predisposition to certain conditions, particularly for those that have no known cure. Patients may also refuse to use genetic tests even if permissible, for similar reasons such as religious concerns; they may also refuse genetic testing due to concerns regarding eligibility for life or other insurance. 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 tests or reduce the potential markets for services and products enabled by our technology platform, either of which could harm our business.

Our ability to utilize our net operating loss carryforwards and certain other tax attributes may be limited.

We have a significant amount of net operating loss, or NOL, carryforwards that can be used to offset potential future taxable income and related income taxes. As of December 31, 2023, we had federal, state, and foreign NOL carryforwards of approximately $1.6 billion, $1.1 billion and $3.8 million, respectively, which, if not utilized, begin to expire in 2027, 2024, and 2027, respectively. Approximately $1.3 billion of these federal NOLs can be carried forward indefinitely. We also had federal research and development credit carryforwards of approximately $64.3 million, which begin to expire in 2027, and state research and development credit carryforwards of approximately $36.7 million, which begin to expire in 2031. Under Section 382 of the Internal Revenue Code of 1986, as amended, if a corporation undergoes an "ownership change" (generally defined as a greater than 50% change, by value, in equity ownership over any three-year period), the corporation's ability to use its pre-change NOL carryforwards and other pre-change tax attributes to offset its post-change income or taxes may be limited. We may experience ownership changes in the future as a result of shifts in our stock ownership, some of which may not be within our control. Our ability to use these carryforwards could be limited if we experience an "ownership change."

Our estimates of total addressable 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.

Total addressable 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 publicly announced estimates and forecasts relating to the size and expected growth of our market may prove to be inaccurate. Even if a market in which we compete meets our size estimates and forecasted growth for such market, our business could fail to grow at similar rates.

Risks Related to Reimbursement

If we are unable to expand, maintain or obtain third-party payer coverage and reimbursement for Panorama, Horizon and our other tests, or if we are required to refund any reimbursements already received, our revenues and results of operations would be adversely affected.

Our business depends on our ability to obtain and maintain adequate coverage and reimbursement from third-party payers and patients. Third-party reimbursement for our testing represents a significant portion of our revenues, and we expect government and commercial third-party payers to continue to be our primary source of payments. In particular, we believe that in order for us to continue to achieve commercial success, we will need to achieve insurance coverage for microdeletions screening, and obtain positive coverage determinations and favorable reimbursement rates from commercial third-party payers, the Centers for Medicare & Medicaid, or CMS, and state reimbursement programs for our tests. Historically, we have not received reimbursement for a significant number of Panorama tests that we have performed for microdeletions; we have published data from our SMART Study, but we cannot be certain whether, or to what extent, the SMART Study may impact insurance coverage and reimbursement for Panorama for microdeletions. In addition, while we have received positive coverage determinations for certain specified uses and indications of our Signatera test from commercial third-party payers as well as the Molecular Diagnostic Services Program, or MolDx, which identifies and establishes Medicare coverage and reimbursement for molecular diagnostic tests, we cannot guarantee that our test will be reimbursed at the rate we expect. Furthermore, while we have also received positive coverage decisions from MolDx for our Prospera Kidney and Lung tests, we cannot guarantee that our tests will continue to be reimbursed at the same or a similar rate as we have received thus far. If we are unable to obtain or maintain coverage or adequate reimbursement from, or achieve in network status with, third-party payers for our existing or future tests, our ability to generate revenues will be limited. For example, physicians may be reluctant to order our tests due to the potential of a substantial out-of-pocket cost to the patient if reimbursement coverage is unavailable or insufficient.

In making coverage determinations, third-party payers often rely on practice guidelines issued by professional societies. The practice guidelines issued by professional societies now generally acknowledge that NIPT is the most sensitive screening option for, and/or are generally supportive of NIPT in, average-risk pregnancies, in addition to high-risk pregnancies. However, while most third-party payers now reimburse for NIPT for average-risk patients, it remains the case that not all third-party payers, particularly state Medicaid payers, do so. Furthermore, many third-party payers do not reimburse for microdeletions screening. While we have published data on the performance of Panorama for the 22q11.2 deletion syndrome, including most recently from our SMART Study, we have and may continue to experience low reimbursement rates for Panorama for microdeletions, and we may otherwise be unable to obtain positive coverage determinations for our test. If third-party payers do not reimburse for NIPT for microdeletions in the future, our future revenues and results of operations would be adversely affected, particularly to the extent that we continue to perform large volumes of tests for which third-party payers do not reimburse.

In addition, a CPT code for microdeletions took effect in January 2017. We have experienced low average reimbursement rates for microdeletions under this code, and we expect that this code will continue to cause our microdeletions reimbursement to remain low, at least in the near term, due to third-party payers declining to reimburse and as a result of reduced reimbursement, under the code, which has had, and we expect to continue to have, an adverse effect on our revenues. Also, a CPT code for expanded carrier screening tests took effect in January 2019. The code has caused and may continue to cause reimbursement rates for our broader Horizon carrier screening panel to decrease because those tests may be reimbursed as a combined single panel instead of as multiple individual tests.

The reimbursement environment, particularly for molecular diagnostics, is continually changing and our efforts to broaden reimbursement for our tests with third-party payers may not be successful. Third parties, such as commercial health insurers and government programs, from whom we have received reimbursement may withdraw coverage or decrease the amount of reimbursement for our tests at any time and for any reason, or may otherwise adopt requirements, programs or policies that may restrict or adversely affect our business. In addition, in some cases, our tests or their uses within certain populations, such as for microdeletions, are considered experimental by third-party payers and, as a result, some payers have decided not to cover or reimburse for such tests. Some third-party payers bundle payment for multiple tests or tests that screen for multiple conditions, such as our Horizon test or our Panorama test and the separate Panorama screen for microdeletions, into a single payment rate, thereby limiting our reimbursement in those situations. Payers may also dispute our billing or coding. Based on any of the foregoing, third-party payers may also decide to deny payment or recoup payment for testing that they contend to have been not medically necessary, against their coverage determinations, or for which they have otherwise overpaid, and we may be required to refund reimbursements already received. We deal with requests for recoupment from third-party payers from time to time in the ordinary course of our business, and it is likely that we will continue to do so in the future. See "*Note 8—Commitments and Contingencies—Third-Party Payer Reimbursement Audits*" in the Notes to Consolidated Financial Statements. If a third-party payer denies payment for testing, reimbursement revenue for our testing could decline. If a third-party payer successfully proves that payment for prior testing was in breach of contract or otherwise contrary to law, they may recoup payment or bring legal action to do so, which amounts could be significant and would adversely impact our results of operations, and it may decrease reimbursement going forward. We may also decide to negotiate and settle with a third-party payer in order to resolve an allegation of overpayment. Any of these outcomes might require us to restate our financials from a prior period, which would likely cause our stock price to decline. For example, in 2018 we reached a settlement with certain government payers regarding past reimbursement submissions; although the settlement involved no admission of fault by us and no corporate integrity agreement, we cannot guarantee that we will not be subject to similar claims, resulting in additional settlements or repayments, in the future.

Furthermore, some of our contracts with third-party payers contain so-called most favored nation provisions, pursuant to which we have agreed that we will not bill the third-party payer more than we bill any other third-party payer. We must therefore monitor our billing and claims submissions to ensure that we remain in compliance with these contractual requirements with third-party payers. If we do not successfully manage these most favored nation provisions, we may need to forego revenues from some third-party payers or reduce the amount we bill to each third-party payor with a most-favored nation clause in its contract that is violated, which would adversely affect our revenues. This situation could also subject us to claims for recoupment, which could require the time and attention of our management, require the expense of engaging outside counsel or consultants, and may be a distraction from development of our business, adversely impacting our operations. Such recoupment demands could also ultimately result in an obligation to repay amounts previously earned.

In addition, if a third-party payer denies coverage, it may be difficult for us to collect from the patient, and we may not be successful in doing so. In particular, we are often unable to collect the full amount of a patient's responsibility where we are an out-of-network provider and the patient is left with a large balance, despite our good faith efforts to collect. As a result, we cannot always collect the full amount due for our tests when third-party payers deny coverage, cover only a portion of the invoiced amount or the patient has a large cost-sharing obligation, which may cause payers to raise questions regarding our billing policies and patient collection practices. We believe that our billing policies and our patient collection practices are compliant with applicable laws and reimbursement policies. However, from time to time we receive inquiries from third-party payers regarding our billing policies and collection practices. We address these inquiries as and when they arise, but there is no guarantee that we will always be successful in addressing such concerns in the future, which may result in a third-party payer deciding to reimburse for our tests at a lower rate or not at all, seeking recoupment of amounts previously paid to us, or bringing legal action to seek reimbursement of previous amounts paid. Any of such occurrences could cause reimbursement revenue for our testing, which constitutes the large majority of our revenue, to decline. Additionally, if we were required to make a repayment, such repayment could be significant, which would adversely impact our results of operations, and we might be required to restate our financials from a prior period, which would likely cause our stock price to decline.

Our revenues may be adversely affected if we are unable to successfully obtain reimbursement from the Medicare program and state Medicaid programs.

Medicare reimbursement impacts our revenues from our oncology and organ health products, as a large proportion of these patients are covered by Medicare. Medicare beneficiaries generally do not receive our women's health testing. However, Medicare reimbursement can affect both Medicaid reimbursement, which is relevant to our NIPT, and reimbursement from commercial third-party payers. Specifically, fee-for-service Medicaid programs generally do not reimburse at rates that exceed Medicare's fee-for-service rates, and many commercial third-party payers set their payment rates at a percentage of the amounts that Medicare pays for such testing services. Medicare reimbursement rates are typically based on the Clinical Laboratory Fee Schedule, or CLFS, set by CMS. Our current Medicare Part B reimbursement for Panorama was not set pursuant to a national coverage determination by CMS. Although we believe that coverage is available under Medicare Part B even without such a determination, we currently lack the certainty afforded by a formal national coverage determination by CMS. Thus, CMS could issue an adverse coverage determination as to Panorama which could influence other third-party payers, including state Medicaid programs, and could have an adverse effect on our revenues.

It is estimated that nearly half of all births in the United States are to state Medicaid program beneficiaries. Each state's Medicaid program has its own coverage determinations related to our testing, and many state Medicaid programs do not provide coverage for our testing. Even if our testing is covered by a state Medicaid program, we must be recognized as an enrolled Medicaid provider by the state in which the Medicaid beneficiary receiving the services resides in order for us to be reimbursed by a state's Medicaid program, including under a Medicaid managed care plan. Furthermore, in certain states that have implemented managed care organizations, or MCOs, that are typically operated by commercial third-party payers, we would also need to contract with one or more MCOs as a participating provider for us to be reimbursed for testing services that we provide to a Medicaid beneficiary.

Our San Carlos, CA laboratory is enrolled as a Medicaid provider in 50 U.S. states or territories and our Austin, TX laboratory is enrolled as a Medicaid provider in 40 states, with additional applications underway for both laboratories. However, even if we are recognized as a Medicaid provider in a state, if Medicare's CLFS rate for our services and tests are low, the Medicaid reimbursement amounts are sometimes as low, or lower, than the Medicare reimbursement rate. In addition, from time to time we receive requests from state Medicaid programs seeking information or documents to determine eligibility for and the amount of Medicaid reimbursement. As a result of all of these factors, many state Medicaid programs only reimburse our testing at a low dollar amount, or not at all. Low or zero-dollar Medicaid reimbursement rates for our tests could have an adverse effect on our business and revenues.

Our revenues may be adversely impacted if third-party payers withdraw coverage or provide lower levels of reimbursement due to changing policies, billing complexities or other factors.

We are in-network, or under contract, with the significant majority of third-party payers from whom we receive reimbursement; this means that we have agreements with most third-party payers that govern test approval or payment terms. However, these contracts do not guarantee reimbursement for all testing we perform. For example, third-party payers with whom we have written agreements may have time-sensitive deadlines to file claims or may have policies that state they will not reimburse for the screening of microdeletions, or don't have a policy in place to reimburse for microdeletions screening. In addition, the terms of certain of our payer agreements require the ordering physician or qualified practitioner's signature on test requisitions or require other controls and procedures prior to conducting a test. In particular, third-party payers have increasingly required prior authorization to be obtained prior to conducting a test, as a condition to reimbursing for the test. This has placed a burden on our billing operations as we have to dedicate or source resources to ensuring that these requirements are met and to conduct follow-up and address issues as they arise, and has also impacted our results of operations, including our gross margins, since these requirements began to take effect. To the extent we or the physicians ordering our tests do not follow the prior authorization requirements, we may be subject to claims for recoupment of reimbursement amounts previously paid to us, or may not receive some or all of the reimbursement payments to which we would otherwise be entitled. This has occurred in some cases and may occur more frequently in the future, which does and would have an adverse impact on our revenues.

Where we are considered to be an out of network provider, which is the case with some third-party payers from whom we receive reimbursement, such third-party payers could deny coverage and decline to reimburse for our tests

according to each plan enrollee's policy. Managing reimbursement on a case-by-case basis is time-consuming and contributes to an increase in the number of days it takes us to collect on accounts, which also increases our risk of non-payment. Negotiating reimbursement on a case-by-case basis also typically results in the receipt of reimbursement at a significant discount to the list price of our tests.

Even if we are being reimbursed for our tests, third-party payers may review and adjust the rate of reimbursement, require patient cost-sharing, or stop paying for our tests. Government and commercial third-party payers continue to increase their efforts to control the cost, utilization and delivery of healthcare services by demanding price discounts or rebates and limiting coverage of, and amounts they will pay for, molecular diagnostic tests. These measures have resulted in reduced payment rates and decreased utilization in the clinical laboratory industry. Because of these cost-containment measures, governmental and commercial third-party payers may reduce, suspend, revoke or discontinue payments or coverage at any time, including payors that currently provide reimbursement for our tests. Reduced reimbursement of our tests may harm our business, financial condition or results of operations.

Billing for clinical laboratory testing services is complex. We perform tests in advance of payment and without certainty as to the outcome of the billing process. In cases where we expect to receive a fixed fee per test due to our reimbursement arrangements, we may nevertheless encounter disputes over pricing and billing. Among the factors complicating our billing of third-party payers are disparity in coverage among various payers; disparity in, and increasingly difficult, information and billing requirements among third-party payers, including with respect to prior authorization requirements and procedures and establishing medical necessity; and incorrect or missing billing information, which is required to be provided by the ordering healthcare practitioner. These billing complexities, and the associated uncertainty in obtaining payment for our tests, could result in reduced reimbursement of our tests, which could harm our business, financial condition and results of operations.

A CPT code specific to NIPT for aneuploidies, and a CPT code for microdeletions, are in place, and CMS has established a pricing benchmark for aneuploidy and microdeletions testing. However, our microdeletions reimbursement has remained low because third-party payers are declining to reimburse, or reimbursing at low rates, under the microdeletions CPT code. Furthermore, we cannot guarantee that any data that we publish, such as from our SMART Study, will be sufficient to enable us to obtain positive coverage determinations for Panorama for microdeletions, negotiate favorable rates under the microdeletions CPT code, or receive reimbursement at all for this testing. In addition, a CPT code for expanded carrier screening tests has been implemented, which has caused and may continue to cause reimbursement rates for our Horizon expanded carrier screening tests to decline. We do not currently have assay-specific CPT codes assigned for all of our tests, and there is a risk that we may not be able to obtain such codes or, if obtained, we may not be able to negotiate favorable rates for such codes. We currently submit for reimbursement using CPT codes based on the guidance of outside coding experts and legal counsel. There is a risk that the codes we currently submit may be rejected or withdrawn or that third-party payers will seek refunds of amounts that they claim were inappropriately billed based on either the CPT code used, or the number of units billed. In addition, third-party payers may not establish positive coverage policies for our tests or adequately reimburse for any CPT code we may use, or seek recoupment for testing previously performed, which have occurred in the past.

Regulatory and Compliance Risks

We may be subject to increased compliance risks as a result of our rapid growth, including our dependence on our sales, marketing and billing efforts.

Approximately 91% and 89% of our total revenues for each of the years ended December 31, 2023 and 2022, respectively, were attributable to our U.S. direct sales. We maintain a heightened focus on our training and compliance efforts in line with our reliance on personnel in our sales, marketing and billing functions, and the significance of these functions as components of our business. We continue to educate, train and monitor our personnel, but from time to time we experience situations in which employees fail to strictly adhere to our policies. In addition, sales and marketing activities in the healthcare space are subject to various rules and regulations, as described in the risk factor entitled "*Reimbursement and Regulatory Risks Related to Our Business—If we or our laboratory distribution partners, consultants or commercial partners act in a manner that violates healthcare fraud and abuse laws or otherwise engage in misconduct, we may be subject to civil or criminal penalties*." Moreover, our billing and marketing messaging can be complex and

nuanced, and there may be errors or misunderstandings in our employees' communication of such messaging. Furthermore, we utilize text messaging, email, phone calls and other similar methods to communicate with patients who are existing or potential users of our products for various business purposes. These activities subject us to laws and regulations relating to communications with consumers, such as the CAN-SPAM Act and the Telephone Consumer Protection Act, violations of which could subject us to claims by consumers, who may seek actual or statutory damages, as has happened in the past, which could be material in the aggregate. As our sales and marketing efforts continue to be critical to our business, with respect to both our expanding product portfolio as well as continued geographical expansion, we will continue to face an increased need to remain vigilant in monitoring and improving our policies, processes and procedures to maintain compliance with a growing number and variety of laws and regulations, including with respect to consumer marketing. To the extent that there is any violation, whether actual, perceived or alleged, of our policies or applicable laws and regulations, we may incur additional training and compliance costs; may, and from time to time do, receive inquiries, such as informal requests for documents, civil investigative demands, and subpoenas, from third-party payers or other third parties, including government entities; or may be held liable or otherwise responsible for such acts of non-compliance. Any of the foregoing could adversely affect our cash flow and financial condition.

If the FDA were to begin actively regulating our tests, we could incur substantial costs and delays associated with trying to obtain premarket 510(k) clearance, de novo classification, or premarket approval and incur costs associated with complying with post-market controls.

We currently offer a number of genetic tests, and each of those tests is an LDT. The FDA considers an LDT to be a test that is designed, developed, validated and used within a single laboratory. Our laboratories are currently regulated under CLIA and must comply with CAP requirements, and we are subject to extensive federal and state laws and regulations. The FDA has historically taken the position that it has the authority to regulate LDTs as medical devices under the FDC Act, but it has generally exercised enforcement discretion with regard to such tests. This means that even though the FDA believes it can impose regulatory requirements on LDTs, such as requirements to obtain premarket approval, de novo classification, or 510(k) clearance, it has generally chosen not to enforce those requirements to date. The regulatory environment for LDTs is unstable – in 2020 HHS directed FDA to stop regulating LDTs, but in 2021, HHS reversed its policy. Thereafter, the FDA resumed requiring submission of emergency use authorization, or EUA, requests, for COVID- 19 LDTs, but did not seek to regulate other, non-COVID, LDTs.

Various legislation has been introduced seeking to substantially revamp the regulation of both LDTs and IVDs. In June 2021, legislation called the Verifying Accurate, Leading-edge IVCT Development Act, or VALID Act, which would have established a new risk-based regulatory framework for in vitro clinical tests, or IVCTs, a category that would have included IVDs, LDTs, collection devices, and instruments used with such tests was introduced in Congress. This legislation was not enacted during that session of Congress but was reintroduced in 2023 and its prospects for enactment are unclear. In addition, the FDA announced a proposed rule regarding LDTs in September 2023, and has indicated that it plans to finalize the proposed rule in the second quarter of 2024, though we cannot be certain that the rule will be finalized on this timeline or at all. The proposed regulation would classify LDTs as medical devices, which would likely require us to adhere to additional regulatory requirements such as those described in this risk factor.

If FDA premarket clearance, approval or de novo classification is required for any of our existing or future tests, or for any components or materials we use in tests, we may be forced to stop selling our tests or we may be required to modify claims for or make other changes to our tests while we or our suppliers work to obtain FDA clearance, approval or de novo classification. Our business could be adversely affected while such review is ongoing and if we or our supplier are ultimately unable to obtain premarket clearance, approval or de novo classification. For example, the regulatory premarket clearance, approval or de novo classification process may involve, among other things, submitting a 510(k) premarket notification, a request for de novo classification, or a PMA application to the FDA. As further described in the risk factor entitled "Uncertainty in the development and commercialization of our enhanced or new tests or services could materially adversely affect our business, financial condition and results of operations," completing such submissions requires the expenditure of time, attention and financial and other resources, and may not yield the desired results, which may delay, limit or prevent regulatory clearances, approvals or de novo classifications. In addition, we may require cooperation in our filings for FDA clearance, approval or de novo classification from third-party manufacturers of the components of our tests. If we are unable to obtain such required cooperation, we may be unable to achieve the desired regulatory clearances, approvals or de novo classifications or may be delayed or be required to expend additional costs

and other resources in doing so. For example, Illumina currently is our sole sequencer and sequencing reagent supplier. If we seek to achieve regulatory clearance, approval or de novo classification for Panorama, to the extent that Panorama incorporates Illumina's sequencer or sequencing reagents, we may require Illumina's cooperation in the regulatory process. We may face difficulty obtaining cooperation from Illumina because Illumina is the parent company of Verinata, a direct competitor of ours in the NIPT field. In addition, we have been party to certain intellectual property proceedings with Illumina as described elsewhere in these Risk Factors. Moreover, if FDA premarket clearance, approval or de novo classification is required, our cash flows may be adversely affected until we obtain such clearance, approval or de novo classification, as most third-party payers, including Medicaid, will not reimburse for use of medical devices which are required to, but which do not, have marketing authorization. Furthermore, the FDA may conclude that laboratories using Constellation and related products from us do not meet the criteria for qualifying as an LDT, and require that such laboratories discontinue use of Constellation and related products. Such an FDA determination could have an adverse impact on the commercialization of Constellation.

The FDA has granted us Breakthrough Device designations for our Signatera test covering its use in various applications. While receiving such designations enables us to have increased interactions with FDA, we cannot assure you that these designations will lead to accelerated review or approval of our regulatory submissions for Signatera.

We cannot assure you that, if we decide or are required to seek premarket clearance or approval or de novo classification for Panorama or any of our other tests, our efforts will succeed on a timely basis or at all. In addition, after a test has been cleared, approved or reclassified, certain kinds of changes that we may make to improve the test, or certain modifications by a supplier of a component upon which our approval relies, may result in the need for additional clearance, approval, or de novo classification by the FDA before we can implement them, which could increase the time and expense involved in implementing such changes commercially. The need for compliance with such FDA regulations would be time-consuming and expensive, potentially diverting resources from other aspects of our business, and we could be subject to legal actions, including fines and penalties, if we fail to comply with these requirements, any of which may adversely impact our business and results of operations.

Furthermore, the FDA or the Federal Trade Commission, or FTC, as well as state consumer protection agencies, may object to the materials and methods we use to promote the use of our current tests or other LDTs we may develop in the future, including with respect to the product claims in our promotional materials, and may initiate enforcement actions against us. Enforcement actions by the FDA may include, among others, untitled or warning letters; fines; injunctions; civil or criminal penalties; recall or seizure of current or future tests, products or services; operating restrictions and partial suspension or total shutdown of production. Enforcement actions by the FTC and state consumer protection agencies may include, among others, injunctions, civil penalties, and equitable monetary relief.

If any of our software is determined by FDA to be non-exempt clinical decision support software, this could impede our ability to perform certain activities, and we could incur substantial costs and delays associated with trying to obtain premarket 510(k) clearance, de novo classification, or premarket approval and incur costs associated with complying with post market controls.

We may also need to obtain regulatory clearance, approval or de novo classification in the United States for our Constellation software in order for it to be used by third parties in the development and commercialization of their diagnostic tests based on our technology. The 21st Century Cures Act, enacted in 2016, includes a number of provisions relating to the FDA's regulatory approach to software that may have bearing on the regulatory status of our Constellation software. We have discussed with the FDA the regulatory status of a portion of our Constellation software, the copy number calculator, or CNC. The FDA has indicated that the CNC may be appropriate for review under the de novo classification process, which is less burdensome than the PMA process. The FDA has stated that it would not prevent us from marketing Constellation in the United States; however, it is possible that the FDA may reverse itself either on the appropriate regulatory review path or regarding our ability to continue to market Constellation.

We cannot assure you that, if we decide or are required to seek premarket clearance or approval or de novo classification for our software, our efforts will succeed on a timely basis or at all. If we are unable to do so, we may be unable to commercialize our cloud based distribution model in the United States. If we are able to do so, we may be subject to ongoing FDA obligations and continued regulatory oversight and review. If we are not able to maintain regulatory

compliance to the extent required, we may not be permitted to offer our Constellation software and may be subject to enforcement action by the FDA, such as the issuance of warning or untitled letters, fines, injunctions and civil penalties; recall or seizure of products; operating restrictions and criminal prosecution.

Failure to obtain necessary regulatory approvals may adversely affect our ability to expand our operations internationally, including our ability to continue commercializing our cloud-based distribution model.

An important part of our business strategy is to expand and offer our tests internationally, either by providing our testing services directly or through our laboratory partners, or through our licensees under our Constellation cloud-based distribution model. As we do so, we will become increasingly subject to or impacted by the regulatory requirements of foreign jurisdictions, which are varied and complex. Our tests, and certain components of our tests, may be subject to the regulatory approval requirements in each foreign country in which they are sold by us or a laboratory partner, or by our licensees under our cloud-based distribution model, and our future performance would depend on us or our partners or licensees obtaining any necessary regulatory approvals in a timely manner. For example, while we have entered into a license agreement with BGI Genomics to commercialize our Signatera test in China using BGI Genomics's sequencing instruments and platform, such commercialization and development activities are subject to obtaining and maintaining necessary regulatory approvals in the relevant jurisdictions. In addition, we have obtained a CE Mark from the European Commission for our Constellation software and the key reagents for our licensees to run their NIPT based on our technology, as well as a CE Mark for our Panorama test as a whole. Therefore, we offer our Panorama test as an IVD both directly and through our Constellation model in these jurisdictions. We are occasionally required to address inquiries from regulatory authorities in various countries, such as those in the European Union, regarding the regulatory status of our Panorama or Constellation offerings. If we do not continue to satisfactorily address any such questions in the future, we may be required to cease offering our products, either directly or through our partners or licensees, in the relevant country. This may in turn result in similar concerns, and subsequent cessation of our sources of revenue, in other countries.

In addition, as further described in the risk factor entitled "*Risks Related to Our Business and Industry—We rely on a limited number of suppliers or, in some cases, single suppliers, for some of our laboratory instruments and materials and may not be able to find replacements or immediately transition to alternative suppliers*," blood collection tubes sourced solely from Streck are required to run our tests. These blood collection tubes are CE Marked by the European Commission; however, if such blood collection tubes are not registered in jurisdictions that do not accept a CE Mark, we may be unable to expand our business in such jurisdictions.

Regulatory approval can be a lengthy, expensive and uncertain process. In addition, regulatory processes are subject to change, and new or changed regulations can result in unanticipated delays and cost increases. For example, the European Commission has adopted revised in-vitro diagnostic regulations, or IVDR, which became effective in 2022. Among others, the new regulations introduce risk-based classification for IVDs and will require notified body involvement for various classes of devices, including reproductive health tests such as Panorama, which will be classified as a Class C product. As such, we will also be required to submit clinical evidence and post-market performance data to regulators. We or our partners or licensees may not be able to obtain regulatory approvals on a timely basis, if at all, which may cause us to incur additional costs or prevent us from marketing our tests in the United States or in foreign countries.

Changes in laws and regulations, or in their application, may adversely affect our business, financial condition and results of operations.

The clinical laboratory testing industry is highly regulated, and failure to comply with applicable regulatory, supervisory, accreditation, registration or licensing requirements may adversely affect our business, financial condition and results of operations. In particular, the laws and regulations governing the marketing and research of clinical diagnostic testing are extremely complex and in many instances there are no clear regulatory or judicial interpretations of these laws and regulations, increasing the risk that we may be found to be in violation of these laws.

Furthermore, the molecular diagnostics industry as a whole is a growing industry and regulatory bodies such as HHS or the FDA may apply heightened scrutiny to our products or to new developments in the field. While we have taken steps to ensure compliance with the current regulatory regime in all material respects, given its nature and our geographical diversity, there could be areas where we are non-compliant. Any change in the federal or state laws or regulations,

including as a result of political pressure, relating to our business may require us to implement changes to our business or practices, and we may not be able to do so in a timely or cost-effective manner. Should we be found to be non-compliant with current or future regulatory requirements, we may be subject to sanctions which could include substantial financial penalties and criminal proceedings, which could result in changes to our operations, adverse publicity and other consequences, which may adversely affect our business, financial condition and results of operations by increasing our cost of compliance or limiting our ability to develop, market and commercialize our tests.

While we have a compliance plan and policies to address compliance with federal and state laws and regulations, including applicable fraud and abuse laws and regulations such as those described in this risk factor, the evolving commercial compliance environment and the need to build and maintain robust and scalable systems to comply with laws and regulations in multiple jurisdictions with different compliance and reporting requirements increases the possibility that we could inadvertently violate one or more of these requirements.

If we fail to comply with federal, state and foreign laboratory licensing requirements, we could lose the ability to perform our tests or experience disruptions to our business.

We are subject to CLIA, a federal law that, in partnership with the states, 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 or impairment of, or assessment of the health of, human beings. CLIA regulations require clinical laboratories to obtain a certificate and mandate specific standards in areas including personnel qualifications, administration, participation in proficiency testing, patient test management and quality assurance. CLIA certification is also required in order for us to be eligible to bill federal health care programs, as well as many commercial third-party payers, for our tests. Our laboratories located in Austin, Texas and San Carlos, California are both CLIA certified and accredited by the College of American Pathologists, or CAP, a third-party accreditation organization with deeming, or delegated, authority from CMS to determine compliance. To renew these certifications, we are subject to a formal external survey and inspection of each site at least every two years. Moreover, CLIA and/or state inspectors may conduct random inspections of our clinical laboratory or conduct an inspection as a result of a complaint or reported incident, as has occurred. Any failure to address identified deficiencies, or to otherwise comply with CLIA, CAP or state requirements, can result in enforcement actions, including the revocation, suspension, or limitation of our CLIA and/or CAP certificate of accreditation or state laboratory permit, as well as a directed plan of correction, on-site monitoring, civil monetary penalties, civil actions for injunctive relief, criminal penalties, suspension or exclusion from the Medicare and Medicaid programs and significant adverse publicity. Bringing our laboratory back into compliance with CLIA requirements could cause us to incur significant expenses and potentially lose revenues in order to address deficiencies and achieve compliance.

Some U.S. states require that we hold licenses or permits to test samples from patients in those states, even if our laboratory facilities are not located in those states, and as a result we are also required to maintain standards related to those states' licensure requirements to conduct testing in our laboratories. California requires laboratories operating in or testing specimens from individuals located in California to hold state licensure in addition to CLIA certification. California laboratory registration is required for our San Carlos, California as well as for our Austin, Texas laboratory, because our Texas laboratory receives specimens originating from California. The State of Texas imposes CLIA requirements on laboratories operating within Texas but does not impose additional state licensure or registration requirements. Additionally, all personnel involved in testing in our California laboratory must maintain a California state license or be supervised by licensed personnel. We maintain a license in good standing with the California Department of Public Health, or CDPH, for both our California and Texas laboratories. In addition, the New York State Department of Health, or NYSDOH, requires out-of-state laboratories that test specimens originating from New York to hold an NYSDOH permit and to comply with NYSDOH laboratory standards, including prior NYSDOH approval of LDTs. Both our Austin, Texas and San Carlos, California laboratories have received approval from the NYSDOH to offer certain of our tests to residents of New York, and we process samples originating from New York at each of these laboratories in accordance with the NYSDOH approvals. Our laboratory director must also maintain a license to perform testing issued by the CDPH as well as a Certificate of Qualification issued by NYSDOH.

As under CLIA, we are subject to routine on-site inspections or inspections in response to a complaint under both California and New York state laboratory laws and regulations. If we are found to be out of compliance with either California or New York requirements, CDPH or NYSDOH may suspend, restrict or revoke our license or laboratory permit,

respectively (and, with respect to California, may exclude persons or entities from owning, operating or directing a laboratory for two years following such license revocation), assess civil monetary penalties, or impose specific corrective action plans, among other sanctions. We cannot assure you that the regulators in any state from which we have obtained a required license or permit will find us to be in compliance with the applicable laws of their respective state at all times, which may result in suspension, limitation, revocation or annulment of our laboratory's license for that state or negative impact to our CLIA certificate, censure, or civil monetary penalties, and would result in our inability to test samples from patients in that state. Any such consequences could materially and adversely affect our business by prohibiting or limiting our ability to offer testing.

Changes in government healthcare policy could increase our costs and negatively impact coverage and reimbursement for our tests by governmental and commercial third-party payers.

The U.S. government has shown significant interest in pursuing healthcare reform and reducing healthcare costs. Government healthcare policy has been and will likely continue to be a topic of extensive legislative and executive activity in the U.S. federal government and many U.S. state governments. As a result, our business could be affected by potentially significant and unanticipated changes in government healthcare policy, such as changes in reimbursement levels by government third-party payers, or in government-sponsored programs in which we may participate. Any such changes could substantially impact our revenues, increase costs and divert management attention from our business strategy. We cannot predict the impact, if any, of governmental healthcare policy changes on our business, financial condition and results of operations.

In the U.S., the Patient Protection and Affordable Care Act, as amended by the Healthcare and Education Reconciliation Act of 2010, or collectively, the PPACA expanded, among other things, the healthcare fraud and abuse laws such as the False Claims Act and the Anti-Kickback Statute, including but not limited to required disclosures of financial arrangements with physician customers, required reporting of discovered overpayments, lower thresholds for violations, new government investigative powers, and enhanced penalties for such violations. There have been multiple attempts to repeal PPACA or significantly scale back its applicability, which if successful could negatively impact reimbursement for our testing, and could adversely affect our test volumes and, in turn, our business, financial condition, results of operations, and cash flows. For example, the Tax Cuts and Jobs Act of 2017, or the Tax Act, repealed the requirement under PPACA that consumers buy insurance or pay a penalty unless they qualified for an applicable exemption. The repeal of this mandate means that fewer consumers may carry insurance coverage and therefore may be less likely to elect to receive our testing because they would be required to pay out of pocket for such tests, which could impact our test volumes and adversely affect our business, financial condition, results of operations, and cash flows. The PPACA also created a system of health insurance "exchanges" designed to make health insurance available to individuals and certain groups through state- or federally-administered marketplaces in addition to existing channels for obtaining health insurance coverage. If Panorama or any of our other tests are not covered by plans offered in the health insurance exchanges, our business, financial condition and results of operations could be adversely affected. Furthermore, various proposed legislative initiatives with respect to the PPACA in the past, including possible repeal of the PPACA, have resulted in considerable uncertainty and concern regarding, for example, a patient's election to undergo genetic screening and whether doing so may impact health insurance eligibility. Because it is unclear whether or how the PPACA may continue to evolve, be modified, or otherwise change, and whether and to what extent NIPT, cancer screening or other genetic screening may be affected, we are uncertain how our business may be impacted.

In addition to the PPACA, various healthcare reform proposals have also emerged from federal and state governments. Under PAMA, services payable by Medicare under the CLFS are adjusted based on negotiated payment rates paid by private payers for the same test. The implementation of the PAMA rates negatively impacted overall pricing and reimbursement for many clinical laboratory testing services. The PAMA rate reductions did not have a material impact on our business when they were implemented because our revenues from Medicare were very low at the time. The PAMA reductions were suspended in 2021 and are expected to resume in 2025. Due to our increased billing for our Signatera and Prospera testing, and in particular the significant and growing percentage of our revenues attributable to Signatera, any decrease in the reimbursement we receive under the CLFS due to PAMA may negatively impact our revenue when they are implemented. In addition, federal budgetary limitations and changes in healthcare policy, such as the creation of broad limits for our tests and requirements that beneficiaries of federal health care programs pay for, or pay for higher portions

of, clinical laboratory tests or services received, could substantially diminish the utilization of our tests, increase costs and adversely affect our ability to generate revenues and achieve profitability.

We cannot predict whether future healthcare initiatives will be implemented at the federal or state level or how any such future legislation, regulation or initiative may affect us. Current or potential future 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 third-party payers for our current and future tests, may adversely affect our test volumes and adversely affect our business, financial condition, results of operations, and cash flows.

If we or our laboratory distribution partners, consultants or commercial partners act in a manner that violates healthcare fraud and abuse laws or otherwise engage in misconduct, we may be subject to civil or criminal penalties.

We are subject to healthcare fraud and abuse regulation and enforcement by both the U.S. federal government and the states in which we conduct our business, including:

- HIPAA, which created federal civil and criminal laws that prohibit executing a scheme to defraud any healthcare benefit program or making false statements relating to healthcare matters and also imposes significant obligations with respect to maintenance of the privacy and security, and transmission, of individually identifiable health information;

- federal and state laws and regulations governing informed consent for genetic testing and the use of genetic material;

- federal and state laws and regulations governing the submission of claims, as well as billing and collection practices, for healthcare services;

- the federal Anti-Kickback Statute, which prohibits, among other things, the knowing and willful solicitation, receipt, offer or payment of remuneration, directly or indirectly, in exchange for or to induce either the referral of an individual for, or the purchase, order or recommendation of, any good or service for which payment may be made under federal health care programs, such as Medicare;

- the federal False Claims Act which prohibits, among other things, the presentation of false or fraudulent claims for payment from Medicare, Medicaid, or other government-funded third-party payers;

- federal laws and regulations governing the Medicare program, providers of services covered by the Medicare program, and the submission of claims to the Medicare program, as well as the manuals and guidance issued by CMS and the local medical policies promulgated by the Medicare Administrative Contractors with respect to the implementation and interpretation of such laws and regulations;

- the federal Stark law, also known as the physician self-referral law, which, subject to certain exceptions, prohibits a physician from making a referral for certain designated health services covered by the Medicare program (and according to case law in some jurisdictions, the Medicaid program as well), including laboratory and pathology services, if the physician or an immediate family member has a financial relationship with the entity providing the designated health services;

- the federal Civil Monetary Penalties Law, which, subject to certain exceptions, prohibits, among other things, the offer or transfer of remuneration to a Medicare or state healthcare program beneficiary if the person knows or should know it is likely to influence the beneficiary's selection of a particular provider, practitioner or supplier of services reimbursable by Medicare or a state healthcare program;

- EKRA, which applies to items or services reimbursed by any health care benefits program, including commercial insurers, that, among other things, prohibits the knowing or willful payment or offer, or the solicitation or receipt, of any remuneration, whether directly or indirectly, overtly or covertly, in cash or in kind, in exchange for the referral or inducement of laboratory testing;

- the prohibition on reassignment by the program beneficiary of Medicare claims to any party; and

- state law equivalents to the above laws, which may apply to items or services reimbursed by any third-party payer, including commercial insurers, and state data privacy and security laws which may be more stringent than HIPAA.

Furthermore, in recent years our industry has experienced increased enforcement of the federal False Claims Act and, in particular, actions brought pursuant to the False Claims Act's "whistleblower" or "qui tam" provisions. The False Claims Act imposes liability for, among other things, knowingly presenting, or causing to be presented, a false or fraudulent claim for payment to a federal governmental program. The qui tam provisions of the False Claims Act allow a private individual to bring civil actions on behalf of the federal government for violations of the False Claims Act and permit such individuals to share in any amounts paid by the defendant to the government in fines or settlement. When an entity is determined to have violated the False Claims Act, it is subject to mandatory damages of three times the actual damages sustained by the government, plus mandatory civil penalties – up to approximately $27,108 in 2023 – for each false claim or statement. In addition, various states have enacted false claim laws analogous to the federal False Claims Act, and in some cases go even further because many of these state laws apply where a claim is submitted to any third-party payer and not merely a governmental program. For example, in 2018 we reached a settlement with certain government payers regarding past reimbursement submissions. Although the settlement involved no admission of fault by us and no corporate integrity agreement, we cannot guarantee that we will not be subject to similar claims in the future.

Many of these laws and regulations have not been fully interpreted by regulatory authorities or the courts, and their provisions are open to a variety of interpretations. In addition, there has been a recent trend of increased U.S. federal and state regulation, scrutiny and enforcement relating to payments made to referral sources, which are governed by these laws and regulations.

We have adopted policies and procedures designed to comply with these laws, and in the ordinary course of our business, we conduct internal reviews of our compliance with these laws. However, the rapid growth and expansion of our business both within and outside of the United States may increase the potential for violating these laws or our internal policies and procedures, and the uncertainty around the interpretation of these laws and regulations increases the risk that we may be found in violation of these or other laws and regulations, or of allegations of such violations, including pursuant to private qui tam actions brought by individual whistleblowers in the name of the government as described above. If our operations, including the conduct of our employees, distributors, consultants and commercial partners, are found to be in violation of any laws or regulations that apply to us, we may be subject to penalties, including civil, criminal and administrative penalties, damages, fines, disgorgement of profits, exclusion from participation in federal health care programs, injunctions, recall or seizure of products, total or partial suspension of production, denial or withdrawal of pre-marketing product approvals, contractual damages, reputational harm, diminished profits and future earnings and the curtailment or restructuring of our operations, any of which could materially and adversely affect our business, financial condition and results of operations.

Failure to comply with privacy and security laws and regulations could result in fines, penalties and damage to our reputation and have a material adverse effect on our business.

The federal HIPAA privacy and security regulations establish comprehensive federal standards with respect to the use and disclosure of protected health information by health plans, healthcare providers, and healthcare clearinghouses, in addition to setting standards to protect the confidentiality, integrity and security of protected health information. The regulations establish a complex regulatory framework on a variety of subjects, including patient authorization of the use and disclosure of, administrative, technical and physical safeguards for, and analysis of security incidents and breach notification requirements with respect to, protected health information. HIPAA provides for significant fines and other penalties for wrongful use or disclosure of protected health information in violation of privacy and security regulations, including potential civil and criminal fines and penalties.

The HIPAA privacy and security regulations establish minimum requirements, and do not supersede state laws that are more stringent. A number of states include medical information in the definition of personal information and have implemented requirements or standards more stringent than HIPAA. Therefore, while we have implemented policies and

procedures related to compliance with the HIPAA regulations, we are also required to comply with various state privacy and security laws and regulations, and could incur penalties, compliance costs as a result of non-compliance, or damages under state laws pursuant to an action brought by a private party for the wrongful use or disclosure of confidential health information or other private personal information. In addition, other federal and state laws that protect the privacy and security of patient information may be subject to enforcement and interpretation by various governmental authorities and courts, resulting in complex compliance issues.

The GDPR data privacy regulations comprehensively reform the prior data protection rules of the European Union, and are more stringent, provide for higher potential liabilities, and apply to a broader range of personal data than those in the United States. The GDPR is applicable to U.S.-based companies, such as ours, that do business or offer services in, or that process or hold personal data of data subjects in, the European Union. While our current processes and practices comply with the GDPR, we have needed to expend considerable time and resources, including management attention, to revise our practices to ensure ongoing compliance with GDPR. Furthermore, the GDPR enables EU member states to enact jurisdiction-specific requirements in key areas, which could require us to implement multiple policies unique to the jurisdictions in which we operate, which could make it more difficult and resource-intensive to continue to operate in the European Union.

As we continue to expand and grow our business, our overall compliance with applicable laws and regulations may result in increased costs and attention of management, and failure to comply may result in significant fines, penalties and damage to our reputation. Additionally, the interpretation and application of health-related, privacy and data protection laws are often uncertain, contradictory and in flux, and it is possible that these laws may be interpreted and applied in a manner that is inconsistent with our practices. As a result, we could be subject to government-imposed fines or orders requiring that we change our practices, which could cause us to incur substantial costs and may adversely affect our business and our reputation.

Changes in the way the FDA regulates the reagents, other consumables, and testing equipment we use when developing, validating, and performing our tests could result in delay or additional expense in bringing our tests to market or performing such tests for our customers.

Many of the sequencers, reagents, kits and other consumable products used to perform our testing, as well as the instruments and other capital equipment that enable the testing, are labeled as for research use only, or RUO. In addition, we offer a version of our Signatera test as an RUO offering. Products that are intended for research use only and are labeled as RUO are exempt from compliance with FDA requirements, including the approval, clearance or de novo classification and other product quality requirements for medical devices. A product labeled RUO but which is actually intended by the manufacturer for clinical diagnostic use may be viewed by the FDA as adulterated and misbranded under the FDC Act and subject to FDA enforcement action. The FDA has issued guidance stating that when determining the intended use of a product labeled RUO, it will consider the totality of the circumstances surrounding distribution of the product, including how the product is marketed and to whom. In addition, many of the reagents used to perform our testing are offered for sale as analyte specific reagents, or ASRs. ASRs are medical devices and must comply with QSR provisions and other device requirements, but most are exempt from premarket review. The FDA could disagree with a manufacturer's assessment that the manufacturer's products are ASRs, or could conclude that products labeled as RUO are actually intended by the manufacturer for clinical diagnostic use, and could take enforcement action against the manufacturer, such as us with respect to Signatera (RUO), including requiring the manufacturer to cease offering the product while it seeks clearance, approval or de novo classification. Manufacturers of RUO products that we employ in our other tests may cease selling their respective products, and we may be unable to obtain an acceptable substitute on commercially reasonable terms or at all, which could significantly and adversely affect our ability to provide timely testing results to our customers or could significantly increase our costs of conducting business.

The sequencers and reagents supplied to us by Illumina are labeled as RUO in the United States. We are using these sequencers and reagents for clinical diagnostic use. If the FDA were to require clearance, approval or de novo classification for the sale of Illumina's sequencers and if Illumina does not obtain such clearance, approval or authorization, we would have to find an alternative sequencing platform for Panorama. We currently have not validated an alternative sequencing platform on which Panorama could be run in a commercially viable manner. If we were not successful in selecting, acquiring on commercially reasonable terms and implementing an alternative platform on a timely basis, our business, financial condition and results of operations would be adversely affected.

Our use of hazardous materials in the development of our tests exposes us to risks related to accidental contamination or injury and requires us to comply with regulations governing hazardous waste materials.

Our research and development activities involve the controlled use of hazardous materials and chemicals. We cannot eliminate the risk of accidental contamination or injury to employees or third parties from the use, storage, handling or disposal of these materials. In the event of contamination or injury, we could be held liable for any resulting damages, and any liability could exceed our resources or any applicable insurance coverage we may have. In addition, we are subject on an ongoing basis to federal, state and local regulations governing the use, storage, handling and disposal of these materials and specified hazardous waste materials. An increase in the costs of compliance with such laws and regulations could harm our business and results of operations.

If the validity of an informed consent from a patient intake for Panorama or our other tests is challenged, we could be precluded from billing for such testing, forced to stop performing such tests, or required to repay amounts previously received, which would adversely affect our business and financial results.

All clinical data and blood samples that we receive for genetic testing are required to have been collected from individuals who have provided appropriate informed consent for us to perform our testing, both commercially and in clinical trials. We seek to ensure that the individuals from whom the data and samples are collected do not retain or have conferred any proprietary or commercial rights to the data or any discoveries derived from them. Our partners operate in a number of different countries in addition to the United States, and, to a large extent, we rely upon them to comply with the individual's informed consent and with U.S. and international laws and regulations. The collection of data and samples in many different U.S. states and foreign countries results in complex legal questions regarding the adequacy of informed consent and the status of genetic material under different legal systems. The individual's informed consent obtained could be challenged in the future in any particular jurisdiction, and those informed consents could be deemed invalid, unlawful or otherwise inadequate for our purposes. Any findings against us, or our laboratory distribution partners, could deny us access to, or force us to stop testing samples in, a particular country or could call into question the results of our clinical trials. We could also be precluded from billing third-party payers for tests for which informed consents are challenged, or could be requested to refund amounts previously paid by third-party payers for such tests. We could become involved in legal challenges, which could require significant management and financial resources and adversely affect our revenues and results of operations.

Risks Related to Our Intellectual Property

Litigation or other proceedings resulting from either third-party claims of intellectual property infringement, or asserting infringement by third parties of our technology, is costly, time-consuming, and could limit our ability to commercialize our products or services.

Our success depends in part on our non-infringement of the patents or intellectual property rights of third parties, and our ability to successfully prevent third parties from infringing our intellectual property. We operate in a crowded technology area in which there has been substantial litigation and other proceedings regarding patent and other intellectual property rights in the genetic diagnostics industry. Third parties, including our competitors, have asserted and may in the future assert that we are infringing their intellectual property rights; in particular, we are or have recently been engaged in patent infringement lawsuits and other intellectual property disputes against various competitors in each of the industries in which we operate, as described in "Note 8—Commitments and Contingencies—Legal Proceedings" in the Notes to Consolidated Financial Statements. We may become subject to and/or initiate future intellectual property litigation as our product portfolio, and the level of competition in our industry segments, grow.

Should we be unsuccessful defending against patent infringement claims, we may be required to pay substantial royalties, money damages, change our marketing practices, or be enjoined from offering certain products or services. For example, in January 2024, a jury verdict of $57 million was awarded against us in a patent infringement lawsuit filed by Ravgen, Inc. In addition, we could experience delays in product introductions or sales growth while we attempt to develop non-infringing alternatives. Any of these or other adverse outcomes could prevent us from offering our tests or otherwise have a material adverse effect on our business, financial condition and our results of operations.

We cannot predict whether, or offer any assurance that, the patent infringement claims we have initiated or may initiate in the future will be successful. We are and may become subject to counterclaims by patent infringement defendants. Our patents may be declared invalid or unenforceable, or narrowed in scope. Even if we prevail in an infringement action, we cannot assure you that we would be adequately compensated for the harm to our business. If we are unable to enjoin third-party infringement, our revenues may be adversely impacted and we may lose market share; and such third-party product may continue to exist in the market, but fail to meet our regulatory or safety standards, thereby causing irreparable harm to our reputation as a provider of quality products, which in turn could result in loss of market share and have a material adverse effect on our business, financial condition and our results of operations.

In addition, our agreements with some of our customers, suppliers, and other entities with whom we do business require us to defend or indemnify these parties to the extent they become involved in patent infringement claims, including the types of claims described in this risk factor. We have agreed, and may in the future agree, to defend or indemnify third parties if we determine it to be in the best interests of our business relationships. If we are required or agree to defend or indemnify third parties in connection with any infringement claims, we could incur significant costs and expenses that could adversely affect our business, financial condition and results of operations.

Any inability to effectively protect our proprietary technologies could harm our competitive position.

Our success and ability to compete depend to a large extent on our ability to develop proprietary products and technologies and to maintain adequate protection of our intellectual property in the United States and other countries; this becomes increasingly important as we expand our operations and enter into strategic collaborations with partners to develop and commercialize products. The laws of some foreign countries do not protect proprietary rights to the same extent as the laws of the United States, and we may encounter difficulties in establishing and enforcing our proprietary rights outside of the United States. In addition, the proprietary positions of companies developing and commercializing tools for molecular diagnostics, including ours, generally are uncertain and involve complex legal and factual questions. This uncertainty may materially affect our ability to defend or obtain patents or to address the patents and patent applications owned or controlled by our collaborators and licensors.

We will be able to protect our proprietary rights from unauthorized use by third parties only to the extent that our proprietary technologies are protected by valid and enforceable patents or are effectively maintained as trade secrets. We have worked to procure patents protecting our technologies, but our procurement efforts may not always be successful, and any patents we successfully procure may be challenged in ways that lead to post-procurement scope reduction or invalidity. For example, certain of our intellectual property is, or recently has been, the subject of challenges instituted by our competitors, as described in "Note 8—Commitments and Contingencies—Legal Proceedings" in the Notes to Consolidated Financial Statements. These challenges may impede our ability to protect our proprietary rights from unauthorized use. In addition, any finding that others have claims of inventorship or ownership rights to our patents and applications could require us to obtain certain rights to practice related technologies, which may not be available on favorable terms.

Certain of our intellectual property was partly supported by a U.S. government grant awarded by the National Institutes of Health, and the government accordingly has certain rights in this intellectual property, including a non-exclusive, non-transferable, irrevocable worldwide license to use applicable inventions for any governmental purpose. Such rights also include "march-in" rights, which refer to the right of the U.S. government to require us to grant a license to the technology to a responsible applicant if we fail to achieve practical application of the technology or if action is necessary to alleviate health or safety needs, to meet requirements of federal regulations or to give preference to U.S. industry.

Any of these factors could adversely affect our ability to obtain commercially relevant or competitively advantageous patent protection for our products.

If we are not able to adequately protect our trade secrets and other proprietary information, the value of our technology and products could be significantly diminished.

We rely on trade secret and proprietary know-how protection for our confidential and proprietary information and have taken security measures to protect this information. These measures, however, may not provide adequate protection. For example, we have a policy of requiring our consultants, advisors and collaborators, including, for example, our strategic collaborators with whom we seek to develop and commercialize products, to enter into confidentiality agreements and our employees to enter into invention, non-disclosure and non-compete agreements. However, breaches of our physical or electronic security systems, or breaches caused by our employees failing to abide by their confidentiality obligations during or upon termination of their employment with us, could compromise these protection efforts. Any action we take to enforce our rights may be time-consuming, expensive, and possibly unsuccessful. Even if successful, the resulting remedy may not adequately compensate us for the harm caused by the breach. These risks are heightened in countries where laws or law enforcement practices may not protect proprietary rights as fully as in the United States or Europe. Any unauthorized use or disclosure of, or access to, our trade secrets, know-how or other proprietary information, whether accidentally or through willful misconduct, could have a material adverse effect on our programs and our strategy, and on our ability to compete effectively.

If our trademarks and trade names are not adequately protected, we may not be able to establish or maintain name recognition in our markets of interest, and our business may be adversely affected.

Failure to maintain our trademark registrations, or to obtain new trademark registrations in the future, could limit our ability to protect our trademarks and impede our marketing efforts in the countries in which we operate. We may not be able to protect our rights to trademarks and trade names that we may need to build name recognition with potential partners or customers in our markets of interest. As a means to enforce our trademark rights and prevent infringement, we may be required to file trademark claims against third parties or initiate trademark opposition proceedings. This can be expensive and time-consuming, and possibly unsuccessful. Our registered or unregistered trademarks or trade names may be challenged, infringed, circumvented, declared generic or determined to infringe on other marks.

Our pending trademark applications in the United States and in other foreign jurisdictions where we may file may not be successful. Even if these applications result in registered trademarks, third parties may challenge these trademarks in the future. Over the long term, if we are unable to establish name recognition based on our trademarks and trade names, then we may not be able to compete effectively and our business may be adversely affected.

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

We employ individuals who were previously employed at other biotechnology or diagnostic companies, including our competitors in the various markets in which we operate. We may be subject to claims that we or our employees, consultants or independent contractors have inadvertently or willfully used or disclosed confidential information of our employees' former employers or other third parties. We may also be subject to claims that our employees' former employers or other third parties have an ownership interest in our patents. Litigation may be necessary to defend against these claims, and if we are unsuccessful, we could be required to pay substantial damages and could lose rights to important intellectual property. Even if we are successful, litigation could result in substantial costs to us and could divert the time and attention of our management and other employees.

Risks Related to our Convertible Notes

Servicing our debt will require a significant amount of cash. We may not have sufficient cash flow from our business to pay our outstanding debt, and we may not have the ability to raise the funds necessary to settle conversions of the Convertible Notes in cash or to repurchase the Convertible Notes upon a fundamental change, which could adversely affect our business and results of operations.

Our ability to make scheduled payments of the principal of, to pay interest on, or to refinance our indebtedness, including the amounts payable under the Convertible 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 indebtedness 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.

Further, holders of the Convertible Notes have the right to require us to repurchase all or a portion of their Convertible Notes upon the occurrence of a "fundamental change" (as defined in the indenture governing the Convertible Notes) before the maturity date at a repurchase price equal to 100% of the principal amount of the Convertible Notes to be repurchased, plus accrued and unpaid interest, if any. In addition, upon conversion of the Convertible Notes, unless we elect to deliver solely shares of our common stock to settle such conversion (other than paying cash in lieu of delivering any fractional share), we will be required to make cash payments in respect of the Convertible Notes being converted. However, we may not have enough available cash, or be able to obtain sufficient financing, at the time we are required to repurchase the Convertible Notes.

The conditional conversion feature of the Convertible Notes, when triggered, may adversely affect our financial condition and operating results.

The conditional conversion feature of the Convertible Notes has been triggered for certain applicable periods beginning with the quarter ended September 30, 2020. During periods for which the conditional conversion feature has been or is triggered, holders of the Convertible Notes are entitled to convert their Convertible Notes at any time during such periods at their option. If one or more holders elect to convert their Convertible Notes, unless we choose to satisfy our conversion obligation by delivering solely shares of our common stock (other than paying cash in lieu of delivering any fractional share), we would elect to settle a portion or all of our conversion obligation in cash, which could adversely affect our liquidity. No holders have elected to convert their Convertible Notes.

In addition, even if holders of Convertible Notes do not elect to convert their Convertible Notes, we could be required under applicable accounting rules to reclassify all or a portion of the outstanding principal of the Convertible Notes as a current rather than long-term liability, which would result in a material reduction of our net working capital.

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

In August 2020, the FASB issued Accounting Standards Update ASU 2020-06, or ASU 2020-06 , with the intent to simplify ASC 470-20 and ASC subtopic 815-40, *Contracts in Entity's Own Equity,* or ASC 815-40. Among the changes, ASU 2020-06 removed the requirement to bifurcate the liability and equity components of convertible debt instruments (such as the Convertible Notes) that may be settled entirely or partially in cash upon conversion. In addition, ASU 2020- 06 precludes the use of the treasury stock method, when calculating diluted earnings per share, for convertible debt instruments that may be settled entirely or partially in cash upon conversion.

We currently apply the "if-converted" method for calculating any potential dilutive effect of the conversion options embedded in the Convertible Notes on diluted net income per share, which assumes that all of the Convertible Notes were converted solely into shares of common stock at the beginning of the reporting period, unless the result would be anti-dilutive. The application of the if-converted method may reduce our reported diluted net income per share to the extent we are profitable, and accounting standards may change in the future in a manner that may otherwise adversely affect our diluted net income per share.

Conversion of the Convertible Notes will dilute the ownership interest of existing stockholders, including holders who had previously converted their Convertible Notes, or may otherwise depress the price of our common stock.

The conversion of some or all of the Convertible Notes will dilute the ownership interests of stockholders to the extent we deliver shares of our common stock upon such conversion. The Convertible Notes are currently convertible and may from time to time in the future be convertible at the option of their holders prior to their scheduled terms under certain circumstances. Any sales in the public market of the common stock issuable upon such conversion could adversely affect prevailing market prices of our common stock. In addition, the existence of the Convertible Notes may encourage short selling by market participants because the conversion of the Convertible Notes could be used to satisfy short positions, or anticipated conversion of the Convertible Notes into shares of our common stock could depress the price of our common stock.

Risks Related to Ownership of Our Common Stock

The market price of our common stock has been and may be volatile, which could subject us to litigation.

The trading prices of the securities of life sciences companies, including ours, have been and may continue to be highly volatile; and financial markets in general, including our stock, experienced particularly high volatility as a result of the COVID-19 pandemic and continued difficult macroeconomic conditions. Accordingly, the market price of our common stock is likely to be subject to wide fluctuations in response to numerous factors, many of which are beyond our control, such as those in this "Risk Factors" section and others including:

- actual or anticipated variations in our and our competitors' results of operations, as well as how those results compare to analyst and investor expectations;
- announcements by us or our competitors of new products, significant acquisitions, other strategic transactions, including strategic and commercial partnerships and relationships, joint ventures, divestitures, collaborations or capital commitments;
- changes in reimbursement practices by current or potential payers;
- failure of analysts to initiate or maintain coverage of our company, issuance of new securities analysts' reports or changed recommendations for our stock;
- negative publicity, including misinformation, about our company, our tests, or the commercial markets in which we operate;
- forward-looking statements related to our financial guidance or projections, our failure to meet or exceed our financial guidance or projections or changes in our financial guidance or projections;
- actual or anticipated changes in regulatory oversight of our products;
- development of disputes concerning our intellectual property or other proprietary rights;
- commencement of, or our involvement in, litigation and the outcomes of our litigation matters;
- announcement or expectation of additional debt or equity financing efforts;
- any major change in our management;
- general economic conditions and slow or negative growth of our markets, including as a result of changes in the rate of inflation (including the cost of raw materials, commodities, and supplies) and interest rates; and

- changes in business, economic, and political conditions, including war, political instability and related military action.

In addition, if the market for life sciences stocks or the stock market in general experiences uneven investor confidence, as has been the case in recent months, the market price of our common stock could decline for reasons unrelated to our business, operating results or financial condition. The market price of our common stock might also decline in reaction to events that affect other companies within, or outside, our industry even if these events do not directly affect us. Some companies, including us, that have experienced volatility in the trading price of their stock have been the subject of securities class action litigation, and we may in the future become subject to such litigation. For example, we have in the past been subject to a purported securities class action lawsuit filed against us, our directors and certain of our officers and stockholders related to our initial public offering. Under certain circumstances, we have contractual and other legal obligations to indemnify and to incur legal expenses on behalf of current and former directors and officers, and on behalf of our former underwriters, in connection with any future lawsuits. Any lawsuit to which we are a party, with or without merit, may result in an unfavorable judgment. We also may decide to settle lawsuits on unfavorable terms. Any such negative outcome could result in payments of substantial damages or fines, damage to our reputation or adverse changes to our offerings or business practices. Defending against litigation is costly and time-consuming, and could divert our management's attention and resources. Furthermore, during the course of litigation, there could be negative public announcements of the results of hearings, motions or other interim proceedings or developments, which could have a material adverse effect on the market price of our common stock.

If we are unable to implement and maintain effective internal controls over financial reporting in the future, investors may lose confidence in the accuracy and completeness of our financial reports and the market price of our common stock could be adversely affected.

We are required to maintain internal controls over financial reporting and to report any material weaknesses in such internal controls. Section 404 of the Sarbanes-Oxley Act requires that we evaluate and determine the effectiveness of our internal controls over financial reporting and provide a management report on internal controls over financial reporting. The Sarbanes-Oxley Act also requires that our management report on internal controls over financial reporting be attested to by our independent registered public accounting firm.

Although we determined that our internal controls over financial reporting were effective as of December 31, 2023, we must continue to monitor and assess our internal controls over financial reporting. If we have a material weakness in our internal controls over financial reporting, we may not detect errors on a timely basis and our financial statements may be materially misstated. If we identify material weaknesses in our internal controls over financial reporting, if we are unable to comply with the requirements of Section 404 in a timely manner, if we are unable to assert that our internal controls over financial reporting are effective, or, when required in the future, if our independent registered public accounting firm is unable to express an opinion as to the effectiveness of our internal controls over financial reporting, investors may lose confidence in the accuracy and completeness of our financial reports and the market price of our common stock could be adversely affected, and we could become subject to investigations by the stock exchange on which our securities are listed, the SEC, or other regulatory authorities.

We do not intend to pay dividends on our capital stock so any returns will be limited to changes in the value of our common stock.

We have never declared or paid any cash dividends on our capital stock. We currently anticipate that we will retain future earnings for the development, operation and expansion of our business and do not anticipate declaring or paying any cash dividends for the foreseeable future. In addition, our ability to pay cash dividends on our capital stock may be prohibited or limited by the terms of any current or future debt financing arrangement. Any return to stockholders will therefore be limited to the increase, if any, in the price of our common stock.

Future sales and issuances of our common stock or rights to purchase common stock, including pursuant to our equity incentive plans or in connection with acquisitions or strategic or commercial transactions, could result in additional dilution of the percentage ownership of our stockholders and could cause the price of our common stock to decline.

From time to time, we may issue additional securities or sell common stock, convertible securities, such as the Convertible Notes, or other equity securities in one or more transactions at prices and in a manner we determine. We also expect to continue to issue common stock to employees and directors pursuant to our equity incentive plans. If we sell or

issue common stock, convertible securities, or other equity securities, or common stock is issued pursuant to equity incentive plans, investors in our common stock may be materially diluted. As we have done in the past, we may decide to issue common stock or other equity securities in connection with an acquisition or a strategic or commercial transaction, which could cause dilution to our existing stockholders. New investors in such transactions could gain rights, preferences and privileges senior to those of holders of our common stock.

Sales of a substantial number of shares of our common stock in the public markets could cause the price of our common stock to decline.

Sales of a substantial number of shares of our common stock in the public market or the perception that these sales might occur could depress the market price of our common stock and could impair our ability to raise capital through the sale of additional equity securities. We are unable to predict the effect that sales may have on the prevailing market price of our common stock.

As we have done in the past, we may issue our shares of common stock or securities convertible into our common stock, such as our Convertible Notes, from time to time in connection with a financing, acquisition, investments or otherwise. Any such issuance could result in substantial dilution to our existing stockholders and cause the price of our common stock to decline.

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

The trading market for our common stock depends in part on the research and reports that securities or industry analysts publish about us or our business. Currently, only a small number of securities analysts cover our stock. If more analysts do not commence coverage of us, or if industry analysts cease coverage of us or fail to publish reports on us regularly, the trading price for our common stock could be adversely affected. If one or more of the analysts who cover us downgrade our common stock or publish inaccurate or unfavorable research about our business, our common stock price would likely decline.

Provisions in our amended and restated certificate of incorporation, amended and restated bylaws, and Delaware law might discourage, delay or prevent a change in control of our company or changes in our management and, therefore, depress the market price of our common stock.

Our amended and restated certificate of incorporation and amended and restated bylaws contain provisions that could depress the market price of our common stock by acting to discourage, delay or prevent a change in control of our company or changes in our management that the stockholders of our company may deem advantageous. These provisions, among other things:

- authorize the issuance of "blank check" preferred stock that our board of directors could use to implement a stockholder rights plan;
- prohibit stockholder action by written consent, which requires all stockholder actions to be taken at a meeting of our stockholders;
- eliminate the ability of our stockholders to call special meetings of stockholders;
- establish advance notice requirements for nominations for election to our board of directors or for proposing matters that can be acted upon by stockholders at annual stockholder meetings;
- establish a classified board of directors so that not all members of our board are elected at one time;
- permit the board of directors to establish the number of directors;
- provide that directors may only be removed "for cause" and only with the approval of 75% of our stockholders;

- require super-majority voting to amend some provisions in our amended and restated certificate of incorporation and amended and restated bylaws; and

- provide that the board of directors is expressly authorized to make, alter or repeal our amended and restated bylaws.

In addition, Section 203 of the Delaware General Corporation Law may discourage, delay or prevent a change in control of our company. Section 203 imposes certain restrictions on mergers, business combinations and other transactions between us and holders of 15% or more of our common stock.

In addition, if a "fundamental change" (as defined in the indenture governing the Convertible Notes) occurs prior to the maturity date of the Convertible Notes, holders of the Convertible Notes will have the right, at their option, to require us to repurchase all or a portion of their Convertible Notes. If a "make-whole fundamental change" (as defined in the indenture governing the Convertible Notes) occurs prior to the maturity date, we will in some cases be required to increase the conversion rate of the Convertible Notes for a holder that elects to convert its Convertible Notes in connection with such make-whole fundamental change. Furthermore, we are prohibited from engaging in certain mergers or acquisitions unless, among other things, the surviving entity of such transaction assumes our obligations under the Convertible Notes.

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware is the exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware is the exclusive forum for any derivative action or proceeding brought on our behalf, any action asserting a breach of fiduciary duty, any action asserting a claim against us arising pursuant to the Delaware General Corporation Law or any action asserting a claim against us that is governed by the internal affairs doctrine. 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 and may discourage these types of lawsuits. Alternatively, if a court were to find the choice of forum provision contained in our certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business, financial condition and results of operations.

Changes in accounting standards and their interpretations could adversely affect our operating results.

U.S. GAAP is subject to interpretation by the Financial Accounting Standards Board, or FASB, the Public Company Accounting Oversight Board, or PCAOB, the SEC, and various other bodies that promulgate and interpret appropriate accounting principles. These principles and related implementation guidelines and interpretations can be highly complex and involve subjective judgments. A change in these principles or interpretations could have a significant effect on our reported financial results, and could affect the reporting of transactions completed before or after the announcement of a change in such principles. Additionally, the adoption of these standards may potentially require enhancements or changes in our systems and will require significant time and cost on behalf of our financial management. A discussion of these standards and other pending changes in GAAP, are further discussed in "Note 2—Summary of Significant Accounting Policies" in the Notes to Consolidated Financial Statements.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 1C. CYBERSECURITY

Risk Management and Strategy

In the ordinary course of our business, we collect and store sensitive data, including legally protected personal information, such as test results and other patient health information, credit card and other financial information, insurance information, and personally identifiable information, as well as sensitive intellectual property and other proprietary business information, including that of our customers, payers and collaboration partners. We are highly dependent on information technology networks and systems – our own as well as those of third-party vendors and their subcontractors – to securely process, transmit, and store this sensitive data and business critical information.

Although we take measures to protect sensitive information from unauthorized access, use or disclosure, our information technology and infrastructure, and that of our technology and other third-party service providers and their subcontractors, are nevertheless inherently vulnerable to, and from time to time experience, various cybersecurity threats. We continue to invest in the security and resiliency of our networks and to enhance our internal controls and processes, which are designed to help protect our systems and infrastructure, and the information they contain. For more information regarding the risks we face from cybersecurity threats, please see "Item 1A. Risk Factors" included elsewhere in this Annual Report on Form 10-K.

Risk Management Processes

Our Information Security Execution Team is responsible for the day-to-day execution of our information security strategy and operations, and comprises key stakeholders across the Company's information services & technology, engineering, legal, privacy, compliance, finance, human resources, and product teams. The Information Security Execution Team coordinates cross functionally to identify, assess, and address immediate and emerging risks from cybersecurity threats, including leading the formation and activities of working groups and response teams to address cybersecurity matters that arise from time to time. We maintain a cybersecurity incident response plan that addresses critical aspects of incident management, including detection, impact analysis, containment, mitigation, remediation, recovery, and long-term strategies for remediation and prevention of future incidents. In carrying out our incident response plan, our Information Security Execution Team also assesses incidents, or multiple related incidents, by reference to a set of specified criteria and, if one or more of such criteria are met, reports such incidents to management.

Our cybersecurity program is aligned with industry standards and best practices, such as the National Institute of Standards and Technology, or NIST, Cybersecurity Framework. We use various tools and methodologies to monitor and manage cybersecurity risks. We also monitor and evaluate our cybersecurity posture and performance on an ongoing basis through regular vulnerability scans, penetration tests and threat intelligence feeds. Our Information Security Execution Team conducts annual tabletop exercises to ensure preparedness for information security, including cybersecurity, incidents. In addition, we promote a company culture of awareness and discipline in cybersecurity matters through annual employee training and education, including periodic phishing simulations.

We engage with a range of external experts, including cybersecurity assessors, consultants, and auditors, in evaluating and attesting to our risk management systems, including an annual Systems and Organization Controls 2, or SOC 2, audit with respect to the security, availability, and process integrity trust services criteria, or TSC. Our collaboration with these third-party service providers includes regular audits, threat assessments, and consultation on cybersecurity strategy and enhancements. Recognizing the risks associated with these and other third-party service providers, we also conduct risk assessments on selected systems and third-party service providers on an ongoing basis.

Governance

Board Oversight

Cybersecurity is an important area of focus for our board of directors. Our audit committee is responsible for carrying out, on behalf of our board of directors, oversight of information security, including cybersecurity, risks. Our audit committee is composed of directors with diverse expertise relevant to such committee's responsibilities, and includes two directors who have expertise or certifications in cybersecurity. Our management team provides updates on cybersecurity matters to our audit committee on a quarterly basis, with more frequent or interim communications as warranted.

In addition to the oversight by our audit committee, our board of directors receives an annual report on cybersecurity matters from our Chief Technology Officer, or CTO. Our Chief Compliance & Privacy Officer, or CCPO, and CTO also attend regular meetings of our board of directors, and engage in discussions on an ad hoc basis relating to cybersecurity and information security matters.

Management

We maintain an Information Security Leadership Committee, or ISLC, that is accountable for enterprise-level information security risk strategy, identification, prioritization, and mitigation, including establishing objectives and priorities. The ISLC comprises company executives that, collectively, represent experience and expertise in information technology, enterprise security and risk management, cybersecurity, engineering, technology, privacy, data security, and healthcare compliance. Members of this committee include our CTO, CCPO, Chief Information Officer, Chief Information Security Officer, and Chief Accounting Officer. The ISLC meets on at least a quarterly basis to review matters including updates on existing and emerging cybersecurity risks and threats including prioritization, mitigation, and remediation; the status of projects to strengthen our information security systems; assessments of our information security program and operations; and prioritized information security incidents, if any. The ISLC oversees the Information Security Execution Team.

ITEM 2. PROPERTIES

We lease office facilities under non-cancelable operating lease agreements. We currently occupy approximately 136,000 square feet of laboratory and office space at 201 Industrial Road in San Carlos, California pursuant to a lease that we directly entered into with our landlord in October 2016. This lease covers two office spaces, referred to as the First Space and the Second Space. The First Space covers approximately 88,000 square feet. The Second Space covers approximately 48,000 square feet. The original lease term was approximately 84 months. An amendment was signed in January 2021 which extended the term of the lease for 48 months. The amended term of the lease commenced in October 2023 and will expire in October 2027 with a combined monthly rent for the First Space and Second Space of $776,671.

In Tukwila, Washington, we lease a facility initially to provide storage of our cord blood tissue units. The facility covers approximately 10,000 square feet, with a lease term of 62 months beginning in June 2018 and expiring in July 2023. In the third quarter of 2019, we sold the Evercord business and the facility was subleased to a third party. We did not exercise the option to renew the facility upon expiration.

We lease laboratory and office space in Austin, Texas, comprising approximately 94,000 square feet pursuant to a lease expiring in November 2026. In December 2021, we entered into an amendment of the Austin lease agreement which extended the lease of the current premises through March 2033. The amendment also includes two additional office spaces, referred to as the First Expansion Premises and the Second Expansion Premises. The First Expansion Premises consists of 32,500 rentable square feet and commenced in February 2022. The Second Expansion Premises consists of 65,222 rentable square feet and commenced in September 2022. The terms of the First and Second Expansion Premises expire in March 2033.

We entered into a lease agreement in November 2020 to lease 11,395 square feet of space located in South San Francisco, California over a three-year term. The premises is used for general office, laboratory and research use. In December 2022, we exercised the renewal option of the South San Francisco lease agreement. In January 2023, we entered in an amendment to extend the lease term of the South San Francisco premises by three years, through November 2026.

We entered into a lease agreement in September 2023 to lease 16,319 square feet of space located in Pleasanton, California over a 60-month term. The premises will be used for laboratory and research use and commenced in December 2023. The annual lease payment starts at $0.5 million and increases annually.

As part of the in-process research and development, or the IPR&D, asset acquisition in September 2021, we inherited a 24-month lease for 7,107 square feet of laboratory space in Canada. The annual lease payment starts at $0.2 million and expired in August 2023.

We have also historically entered into leases of individual workspaces and storage spaces at various locations on both a month-to-month basis without an established lease term, and more recently for certain locations, have committed to terms approximating one to five years. For the facilities without a committed lease term, we have elected to not recognize them as the right-of-use assets on the balance sheet as they are all considered short-term leases. For individual workspaces where the committed lease term exceeds one year, we have recorded a right-of-use asset.

We may expand our facilities capacity as our employee base and laboratory processing needs grow. We believe that we will be able to obtain additional space on commercially reasonable terms.

ITEM 3. LEGAL PROCEEDINGS

From time to time, we are involved in legal proceedings. The results of such legal proceedings and claims cannot be predicted with certainty, and regardless of the outcome, legal proceedings could have an adverse impact on us because of defense and settlement costs, diversion of resources and other factors.

For information regarding certain current legal proceedings, see "Note 8—Commitments and Contingencies— Legal Proceedings" in the Notes to Consolidated Financial Statements, which is incorporated herein by reference.

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 Price of Our Common Stock

Our common stock is listed on the Nasdaq Global Select Market under the symbol "NTRA".

Holders

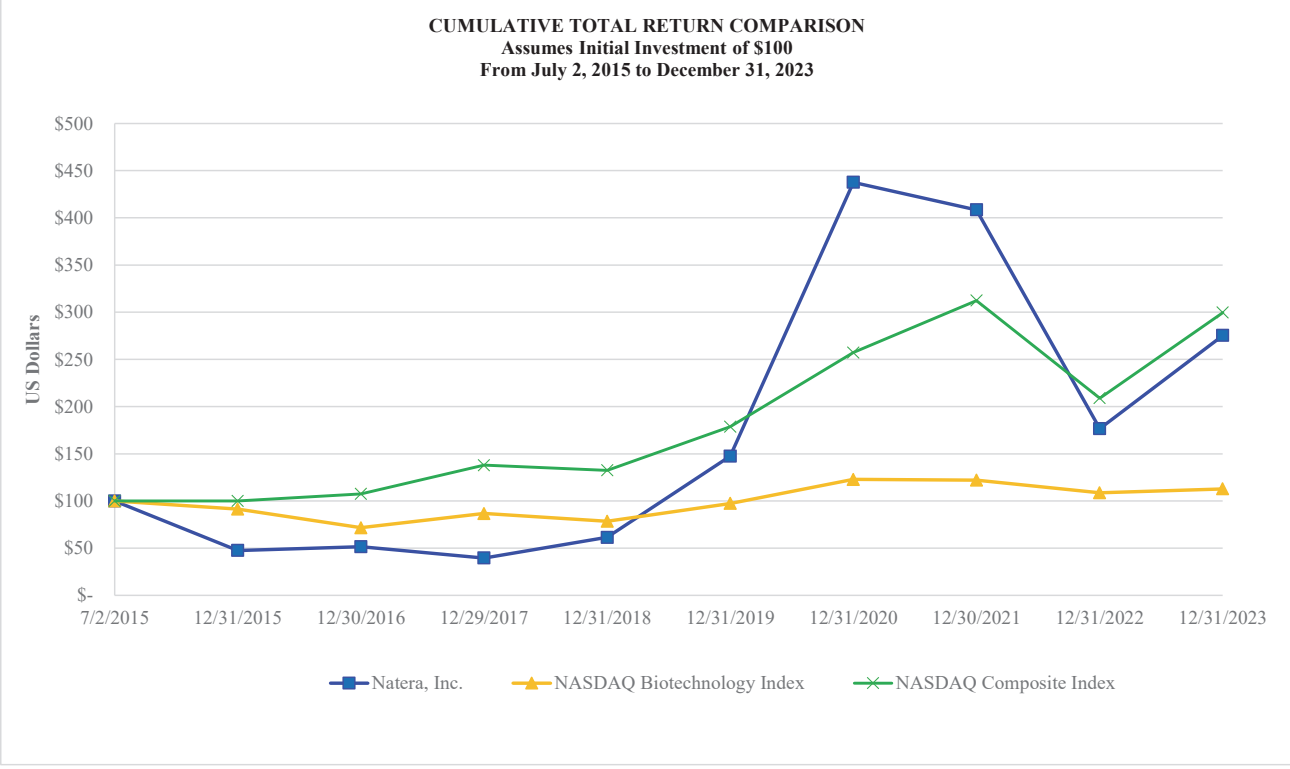
As of January 31, 2024, we had 25 holders of record of our common stock. The actual number of stockholders is greater than this number of record holders and includes stockholders who are beneficial owners, but whose shares are held in street name by brokers and other nominees. This number of holders of record also does not include stockholders whose shares may be held in trust by other entities.

Dividends

No cash dividends have ever been paid or declared on our common stock. We currently intend to retain all future earnings, if any, for use in our business and do not anticipate paying any cash dividends on our common stock in the foreseeable future. Any future determination to declare cash dividends will be made at the discretion of our board of directors, subject to applicable laws, and will depend on our financial condition, results of operations, capital requirements, general business conditions and other factors our board of directors may deem relevant.

Performance Graph

This performance graph shall not be deemed "filed" for purposes of Section 18 of the Exchange Act, or incorporated by reference into any of our other filings under the Exchange Act or the Securities Act except to the extent we specifically incorporate it by reference into such filing. The following graph compares the cumulative total stockholder return on our common stock between our initial public offering on July 2, 2015 and December 31, 2023 with the cumulative total return of (i) the NASDAQ Biotechnology Index and (ii) the NASDAQ Composite Index over the same period. The chart assumes $100 was invested at the close of market on July 2, 2015, and assumes the reinvestment of any dividends. The stock price performance on the following graph is not necessarily indicative of future stock price performance.



Trade Date	Natera, Inc.	Nasdaq Biotechnology	Nasdaq Composite
Base period 7/2/2015	$ 100.00	$ 100.00	$ 100.00
12/31/2015	$ 47.49	$ 91.34	$ 99.96
12/31/2016	$ 51.50	$ 71.53	$ 107.46
12/31/2017	$ 39.53	$ 86.60	$ 137.81
12/31/2018	$ 61.39	$ 78.52	$ 132.46
12/31/2019	$ 147.45	$ 97.34	$ 178.59
12/31/2020	$ 437.64	$ 122.78	$ 257.29
12/31/2021	$ 408.40	$ 122.00	$ 312.32
12/31/2022	$ 176.65	$ 108.69	$ 208.94
12/31/2023	$ 275.46	$ 112.76	$ 299.67

Recent Sales of Unregistered Securities

None.

Purchases of Equity Securities by the Issuer and Affiliated Parties

None.

ITEM 6. SELECTED FINANCIAL DATA

Information required by Item 6 of Form 10-K is omitted pursuant to the SEC's adoption of amendments to Regulation S-K effective February 10, 2021.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations in conjunction with our consolidated financial statements and related notes included in Part II, Item 8 of this report. This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those discussed below. Factors that could cause or contribute to such differences include, but are not limited to, those identified below and those discussed in "Risk Factors" included elsewhere in this report.

Overview

We are a diagnostics company with proprietary molecular and bioinformatics technology that we are applying to change the management of disease worldwide. Our cell-free DNA, or cfDNA, technology combines our novel molecular assays, which reliably measure many informative regions across the genome from samples as small as a single cell, with our statistical algorithms which incorporate data available from the broader scientific community to identify genetic variations covering a wide range of serious conditions with high accuracy and coverage. We aim to make personalized genetic testing and diagnostics part of the standard of care to protect health and inform earlier and more targeted interventions that help lead to longer, healthier lives.

We currently provide a comprehensive suite of products in women's health, as well as our oncology and organ health products, and our Constellation cloud-based platform. We generate a majority of our revenues from the sale of Panorama, our non-invasive prenatal test, or NIPT, as well as Horizon, our Carrier Screening, or HCS, test. In addition to Panorama and Horizon, our product offerings in women's health include Spectrum Preimplantation Genetics, our Anora miscarriage test, and Vistara single-gene NIPT, as well as our Empower hereditary cancer screening test, which we also plan to offer to oncologists through our oncology sales channel. We also offer our Signatera molecular residual disease test for oncology applications, which we commercialize as a test run in our CLIA (as defined below) laboratory and offer on a research use only basis to research laboratories and pharmaceutical companies; and our Prospera organ transplant assessment tests.

We process tests in our laboratories certified under the Clinical Laboratory Improvement Amendments of 1988, or CLIA, in Austin, Texas and San Carlos, California. A portion of our testing is performed by third-party laboratories. Our customers include independent laboratories, national and regional reference laboratories, medical centers and physician practices for our screening tests, and research laboratories and pharmaceutical companies. We market and sell our tests through our direct sales force and, for our women's health tests, through our laboratory distribution partners. We bill clinics, laboratory distribution partners, patients, pharmaceutical companies and insurance payers for the tests we perform. In cases where we bill laboratory distribution partners, our partners in turn bill clinics, patients and insurers. The majority of our revenue comes from insurers with whom we have in-network contracts. Such insurers reimburse us for our tests pursuant to our in-network contracts with them, based on positive coverage determinations, which means that the insurer has determined that the test in general is medically necessary for this category of patient.

In addition to offering tests to be performed at our laboratories, either directly or through our laboratory distribution partners, we also establish licensing arrangements with laboratories under Constellation, our cloud-based distribution model, whereby our laboratory licensees run the molecular workflows themselves and then access our bioinformatics algorithms through our cloud-based software. This cloud-based distribution model results in lower revenues and gross profit per test than cases in which we process a test ourselves; however, because we do not incur the costs of processing the tests, our costs per test under this model are also lower. We began entering into these licensing arrangements starting in the fourth quarter of 2015.

The principal focus of our commercial operations is to offer our tests through both our direct sales force and laboratory distribution partners, and our Constellation licensees under our cloud-based distribution model. The number of tests that we accession is a key indicator that we use to assess our business. A test is accessioned when we receive the test at our laboratory, the relevant information about the test is entered into our computer system, and the test sample is routed into the appropriate workflow. This number is a subset of the number of tests that we process, which includes tests distributed through our Constellation licensees. The number of tests that we process is a key metric as it tracks overall

volume growth, particularly as our laboratory partners may transition from sending samples to our laboratory to our cloud-based distribution model, as a result of which our tests accessioned would decrease but our tests processed would remain unchanged.

During the year ended December 31, 2023, we processed approximately 2,496,100 tests, comprised of approximately 2,426,500 tests accessioned in our laboratories. During the year ended December 31, 2022, we processed approximately 2,066,500 tests, comprised of approximately 2,004,000 tests accessioned in our laboratories. During the year ended December 31, 2021, we processed approximately 1,570,000 tests, comprised of approximately 1,513,400 tests accessioned in our laboratories. This increase in volume represents continuous commercial growth of Panorama and HCS, both as tests performed in our laboratories as well as through our Constellation software platform.

The percent of our revenues attributable to our U.S. direct sales force were 91%, 89% and 89% for the years ended December 31, 2023, 2022, 2021, respectively. The percent of our revenues attributable to U.S. laboratory partners for the year ended the year ended December 31, 2023, 2022, 2021, was 6%, 7% and 5%, respectively. The percent of our revenues attributable to international laboratory partners and other international sales was 3%, 4% and 6% for the years ended December 31, 2023, 2022 and 2021, respectively.

For the year ended December 31, 2023, total revenues were $1,082.6 million, compared to $820.2 million and $625.5 million in the years ended December 31, 2022 and 2021, respectively. Product revenues generated from our testing accounted for $1,068.5 million or 99% of total revenues for the year ended December 31, 2023, compared to $797.3 million or 97% of total revenues for the year ended December 31, 2022 and $580.1 million or 93% of total revenues for the year ended December 31, 2021. For the years ended December 31, 2023, 2022, and 2021, there were no customers exceeding 10% of the total revenues on an individual basis. Revenues from customers outside the United States were $34.9 million, representing 3% of total revenues for the year ended December 31, 2023. For the year ended December 31, 2022, revenues from customers outside the United States were $34.4 million, representing approximately 4% of total revenues. For the year ended December 31, 2021, revenues from customers outside the United States were $34.6 million, representing approximately 6% of total revenues.

Our net losses for the years ended December 31, 2023, 2022, and 2021, were $434.8 million, $547.8 million, and $471.7 million, respectively. This included non-cash stock compensation expense of $191.8 million, $152.4 million, and $115.2 million for the years ended December 31, 2023, 2022, and 2021, respectively. As of December 31, 2023, we had an accumulated deficit of $2.4 billion.

Components of the Results of Operations

The section of this Management's Discussion and Analysis generally discusses year-to-year comparisons between 2023 and 2022. Discussions of year-to-year comparisons between 2022 and 2021 that are not included in this Annual Report on Form 10-K can be found in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Item 7 of Part II of our Annual Report on Form 10-K for the fiscal year ended December 31, 2022, filed with the SEC on March 1, 2023.

Revenues

Product Revenues

We generate revenues from the sale of our tests, primarily from the sale of our Panorama and HCS tests. Our two primary distribution channels are our direct sales force and our laboratory partners. In cases where we promote our tests through our direct sales force, we generally bill directly to a patient, clinic or insurance carrier, or a combination of the insurance carrier and patient, for the fees.

Sales of our clinical tests are recorded as product revenues. Revenues recognized from tests processed through our Constellation model, and from our strategic partnership agreements, are reported in licensing and other revenues.

In cases where we sell our tests through our laboratory partners, the majority of our laboratory partners bill the patient, clinic or insurance carrier for the performance of our tests, and we are entitled to either a fixed price per test or a percentage of their collections.

Our ability to increase our revenues will depend on our ability to further penetrate the domestic and international markets and, in particular, generate sales through our direct sales force, develop and commercialize additional tests, obtain reimbursement from additional third-party payers and increase our reimbursement rates for tests performed. For example, our financial performance depends on reimbursement for microdeletions testing. Many third-party payers do not currently reimburse for microdeletions screening in part because there has historically been limited published data on the performance of microdeletions screening tests, with our SMART study results being published relatively recently, in early 2022.

Entering into in-network contracts continues to be an important part of our business strategy, as we believe that in-network coverage of our tests by third-party payers is crucial to our growth and long-term success, as in-network pricing is more predictable than out-of-network pricing, enables us to develop stable, long-term relationships with third-party payers, and provides access to a larger population of covered lives. However, the negotiated fees under our contracts with third-party payers are typically lower than the list price of our tests, and in some cases the third-party payers that we contract with have negative coverage determinations for some of our offerings, in particular Panorama for microdeletions screening. Therefore, being in-network with third-party payers has in the past had, and may in the future have, an adverse impact on our revenues and gross margins. We intend to mitigate any impact by driving more business from our most profitable accounts.

Licensing and Other Revenues

Revenues recognized from tests processed through our Constellation model, and from our strategic partnership agreements (which during the three years ended December 31, 2023, 2022 and 2021 comprised the Qiagen, BGI Genomics Co. Ltd., and Foundation Medicine, Inc. agreements) are reported in licensing and other revenues. We also recognize licensing revenues through the licensing and the provisioning of services to support the use of our proprietary technology by licensees under our cloud-based distribution model. As of December 31, 2023, we are recognizing revenues on 15 licensing and service arrangements with laboratories under our Constellation model.

Our strategy to offer access to our algorithm to laboratory licensees via our Constellation cloud-based software platform may also cause our revenues to decrease because we do not process the tests and perform the molecular biology analysis in our own laboratory under this model, and therefore are not able to charge as high an amount, and as a result realize lower revenues per test than when we perform the entire test ourselves. However, cost of licensing and other revenues for the Constellation software platform are relatively low, and therefore, its associated gross margin is higher.

Cost of Product Revenues

The components of our cost of product revenues are material and service costs, impairment charges associated with testing equipment, personnel costs, including stock-based compensation expense, equipment and infrastructure expenses associated with testing samples, electronic medical records, order and delivery systems, shipping charges to transport samples, costs incurred from third party test processing fees, and allocated overhead such as rent, information technology costs, equipment depreciation and utilities. Costs associated with Whole Exome Sequencing, or WES, are also included, as well as labor costs, relating to our Signatera CLIA and Signatera research use only offerings. Costs associated with performing tests are recorded when the test is accessioned. We expect cost of product revenues in absolute dollars to increase as the number of tests we perform increases.

As we continue to achieve scale, we have increased our focus on more efficient use of labor, automation, and DNA sequencing. For example, we updated the molecular and bioinformatics process for Panorama to further reduce the sequencing reagents, test steps and associated labor costs required to obtain a test result, while increasing the accuracy of the test to allow it to run with lower fetal fraction input. These improvements also reduced the frequency of the need to require blood redraws from the patient.

Cost of Licensing and Other Revenues

The components of our cost of licensing and other revenues are material costs associated with test kits sold to Constellation clients, development and support services relating to our strategic partnership agreements and other costs.

We currently have 15 revenue generating licensing and service agreements with laboratories under our Constellation distribution model. We consider our cost of licensing and other revenues for the Constellation software platform to be relatively low, and therefore we expect its associated gross margin is higher. We expect our cost of licensing will increase in relation to volume growth.

Expenses

Research and Development

Research and development expenses include costs incurred to develop our technology, collect clinical samples and conduct clinical studies to develop and support our products. These costs consist of personnel costs, including stock- based compensation expense; prototype materials; laboratory supplies; consulting costs; regulatory costs; electronic medical record set up costs; and costs associated with setting up and conducting clinical studies at domestic and international sites and allocated overhead, including rent, information technology, equipment depreciation and utilities. We expense all research and development costs in the periods in which they are incurred. We expect our research and development expenses to increase in absolute dollars as we continue to invest in research and development activities related to developing enhanced and new products.

Selling, General and Administrative

Selling, general and administrative expenses include executive, selling and marketing, legal, finance and accounting, human resources, billing and client services. These expenses consist of personnel costs, including stock-based compensation expense; direct marketing expenses; audit and legal expenses; consulting costs; training and medical education activities; payer outreach programs and allocated overhead, including rent, information technology, equipment depreciation, and utilities.

Interest Expense

Interest expense is attributable to borrowing under our Convertible Senior Notes (the “Convertible Notes”) and credit line with UBS (the “Credit Line”), including the amortization of debt discounts.

Interest Income and Other (Expense) Income, Net

Interest income and other (expense) income, net is comprised of interest earned on our cash, realized gains and losses on investments and assets, sublease rental income, and foreign currency remeasurement gains and losses.

Critical Accounting Policies

Our management's discussion and analysis of our financial condition and results of operations is based on our financial statements, which have been prepared in accordance with generally accepted accounting principles in the United States. The preparation of these 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 the financial statements, as well as the reported revenue generated, and expenses incurred during the reporting periods. Our estimates are based on our 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. We consider our critical accounting policies and estimates to be revenue recognition and stock-based compensation attributable to performance-based awards.

Recent Accounting Pronouncements

We believe that the impact of accounting standards updates recently issued that are not yet effective will not have a material impact on our financial position or results of operations upon adoption.

Revenue Recognition

We recognize revenues when, or as, performance obligations in the contracts are satisfied, in the amount reflecting the expected consideration to be received from the goods or services transferred to the customers.

Product Revenues

Product revenues are derived by performing genetic testing services and our performance obligation is complete when test results are delivered to a clinic or patient, who are considered the customer for such services. We enter into contracts with insurance carriers with primarily payment terms related to tests provided to the patients who have health insurance coverage. Insurance carriers are considered to be third-party payers on behalf of the patients, and the patients are considered as the customers who receive genetic test services. Tests may be billed to insurance carriers, patients, or a combination of insurance carriers and patients. Further, we sell tests to a number of domestic and international laboratory partners and identify the laboratory partners as customers provided that there is a test services agreement between us and them.

Licensing and Other Revenues

We recognize licensing revenues from our Constellation cloud-based distribution model, pursuant to which we grant licenses to laboratories to access our proprietary bioinformatics algorithms through our cloud-based software to analyze the results of molecular workflows that such licensees develop and perform in their laboratories. In addition, the royalties we receive from our arrangement with a prenatal paternity licensee are recognized Constellation revenues.

We also recognize revenues from our strategic partnership agreements. The performance obligations are unique in each agreement and would typically require the license of intellectual property, development services, support services, and future test work. We also record revenues from the sale of IVD kits in licensing and other revenues.

Stock-Based Compensation Attributable to Performance-Based Awards

Stock-based compensation expense for stock options with performance metrics is calculated based upon probability of achievement of the metrics specified in the grant. The fair value is recognized as expense over the requisite service period, which is generally the vesting period of the respective awards. No compensation cost is recognized on stock options for employees and non-employees who do not render the requisite service and therefore forfeit their rights to the stock options. The measurement of stock-based compensation is subject to periodic adjustments as the underlying equity instruments vest, and the resulting change in value, if any, is recognized in our statements of operations and comprehensive loss during the period that the related services are rendered.

Results of Operations

Comparison of the years ended December 31, 2023, 2022, and 2021

(in thousands)	Year Ended December 31,			Changes			
	2023	2022	2021	2023 - 2022		2022 - 2021	
				Amount	Percent	Amount	Percent
Revenues:							
Product revenues	$ 1,068,522	$ 797,307	$ 580,080	$ 271,215	34.0 %	$ 217,227	37.4 %
Licensing and other revenues	14,049	22,915	45,406	(8,866)	(38.7)	(22,491)	(49.5)
Total revenues	1,082,571	820,222	625,486	262,349	32.0	194,736	31.1
Cost and expenses:							
Cost of product revenues	588,564	453,632	315,195	134,932	29.7	138,437	43.9
Cost of licensing and other revenues	1,267	2,624	3,223	(1,357)	(51.7)	(599)	(18.6)
Research and development	320,678	316,415	264,208	4,263	1.3	52,207	19.8
Selling, general and administrative	618,307	588,591	511,034	29,716	5.0	77,557	15.2
Total cost and expenses	1,528,816	1,361,262	1,093,660	167,554	12.3	267,602	24.5
Loss from operations	(446,245)	(541,040)	(468,174)	94,795	17.5	(72,866)	(15.6)
Interest expense	(12,638)	(9,319)	(8,305)	(3,319)	(35.6)	(1,014)	(12.2)
Interest and other income, net	24,353	3,538	5,381	20,815	588.3	(1,843)	(34.3)
Loss before income taxes	(434,530)	(546,821)	(471,098)	112,291	20.5	(75,723)	(16.1)
Income tax expense	(271)	(978)	(618)	707	72.3	(360)	(58.3)
Net loss	$ (434,801)	$ (547,799)	$ (471,716)	$ 112,998	20.6 %	$ (76,083)	(16.1)%

Revenues

Total revenues are comprised of product revenues, which are primarily driven by sales of our Panorama and HCS tests, and licensing and other revenues, which primarily includes development licensing revenue, licensing of our Constellation software to our licensees. Total revenues for the year ended December 31, 2023 increased by $262.3 million, or 32.0%, when compared to the year ended December 31, 2022.

We derive our revenues from tests based on units reported to customers—tests delivered with a result. All reported units are either accessioned in our laboratories or processed outside of our laboratories. As noted in "Overview," the number of tests that we process is a key metric as it tracks overall volume growth. During the year ended December 31, 2023, total reported units were approximately 2,388,200, comprised of approximately 2,323,400 tests reported in our laboratories. Comparatively, during the year ended December 31, 2022, total reported units were approximately 1,919,600, comprised of approximately 1,861,000 tests reported in our laboratories. During the year ended December 31, 2023 and 2022, total oncology units processed were approximately 340,700 and 196,400, respectively.

Product Revenues

During the year ended December 31, 2023, product revenues increased by $271.2 million, or 34.0% compared to the year ended December 31, 2022, as a result of the continued revenue growth from increased test volumes as well as average selling price improvements.

Licensing and Other Revenues

Licensing and other revenues decreased by $8.9 million, or 38.7%, during the year ended December 31, 2023 compared to the year ended December 31, 2022. The decrease was primarily due to a decrease in revenue from our collaborative agreements.

Cost of Product Revenues

During the year ended December 31, 2023, cost of product revenues increased by $134.9 million or 29.7% when compared to the year ended December 31, 2022, primarily due to higher costs related to inventory consumption of $42.1 million driven by an increase in accessioned cases, a $42.5 million increase in third-party fees, a $6.1 million increase in shipping related charges, a $10.7 million increase in equipment and related depreciation expense, and a $33.5 million increase in labor, overhead, and other related costs driven by headcount growth and product support.

Cost of Licensing and Other Revenues

Cost of licensing and other revenues for the year ended December 31, 2023, when compared to the year ended December 31, 2022, decreased by approximately $1.4 million, or 51.7%, primarily due to a net decrease in costs to support our collaborative agreements.

Expenses

Research and Development

Research and development expenses during the year ended December 31, 2023 increased by $4.3 million, or 1.3%, when compared to the year ended December 31, 2022. The increase was driven by a $27.7 million increase in salary and related expenditures, which includes a $20.4 million increase in stock-based compensation expense, and a $3.6 million net increase in office, facilities, and other expenses. This was offset by a $12.7 million decrease in IPR&D expense mainly related to the milestone payments for the September 2021 acquisition, a $7.7 million decrease in consulting expenses, and a $6.6 million decrease in lab and clinical trial related expenses.

Selling, General and Administrative

Selling, general and administrative expenses increased by $29.7 million, or 5.0%, in the year ended December 31, 2023 compared to the year ended December 31, 2022. The increase was attributable to a $18.0 million increase in consulting and legal expenses, a $16.0 million increase in third party billing expenses, and a net increase of $8.0 million in salary and related compensation expenditures primarily related to an increase in stock-based compensation expense. This was offset by a $9.1 million decrease in marketing costs and a $3.2 million net decrease in travel, facilities, office and other costs.

Interest Expense

Interest expense increased by $3.3 million, 35.6%, in the year ended December 31, 2023 compared to the same period in the prior year due to an increase in interest rate as well as a $30.0 million drawdown from November 2022 for the UBS Credit Line.

Interest and Other Income

Interest and other income increased by $20.8 million, or 588.3%, in the year ended December 31, 2023, compared to the same period in the prior year, primarily due to higher interest rates and greater average cash and investment balances.

Liquidity and Capital Resources

We have incurred net losses each year since our inception. For the year ended December 31, 2023, we had a net loss of $434.8 million, and we expect to continue to incur losses in future periods as we continue to devote a substantial portion of our resources to our research and development and commercialization efforts for our existing and new products. As of December 31, 2023, we had an accumulated deficit of $2.4 billion. As of December 31, 2023, we had $642.1 million in cash and cash equivalents and restricted cash, $236.9 million in marketable securities, $80.4 million of outstanding balance of the Credit Line including accrued interest, and $287.5 million outstanding principal balance on the Convertible Notes. As of December 31, 2023, we have $20.0 million available on the Credit Line.

While we have introduced multiple products that are generating revenues, these revenues have not been sufficient to fund all operations. Accordingly, we have funded the portion of operating costs that exceeds revenues through a combination of equity issuances and debt and other financings. We expect to develop and commercialize future products and continue to invest in the growth of our business and, consequently, we will need to generate additional revenues to achieve future profitability and may need to raise additional equity or incur additional debt. If we raise additional funds by issuing equity securities, our stockholders would 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 requires 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 and commercialization of our products and significantly scale back our business and operations.

In September 2023, we completed an underwritten equity offering and sold 4,550,000 shares of our common stock at a price of $55 per share to the public. Before offering expenses of approximately $0.4 million, we received proceeds of approximately $235.8 million net of the underwriting discount. In November 2022, we completed an underwritten equity offering and sold 13,144,500 shares of our common stock at a price of $35 per share to the public. Before offering expenses of approximately $0.5 million, we received proceeds of approximately $433.2 million net of the underwriting discount. In July 2021, we completed an additional underwritten equity offering and sold 5,175,000 shares of our common stock at a price of $113 per share to the public. Before offering expenses of $0.4 million, we received proceeds of $551.2 million net of the underwriting discount. As cash flows from our operations are currently negative, our contractual obligations and other commitments are satisfied by the equity financing described above, our convertible note financing conducted in April 2020 described below, the Credit Facility described below, and our product, licensing, and other sales. For our commitments, refer to the “Contractual Obligations and Other Commitments” section below.

Refer to additional disclosures associated with risks and our ability to generate and obtain adequate amounts of cash to meet capital requirements for both short-term and long-term obligations.

Based on our current business plan, we believe that our existing cash and marketable securities will be sufficient to meet our anticipated cash requirements for at least 12 months after February 28, 2024.

Credit Line Agreement

In September 2015, we entered into a Credit Line with UBS, or the Credit Line, providing for a $50.0 million revolving line of credit which could be drawn in increments at any time. The Credit Line was amended in July 2017 and bears interest at 30-day LIBOR plus 1.10%, and it is secured by a first priority lien and security interest in our money market and marketable securities held in our managed investment account with UBS. UBS has the right to demand full or partial payment of the Credit Line obligations and terminate it, in its discretion and without cause, at any time. The interest rate was subsequently changed to the 30-day Secured Overnight Financing Rate, or SOFR, average, plus 1.21%. The SOFR rate is variable. The Credit Line was subsequently increased from $50.0 million to $150.0 million. In June 2023, the Credit Line decreased to $100.0 million. In October 2023, the interest rate for the Credit Line was subsequently changed to the 30-day SOFR average, plus 0.5%. As of December 31, 2023, the total principal amount outstanding with accrued interest was $80.4 million and $20.0 million is remaining as available under the Credit Line.

Convertible Notes

In April 2020, we issued $287.5 million aggregate principal amount of Convertible Notes in a private placement offering to qualified institutional buyers pursuant to Rule 144A under the Securities Act of 1933, as amended.

The Convertible Notes are senior, unsecured obligations of the Company and bear interest at a rate of 2.25% per year, payable in cash semi-annually in arrears in May and November of each year, beginning in November 2020. The Convertible Notes mature in May 2027, unless earlier converted, repurchased or redeemed in accordance with their terms. Upon conversion, the Convertible Notes are convertible into cash, shares of our common stock or a combination of cash and shares of our common stock, at our election.

We received net proceeds from the Convertible Notes of $278.3 million, after deducting the initial purchasers' discounts and debt issuance costs. We used approximately $79.2 million of the net proceeds from the Convertible Notes offering to repay our obligations under the 2017 Term Loan with OrbiMed in 2020.

Cash Flows

The following table summarizes our cash flows for the periods indicated:

	Year Ended December 31,		
	2023	2022	2021
		(in thousands)	
Cash used in operating activities	$ (246,955)	$ (431,501)	$ (335,236)
Cash provided by (used in) investing activities	168,498	330,338	(205,193)
Cash provided by financing activities	254,461	482,640	576,188
Net change in cash, cash equivalents and restricted cash	176,004	381,477	35,759
Cash, cash equivalents and restricted cash, beginning of period	466,091	84,614	48,855
Cash, cash equivalents and restricted cash, end of year	$ 642,095	$ 466,091	$ 84,614

Cash Used in Operating Activities

Cash used in operating activities during the year ended December 31, 2023 was $247.0 million. The net loss of $434.8 million includes $235.8 million in non-cash charges resulting from $24.1 million of depreciation and amortization, $2.7 million milestone expense for in-process research and development, $14.5 million of non-cash lease expense, $191.8 million of stock-based compensation expense, $1.1 million premium amortization and discount accretion on investment securities, $0.3 million in foreign exchange adjustment, and $1.3 million for amortization of debt discount. Operating assets had cash outflows of $57.0 million resulting from $33.9 million in increases in accounts receivable, $5.4 million in increases in inventory, and $26.1 million in increases in prepaid expenses and other current assets, offset by $8.4 million

from cash inflows in operating lease right-of-use assets. Operating liabilities resulted in cash inflows of $9.0 million resulting from a $21.6 million increase in accrued compensation, a $10.3 million increase in other accrued liabilities, and a $5.0 million increase in deferred revenue, offset by a $15.5 million decrease in accounts payable and a $12.4 million decrease in operating lease liabilities.

Cash used in operating activities during the year ended December 31, 2022 was $431.5 million. The net loss of $547.8 million includes $199.3 million in non-cash charges resulting from $16.7 million of depreciation and amortization, $9.3 million milestone expense for in-process research and development, $13.8 million of non-cash lease expense, $152.4 million of stock-based compensation expense, $4.8 million premium amortization and discount accretion on investment securities, $0.9 million loss on investments, $1.3 million for amortization of debt discount and issuance cost, and $0.3 million in non-cash interest expense. Operating assets had cash outflows of $131.4 million resulting from $122.3 million in increases in accounts receivable, $8.5 million in increases in inventory, and $1.2 million in increases in prepaid expenses and other current assets, offset by $0.6 million from cash inflows in operating lease right-of-use assets. Operating liabilities resulted in cash inflows of $48.4 million resulting from a $5.5 million increase in accounts payable, a $3.1 million increase in accrued compensation, a $47.7 million increase in other accrued liabilities, a $2.1 million increase in deferred revenue offset by a $10.0 million decrease in operating lease liabilities.

Cash Provided by Investing Activities

Cash provided by investing activities for the year ended December 31, 2023 totaled $168.5 million, which was comprised of $306.0 million proceeds of investments maturities, offset by $98.3 million purchases of new investments and $39.2 million in cash paid for the purchase of property and equipment.

Cash provided by investing activities for the year ended December 31, 2022 totaled $330.3 million, which was comprised of $248.4 million in proceeds from sale of investments and $216.5 million proceeds of investments maturities, offset by $86.9 million purchases of new investments and $47.7 million in cash paid for the purchase of property and equipment.

Cash Provided by Financing Activities

Cash provided by financing activities for the year ended December 31, 2023 totaled $254.4 million comprised of $235.4 million net proceeds from our equity offering completed in the third quarter of 2023, $15.1 million in issuance of common stock under the employee stock purchase plan, and $3.9 million cash proceeds from the exercise of stock options.

Cash provided by financing activities for the year ended December 31, 2022 totaled $482.6 million comprised of $433.2 million net proceeds from our equity offering completed in the fourth quarter of 2022, $30.0 million proceeds from Credit Line, $13.0 million in issuance of common stock under the employee stock purchase plan, and $6.4 million cash proceeds from the exercise of stock options.

Contractual Obligations and Other Commitments

We have entered into arrangements that contractually obligate us to make payments that will affect our liquidity and cash flows in future periods. Such arrangements include those related to our lease commitments, Credit Line (as defined below), Convertible Notes, commercial supply agreements and other agreements.

Credit Line

The short-term debt obligations consist of the $80.4 million principal amount drawn from the UBS Credit Line, or the Credit Line, and applicable interest. The Credit Line was amended in July 2017 and bears interest at 30-day LIBOR plus 1.10%, and it is secured by a first priority lien and security interest in our money market and marketable securities held in our managed investment account with UBS. We are required to maintain a minimum of at least $150.0 million in our UBS accounts as collateral which has been classified as short-term investments in the consolidated balance sheet. The interest rate was subsequently changed to the 30-day SOFR average, plus 1.21%. The SOFR rate is variable. UBS has the right to demand full or partial payment of the Credit Line obligations and terminate it, in its discretion and without cause,

at any time. In October 2023, the interest rate was subsequently changed to the 30-day SOFR average, plus 0.5%. Please refer to Note 10, *Debt*, for further details.

Convertible Notes

The long-term debt obligations consist of the $287.5 million principal amount from a private placement offering to qualified institutional buyers and applicable interest. The Convertible Notes are senior, unsecured obligations of the Company and bear interest at a rate of 2.25% per year, payable in cash semi-annually in arrears in May and November of each year, beginning in November 2020. The Convertible Notes mature in May 2027, unless earlier converted, repurchased or redeemed in accordance with their terms. Upon conversion, the Convertible Notes are convertible into cash, shares of our common stock or a combination of cash and shares of our common stock, at our election. Please refer to Note 10, *Debt*, for further details.

Inventory purchase and other contractual obligations

We enter into contracts in the normal course of business with various third parties for clinical trials, preclinical research studies, testing, manufacturing, and other services for operational purposes. Payments due upon cancellation generally consist only of payments for services provided or expenses incurred, including non-cancellable obligations of our service providers, up to the date of cancellation. These payments have not been included separately within these contractual and other obligations disclosures. Please refer to Note 8, *Commitments and Contingencies* for further details.

The following table summarizes our unconditional purchase and contractual commitments as of December 31, 2023:

	Payments Due by Period				
	Total	Less Than 1 Year	1 to 3 Years	3 to 5 Years	More Than 5 Years
			(in thousands)		
Short-term debt obligations[1]	80,000	80,000	—	—	—
Long-term debt obligations[2]	287,500	—	—	287,500	—
Interest accrued on debt[3]	1,480	1,480	—	—	—
Inventory purchase and other contractual obligations[4]	94,533	58,875	17,658	18,000	—
Total	$ 463,513	$ 140,355	$ 17,658	$ 305,500	$ —

(1) Represents proceeds drawn from our Credit Line.
(2) Represents the principal amount of our Convertible Notes due 2027.
(3) Represents interest accrued on our Convertible Notes and Credit Line.
(4) Represents various inventory purchase and other contractual obligations. Please refer to contractual commitments disclosures provided in Note 8, *Commitments and Contingencies* for additional information.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements during the periods presented.

ITEM 7A: QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Interest Rate Risk

We are exposed to market risks in the ordinary course of our business. These risks primarily relate to interest rates. Our Credit Line had an interest rate of 30-day LIBOR plus 1.10%. The interest rate was subsequently changed to the 30-day Secured Overnight Financing Rate, or SOFR, average, plus 1.21%. The SOFR rate is variable. In October 2023, the interest rate for the Credit Line was subsequently changed to the 30-day SOFR average, plus 0.5%. An incremental change in the borrowing rate of 100 basis points would increase our annual interest expense by $0.8 million based on our

$80.4 million gross debt outstanding on our Credit Line, including principal and accrued interest as of December 31, 2023. The interest rate for our Convertible Notes is fixed at 2.25% and not exposed market risk related to interest rates. Our investment portfolio is exposed to market risk from changes in interest rates. This risk is mitigated as we have maintained a relatively short average maturity for our investment portfolio. An incremental change in the investment yield of 100 basis points would increase our annual interest income by approximately $2.4 million annually in relation to amounts we would expect to earn, based on our short-term investments as of December 31, 2023.

For the fiscal year ending December 31, 2023, compared to the fiscal year ending December 31, 2022, our unrealized loss on available for sale securities decreased due to the change in average yield rate, resulting in an unrealized gain of $13.3 million for the year ended December 31, 2023.

Foreign Currency Exchange Rate Fluctuations

Our operations are currently conducted primarily in the United States. As we expand internationally, our results of operations and cash flows may become subject to fluctuations due to changes in foreign currency exchange rates. In periods when the U.S. dollar declines in value as compared to the foreign currencies in which we incur expenses, our foreign currency-based expenses will increase when translated into U.S. dollars. In addition, future fluctuations in the value of the U.S. dollar may affect the price at which we sell our tests outside the United States. To date, our foreign currency risk has been minimal and we have not historically hedged our foreign currency risk; however, we may consider doing so in the future.

Inflation Risk

As of the date of filing of this Annual Report, we do not believe that inflation has had a material effect on our business, financial condition, or results of operations. If the Company's costs were to become subject to significant inflationary pressures, the Company may not be able to fully offset such higher costs through increases in revenue as increases in core inflation rates, higher interest rates, and lower equity prices may also negatively affect demand for our product offerings, our ability to raise capital and cashflow impact. The Company's inability or failure to fully offset any such higher costs could harm the Company's business, financial condition, and results of operations.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

NATERA, INC.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Natera, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Natera, Inc. (the Company) as of December 31, 2023 and 2022, and the related consolidated statements of operations and comprehensive loss, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2023, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2023, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2023, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), and our report dated February 28, 2024 expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the account or disclosure to which it relates.

Genetic Test Revenue

Description of the Matter

For the year ended December 31, 2023, the Company recognized product revenue of $984 million related to consideration received from patients and insurance carriers as third-party payors on behalf of patients. As explained in Note 3 of the consolidated financial statements, product revenue is recognized based on the consideration expected to be received for genetic tests performed on behalf of patients. Consideration expected to be received for genetic tests performed is estimated based on a variety of factors, including historical and current payment trends, as well as expectations of future collections. In periods subsequent to test delivery, management monitors whether cash collections

are sufficient to support revenue recognized in prior periods or whether changes to previous or current estimates of expected consideration to be received are required.

Auditing the measurement of genetic test revenue related to genetic tests performed on behalf of patients was complex due to the nature of the procedures required to assess management's judgment in estimating consideration expected to be received for tests where there was limited or no historical cash collection data. In such situations, management uses a variety of inputs to estimate consideration expected to be received, as applicable, including available cash collection history, current payment trends, and contractual arrangements with insurance carriers, among other factors.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design, and tested the operating effectiveness of internal controls that address the risks of material misstatement relating to the measurement of revenue related to tests performed on behalf of patients. Our procedures included testing controls related to management's review of the inputs and significant assumptions used in estimating the consideration expected to be received for tests performed on behalf of patients where there was limited or no historical collection data.

We performed audit procedures that included, among others, assessing the methodologies used to estimate consideration expected to be received for tests performed on behalf of patients when sufficient historical cash collection data was not available. Specifically, we obtained an understanding of the rationale for management's estimates and examined management's supporting evidence, such as contractual arrangements with insurance payors, and management's analysis of the consideration received for similar tests, as applicable. Additionally, we tested management's supporting calculations. We also performed an evaluation of actual cash collections versus expectations to assess the accuracy of estimates made in prior periods.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2012
San Mateo, California
February 28, 2024

Natera, Inc.
Consolidated Balance Sheets
(in thousands, except par value amount)

	December 31, 2023	December 31, 2022
Assets		
Current assets:		
Cash, cash equivalents and restricted cash	$ 642,095	$ 466,091
Short-term investments	236,882	432,301
Accounts receivable, net of allowance of $6,481 in 2023 and $3,830 in 2022	278,289	244,385
Inventory	40,759	35,406
Prepaid expenses and other current assets, net	60,524	33,634
Total current assets	1,258,549	1,211,817
Property and equipment, net	111,210	92,453
Operating lease right-of-use assets	56,537	71,874
Other assets	15,403	18,330
Total assets	$ 1,441,699	$ 1,394,474
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 14,998	$ 31,148
Accrued compensation	45,857	44,010
Other accrued liabilities	149,405	144,214
Deferred revenue, current portion	16,612	10,777
Short-term debt financing	80,402	80,350
Total current liabilities	307,274	310,499
Long-term debt financing	282,945	281,653
Deferred revenue, long-term portion	19,128	20,001
Operating lease liabilities, long-term portion	67,025	76,577
Total liabilities	676,372	688,730
Commitments and contingencies (Note 8)		
Stockholders' equity:		
Common stock, $0.0001 par value: 750,000 shares authorized at both December 31, 2023 and 2022; 119,581 and 111,255 shares issued and outstanding at December 31, 2023 and 2022, respectively	11	11
Additional paid in capital	3,145,837	2,664,730
Accumulated deficit	(2,377,436)	(1,942,635)
Accumulated other comprehensive loss	(3,085)	(16,362)
Total stockholders' equity	765,327	705,744
Total liabilities and stockholders' equity	$ 1,441,699	$ 1,394,474

See accompanying notes.

Natera, Inc.
Consolidated Statements of Operations and Comprehensive Loss
(in thousands, except per share data)

	Year ended December 31,		
	2023	2022	2021
Revenues			
Product revenues	$ 1,068,522	$ 797,307	$ 580,080
Licensing and other revenues	14,049	22,915	45,406
Total revenues	1,082,571	820,222	625,486
Cost and expenses			
Cost of product revenues	588,564	453,632	315,195
Cost of licensing and other revenues	1,267	2,624	3,223
Research and development	320,678	316,415	264,208
Selling, general and administrative	618,307	588,591	511,034
Total cost and expenses	1,528,816	1,361,262	1,093,660
Loss from operations	(446,245)	(541,040)	(468,174)
Interest expense	(12,638)	(9,319)	(8,305)
Interest and other income, net	24,353	3,538	5,381
Loss before income taxes	(434,530)	(546,821)	(471,098)
Income tax expense	(271)	(978)	(618)
Net loss	$ (434,801)	$ (547,799)	$ (471,716)
Unrealized gain (loss) on available-for-sale securities, net of tax	13,277	(14,075)	(6,546)
Comprehensive loss	$ (421,524)	$ (561,874)	$ (478,262)
Net loss per share (Note 13):			
Basic and diluted	$ (3.78)	$ (5.57)	$ (5.21)
Weighted-average number of shares used in computing basic and diluted net loss per share:			
Basic and diluted	114,997	98,408	90,558

See accompanying notes.

Natera, Inc.
Consolidated Statements of Stockholders' Equity
(in thousands)

	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
Balance as of December 31, 2020	**86,223**	**$ 9**	**$ 1,411,286**	**$ 4,259**	**$ (929,318)**	**$ 486,236**
Issuance of common stock upon exercise of stock options	1,165	—	11,816	—	—	11,816
Issuance of common stock under employee stock purchase plan	186	—	13,550	—	—	13,550
Vesting of restricted stock	2,117	—	—	—	—	—
Stock-based compensation	—	—	115,219	—	—	115,219
Unrealized loss on available-for sale securities	—	—	—	(6,546)	—	(6,546)
Cumulative-effect adjustment upon adoption of ASU 2016-13	—	—	(82,876)	—	6,198	(76,678)
Issuance of common stock for public offering, net	5,175	1	550,821	—	—	550,822
Issuance of common stock for IPR&D acquisition	274	—	30,601	—	—	30,601
Net loss	—	—	—	—	(471,716)	(471,716)
Balance as of December 31, 2021	**95,140**	**10**	**2,050,417**	**(2,287)**	**(1,394,836)**	**653,304**
Issuance of common stock upon exercise of stock options	828	—	6,411	—	—	6,411
Issuance of common stock under employee stock purchase plan	437	—	13,037	—	—	13,037
Vesting of restricted stock	1,480	—	—	—	—	—
Stock-based compensation	—	—	152,384	—	—	152,384
Unrealized loss on available-for sale securities	—	—	—	(14,075)	—	(14,075)
Issuance of common stock for public offering, net	13,145	1	433,191	—	—	433,192
Issuance of common stock for IPR&D milestone	225	—	9,290	—	—	9,290
Net loss	—	—	—	—	(547,799)	(547,799)
Balance as of December 31, 2022	**111,255**	**11**	**2,664,730**	**(16,362)**	**(1,942,635)**	**705,744**
Issuance of common stock upon exercise of stock options	298	—	3,892	—	—	3,892
Issuance of common stock under employee stock purchase plan	392	—	15,128	—	—	15,128
Issuance of stock for bonuses	349	—	19,774	—	—	19,774
Issuance of common stock for IPR&D milestone	336	—	14,435	—	—	14,435
Issuance of common stock for public offering, net	4,550	—	235,441	—	—	235,441
Vesting of restricted stock units	2,401	—	—	—	—	-
Stock-based compensation	—	—	192,437	—	—	192,437
Unrealized gain on available-for sale securities	—	—	—	13,277	—	13,277
Net loss	—	—	—	—	(434,801)	(434,801)
Balance as of December 31, 2023	**119,581**	**$ 11**	**$ 3,145,837**	**$ (3,085)**	**$ (2,377,436)**	**$ 765,327**

Natera, Inc.
Consolidated Statements of Cash Flows
(in thousands)

	Year Ended December 31,		
	2023	2022	2021
Operating activities:			
Net loss	$ (434,801)	$ (547,799)	$ (471,716)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	24,097	16,702	11,254
Expensed in-process research and development	2,679	9,290	35,604
Non-cash lease expense	14,519	13,770	10,926
Stock-based compensation	191,808	152,384	115,219
Premium amortization and discount accretion on investment securities	1,087	4,837	7,814
(Gain) loss on investments	—	906	(46)
Foreign exchange adjustment	265	(2)	(11)
Amortization of debt discount and issuance cost	1,292	1,259	1,227
Non-cash interest expense	52	302	94
Changes in operating assets and liabilities:			
Accounts receivable	(33,904)	(122,311)	(43,509)
Inventory	(5,353)	(8,497)	(6,878)
Operating lease right-of-use assets	8,354	622	—
Prepaid expenses and other assets	(26,072)	(1,202)	(3,182)
Accounts payable	(15,458)	5,462	19,222
Accrued compensation	21,619	3,069	10,569
Operating lease liabilities	(12,448)	(9,999)	(10,296)
Other accrued liabilities	10,347	47,650	32,682
Deferred revenue	4,962	2,056	(44,209)
Net cash used in operating activities	(246,955)	(431,501)	(335,236)
Investing activities:			
Purchases of investments	(98,303)	(86,947)	(876,095)
Proceeds from sale of investments	—	248,482	187,580
Proceeds from maturity of investments	306,000	216,500	532,910
Purchases of property and equipment, net	(39,199)	(47,697)	(41,030)
Cash paid for acquisition of an asset	—	—	(8,558)
Net cash provided by (used in) investing activities	168,498	330,338	(205,193)
Financing activities:			
Proceeds from exercise of stock options	3,892	6,411	11,816
Proceeds from issuance of common stock under employee stock purchase plan	15,128	13,037	13,550
Proceeds from public offering, net of issuance cost	235,441	433,192	550,822
Proceeds from Credit Line	—	30,000	—
Net cash provided by financing activities	254,461	482,640	576,188
Net change in cash, cash equivalents and restricted cash	176,004	381,477	35,759
Beginning cash, cash equivalents and restricted cash	466,091	84,614	48,855
Ending cash, cash equivalents and restricted cash	$ 642,095	$ 466,091	$ 84,614
Supplemental disclosure of cash flow information:			
Cash paid for income taxes	$ 295	$ 549	$ 283
Cash paid for interest	$ 11,346	$ 8,060	$ 7,077
Non-cash investing and financing activities:			
Purchases of property and equipment in accounts payable and accruals	$ 1,582	$ (1,940)	$ 5,173
Issuance of common stock for IPR&D milestone	$ 14,435	$ —	$ —
Issuance of common stock for bonuses	$ 19,774	$ —	$ —
Stock-based compensation included in capitalized software development costs	$ 629	$ —	$ —

See accompanying notes

1. Description of Business

Natera, Inc. (the "Company") was formed in the state of California as Gene Security Network, LLC in November 2003 and incorporated in the state of Delaware in January 2007. The Company is a diagnostics company with proprietary molecular and bioinformatics technology that it is applying to change the management of disease worldwide. The Company's cell-free DNA ("cfDNA") technology combines its novel molecular assays, which reliably measure many informative regions across the genome from samples as small as a single cell, with its statistical algorithms which incorporate data available from the broader scientific community to identify genetic variations covering a wide range of serious conditions with high accuracy and coverage. The Company focuses on applying its technology to three main areas of healthcare – women's health, oncology and organ health. In the women's health space, the Company develops and commercializes non- or minimally- invasive tests to evaluate risk for, and thereby enable early detection of, a wide range of genetic conditions, such as Down syndrome. In oncology, the Company commercializes, among others, a personalized blood-based DNA test to detect molecular residual disease and monitor for disease recurrence across a broad range of cancer types. The Company's third area of focus is organ health, with tests to assess kidney, heart, and lung transplant rejection as well as genetic testing for chronic kidney disease. The Company operates laboratories in Austin, Texas and San Carlos, California certified under the Clinical Laboratory Improvement Amendments ("CLIA") providing a host of cell-free DNA-based molecular testing services. The Company determines its operating segments based on the way it organizes its business to make operating decisions and assess performance. The Company operates one segment, the development and commercialization of molecular testing services, applying its proprietary technology in the fields of women's health, oncology and organ health.

The Company's key product offerings include its Panorama Non-Invasive Prenatal Test ("Panorama") that screens for chromosomal abnormalities of a fetus as well as in twin pregnancies, typically with a blood draw from the mother; Horizon Carrier Screening ("Horizon") to determine carrier status for a large number of severe genetic diseases that could be passed on to the carrier's children; its Signatera molecular residual disease test ("Signatera")to detect circulating tumor DNA in patients previously diagnosed with cancer to assess molecular residual disease, monitor for recurrence, and evaluate treatment response; and its Prospera test, to assess organ transplant rejection in patients who have undergone kidney, heart, or lung transplantation. All testing is available principally in the United States. The Company also offers its Panorama test to customers outside of the United States, primarily in Europe. The Company also offers Constellation, a cloud-based software platform that enables laboratory customers to gain access through the cloud to the Company's algorithms and bioinformatics in order to validate and launch their own tests based on the Company's technology.

2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying consolidated financial statements have been prepared in conformity with U.S. generally accepted accounting principles ("U.S. GAAP").

Some items in the prior period financial statements were reclassified to conform to the current presentation.

Liquidity Matters

The Company has incurred net losses since its inception and anticipates net losses and negative operating cash flows for the near future. The Company had a net loss of $434.8 million for the year ended December 31, 2023 and an accumulated deficit of $2.4 billion as of December 31, 2023. As of December 31, 2023, the Company had $642.1 million in cash, cash equivalents, and restricted cash, $236.9 million in marketable securities, $80.4 million of outstanding balance of the Credit Line (as defined in Note 10, Debt) including accrued interest, and $287.5 million outstanding principal balance of its 2.25% Convertible Senior Notes (the "Convertible Notes"). The Company is required to maintain a minimum of at least $150.0 million in its UBS accounts as collateral for its Credit Line which is classified as short-term investments in the consolidated balance sheet. As of December 31, 2023, the Company had $20.0 million remaining available on the Credit Line.

While the Company has introduced multiple products that are generating revenues, these revenues have not been sufficient to fund all operations and business plans. Accordingly, the Company has funded the portion of operating costs that exceeds revenues through a combination of equity issuances, debt issuances, and other financings.

The Company continues to invest in the development and commercialization of its existing and future products and, consequently, it will need to generate additional revenues to achieve future profitability and may need to raise additional equity or debt financing. If the Company raises additional funds by issuing equity securities, its stockholders will experience dilution. Additional debt financing, if available, may involve covenants restricting its operations or its ability to incur additional debt. Any additional debt financing or additional equity that the Company raises may contain terms that are not favorable to it or its stockholders and requires significant debt service payments, which diverts resources from other activities. Additional financing may not be available when necessary, or in amounts or on terms acceptable to the Company. If the Company is unable to obtain additional financing, it may be required to delay or slow its investment in the development and commercialization of its products and significantly scale back its business and operations.

In September 2023, the Company completed an underwritten equity offering and sold 4,550,000 shares of its common stock at a price of $55 per share to the public. Before estimated offering expenses of $0.4 million, the Company received proceeds of approximately $235.8 million net of the underwriting discount. In November 2022, the Company completed an underwritten equity offering and sold 13,144,500 shares of its common stock at a price of $35 per share to the public. Before estimated offering expenses of $0.5 million, the Company received proceeds of approximately $433.2 million net of the underwriting discount. In July 2021, the Company completed an underwritten equity offering and sold 5,175,000 shares of its common stock at a price of $113 per share to the public. Before offering expenses of $0.4 million, the Company received proceeds of $551.2 million net of the underwriting discount.

On September 10, 2021, the Company entered into an agreement with a third party for an asset acquisition where the acquired asset was in-process research and development primarily in exchange for an equity consideration payment. In addition, pursuant to the agreement, certain employees of the third party became employees of the Company. The third party was a biotechnology company focused on oncology. The total upfront acquisition consideration amounts to $35.6 million composed of the issuance of 276,346 shares of the Company's common stock with a fair value of $30.9 million, approximately $3.9 million of cash consideration, assumed net liabilities of $0.2 million, as well as $0.6 million of acquisition related legal and accounting costs directly attributable to the acquisition of the asset. The Company accounted for the transaction as an asset acquisition as substantially all of the estimated fair value of the gross assets acquired was concentrated in a single identified in-process research and development asset ("IPR&D") thus satisfying the requirements of the screen test in ASU 2017-01. The estimated fair value of the acquired workforce was not significant. The Company concluded the acquired IPR&D has no alternative-future use and accordingly expensed approximately $35.6 million, on the day the transaction closed as research and development expense, which is reflected in its consolidated statement of operations.

Further, additional consideration aggregating up to approximately $35.0 million was estimated to be paid via issuance of an estimated 269,547 additional Natera common shares, consistent with the registration statement filed with the SEC on September 10, 2021, upon achievement of defined milestones relating to product development, commercial launch and continued employment of certain selling shareholders, each of which was revalued at each reporting date and amount of compensation expense was adjusted accordingly and reported in research and development expenses. In

November 2022, the terms of the payment for any remaining consideration were modified, resulting in $10.0 million of consideration paid in December 2022 and $15.0 million of consideration paid in March 2023, with such consideration primarily consisting of Natera common stock.

Based on the Company's current business plan, the Company believes that its existing cash and marketable securities will be sufficient to meet its anticipated cash requirements for at least 12 months after February 28, 2024.

Principles of Consolidation

The accompanying consolidated financial statements include all the accounts of the Company and its subsidiaries. The Company established a subsidiary that operates in the state of Texas to support the Company's laboratory and operational functions. The Company established a subsidiary that operates in Canada following the acquisition of the IPR&D asset. All intercompany balances and transactions have been eliminated.

Use of Estimates

The preparation of financial statements in accordance with generally accepted accounting principles (GAAP) in the United States requires management to make estimates and assumptions about future events that affect the amounts of assets and liabilities reported, disclosures about contingent assets and liabilities, and reported amounts of revenues and expenses. Significant items subject to such estimates include the allowance for doubtful accounts, the operating right- of- use assets and the associated lease liabilities, the average useful life for property and equipment including impairment estimates, deferred revenues associated with unsatisfied performance obligations, accrued liability for potential refund requests, stock-based compensation, the fair value of options, income tax uncertainties, and the expected consideration to be received from contracts with customers, insurance payors, and patients. These estimates and assumptions are based on management's best estimates and judgment. Management regularly evaluates its estimates and assumptions using historical experience and other factors, including contractual terms and statutory limits; however, actual results could differ from these estimates and could have an adverse effect on the Company's financial statements.

Cash, Cash Equivalents, and Restricted Cash

Cash, cash equivalents, and restricted cash consist of cash, liquid demand deposits, and money market funds. Highly liquid investments purchased with an original maturity of three months or less are also considered cash equivalents. Restricted cash as of December 31, 2023 and 2022 was immaterial.

Investments

Investments consist primarily of debt securities such as U.S. Treasuries, U.S. agency and municipal bonds. Management determines the appropriate classification of securities at the time of purchase and re-evaluates such determination at each balance sheet date. The Company generally classifies its entire investment portfolio as available- for- sale. The Company views its available-for-sale portfolio as available for use in current operations. Accordingly, the Company classifies all investments as short-term, irrespective of maturity date. Available-for-sale securities are carried at fair value, with unrealized gains and losses reported in accumulated other comprehensive income (loss), which is a separate component of stockholders' equity.

The Company classifies its investments as Level 1 or 2 within the fair value hierarchy. Fair values determined by Level 1 inputs utilize quoted prices (unadjusted) in active markets for identical assets that the Company has the ability to access. Fair values determined by Level 2 inputs utilize data points that are observable such as quoted prices, interest rates and yield curves. The Company holds Level 2 securities which are initially valued at the transaction price and subsequently valued by a third-party service provider using inputs other than quoted prices that are observable either directly or indirectly, such as yield curve, volatility factors, credit spreads, default rates, loss severity, current market and contractual prices for the underlying instruments or debt, broker and dealer quotes, as well as other relevant economic measures. The Company performs certain procedures to corroborate the fair value of these holdings.

Available-for-sale debt securities. The amended guidance from ASU 2016-13 requires the measurement of expected credit losses for available-for-sale debt securities held at the reporting date over the remaining life based on historical experience, current conditions, and reasonable and supportable forecasts. The Company evaluated its investment portfolio under the available-for-sale debt securities impairment model guidance and determined the Company's investment portfolio is composed of low-risk, investment grade securities and thus have not recorded an expected credit loss for its investment portfolio. Further, gross unrealized losses on available for sale securities were not material at December 31, 2023.

Accounts Receivable

Trade accounts receivable and other receivables. The allowance for doubtful accounts for trade accounts receivable is based on the Company's assessment of the collectability of accounts related to its clinics and laboratory partner customers. The Company regularly reviews the allowance by considering factors such as historical experience, the age of the accounts receivable balances, and current economic conditions that may affect a customer's ability to pay. See Note 6, *Balance Sheet Components*, for a roll-forward of the allowance for doubtful accounts related to trade accounts receivable for years ended December 31, 2023, 2022, and 2021. The Company recognizes revenue under ASC 606 and applies a constraint to the estimated variable consideration such that it is not probable that a significant reversal will occur. When assessing the total consideration expected to be received from insurance carriers and patients, a certain percentage of revenues is further constrained for estimated refunds. After applying the ASC 606 constraint, the Company assessed for credit losses and determined an incremental credit loss was not needed given the payors from whom such receivables are collectible and the relatively short duration over which the majority of receivables are collected. Accordingly, the Company currently does not have an incremental credit loss reserve nor allowance for doubtful accounts against accounts receivable for insurance and patient payors due to the average selling price calculations which incorporate these risks as net receivables are recorded.

Inventory

Inventory is recorded at the lower of cost or net realizable value, determined on a first-in, first-out basis. Inventory consists entirely of supplies, which are consumed when providing its test reports, and therefore, the Company does not maintain any finished goods inventory. The Company enters into inventory purchases commitments so that it can meet future delivery schedules based on forecasted demand for its tests.

The Company uses judgment to analyze and determine if the composition of its inventory is obsolete, slow- moving or unsalable and frequently reviews such determinations. A write down of specifically identified unusable, obsolete, slow-moving or known unsalable inventory in the period is first recognized by using a number of factors including product expiration dates and scrapped inventory. Any write-down of inventory to net realizable value establishes a new cost basis and will be maintained even if certain circumstances suggest the inventory is recoverable in subsequent periods. Costs associated with the write-down of inventory are recorded to cost of revenue on our consolidated statements of operations. The Company makes assumptions about future demand, market conditions and the release of new products that may supersede older products. However, if actual market conditions are less favorable than anticipated, additional inventory write-downs may be required.

The following is a roll-forward of the inventory reserve for the years ended December 31, 2023 and 2022.

	December 31,	
	2023	2022
	(in thousands)	
Beginning balance	$ 748	$ 988
Write-offs	(2,175)	(240)
Net additions to reserve	2,299	—
Ending balance	$ 872	$ 748

Property and Equipment

Property and equipment, including purchased and internally developed software, are stated at cost. Depreciation is calculated using the straight-line method over the estimated useful lives of the assets, which are generally three to five years determined by the classification of the property and equipment class in accordance with the Company's fixed asset policy. Leasehold improvements are amortized using the straight-line method over the estimated useful lives of the assets or the remaining term of the lease, whichever is shorter. The Company periodically reviews the useful lives assigned to property and equipment placed in service in accordance with the Company's fixed asset policy and changes the estimates of useful lives to reflect the results of such reviews.

Capitalized Software Held for Internal Use

The Company capitalizes salaries and related costs of employees and consultants who devote time to the development of internal-use software development projects. Capitalization begins during the application development stage, once the preliminary project stage has been completed, which includes successful validation and approval from management. If a project constitutes an enhancement to previously developed software, the Company assesses whether the enhancement is significant and creates additional functionality to the software, thus qualifying the work incurred for capitalization. Once the project is available for general release, capitalization ceases and the Company estimates the useful life of the asset and begins amortization. The Company periodically assesses whether triggering events are present to review internal-use software for impairment. Changes in estimates related to internal-use software would increase or decrease operating expenses or amortization recorded during the reporting period.

The Company amortizes its internal-use software over the estimated useful lives of three years. The net book value of capitalized software held for internal use was $8.7 million and $5.9 million as of December 31, 2023 and 2022, respectively. Amortization expense for amounts previously capitalized for the years ended December 31, 2023, 2022, and 2021, was $2.4 million, $0.2 million, and $1.1 million, respectively.

Impairment of Long-lived Assets

The Company evaluates its long-lived assets for indicators of possible impairment when events or changes in circumstances indicate the carrying amount of an asset may not be recoverable. The Company then compares the carrying amounts of the assets with the future net undiscounted cash flows expected to be generated by such asset. Should an impairment exist, the impairment loss would be measured based on the excess carrying value of the asset over the asset's fair value determined using discounted estimates of future cash flows.

Operating Lease Right-of-Use Assets

The Company determines if an arrangement is or contains a lease at inception and classify each lease as operating or financing. Operating lease right-of-use assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent the Company's obligation to make lease payments made during the lease term, net of any tenant improvement allowance. Operating lease right-of-use assets and liabilities are recognized at the lease commencement date based on the present value of lease payments over the lease term. In determining the present value of committed lease payments, the Company uses its incremental borrowing rate based on the information available at the lease commencement date, which includes significant assumptions made including the Company's estimated credit rating, annual percentage yields from corporate debt financings of companies of similar size and credit rating over a loan term approximating the remaining term of each lease, and government bond yields for terms approximating the remaining term of each lease in countries where the leased assets are located. Certain leases include payments of operating expenses that are dependent on the landlord's estimate, and these variable payments are therefore excluded from the lease payments used to determine the operating lease right-of-use asset and lease liability. Lease terms may include options to extend or terminate the lease when it is reasonably certain that the Company will exercise any such options. Operating lease right- of- use assets are adjusted for prepaid lease payments, lease incentives and initial direct costs incurred. Lease expense is recognized on a straight-line basis over the expected lease term.

The Company elected to not apply the recognition requirements of Topic 842 to short-term leases with terms of 12 months or less. For short-term leases, lease payments are recognized as operating expenses on a straight-line basis over the lease term.

Accumulated Other Comprehensive Income (Loss)

Comprehensive loss and its components encompass all changes in equity other than those with stockholders, and include net loss, unrealized gains and losses on available-for-sale marketable securities, and foreign currency translation adjustments.

	December 31,	
	2023	2022
	(in thousands)	
Beginning balance	$ (16,362)	$ (2,287)
Net unrealized gain (loss) on available-for-sale securities, net of tax and foreign currency translation adjustment	13,277	(14,075)
Ending balance	$ (3,085)	$ (16,362)

Revenue Recognition

The Company recognizes revenue under, ASC 606, using the following five step process:

- Identification of a contract, or contracts, with a customer;
- Identification of the performance obligations in the contract;
- Determination of the transaction price;
- Allocation of the transaction price to the performance obligations in the contract; and
- Revenue recognition when, or as, the performance obligations are satisfied

The Company uses the most likely amount method of estimating variable consideration. The total consideration which the Company expects to collect in exchange for the Company's products is an estimate and may be fixed or variable, and is primarily based on historical cash collections for tests delivered, as adjusted for current expectations. Current expectations of cash collections factor in changes in reimbursement rate trends, past events not expected to recur, and future known changes such as anticipated contractual pricing changes or changes to insurance coverage. For insurance carriers and product types with similar reimbursement characteristics, the Company uses a portfolio approach to estimate variable consideration. The Company also applies a constraint to the estimated variable consideration when it assesses it is probable that a significant reversal in the amount of cumulative revenue may occur in future periods.

When assessing the total consideration expected to be received from insurance carriers and patients, a certain percentage of revenues is further constrained for estimated refunds.

See Note 3, *Revenue Recognition,* for detailed discussions of product revenues, licensing and other revenues, and how the five steps described above are applied.

Cost of Product Revenues

The components of our cost of product revenues are material and service costs, impairment charges associated with testing equipment, personnel costs, including stock-based compensation expense, equipment and infrastructure expenses associated with testing samples, electronic medical records, order and delivery systems, shipping charges to transport samples, costs incurred from third party test processing fees, and allocated overhead such as rent, information technology costs, equipment depreciation and utilities. Costs associated with Whole Exome Sequencing ("WES") are also included, as well as labor costs, relating to our Signatera CLIA offering. Costs associated with performing tests are recorded when the test is accessioned.

Cost of Licensing and Other Revenues

The components of our cost of licensing and other revenues are material costs associated with test kits sold to clients using Constellation, the Company's cloud software product clients, development and support services relating to our strategic partnership agreements, and other costs.

Research and Development

The Company records research and development costs in the period incurred. Research and development costs consist of personnel costs, including stock-based compensation expense, contract services, cost of materials utilized in performing tests, costs of clinical trials and allocated facilities and related overhead expenses.

Advertising Costs

The Company expenses advertising costs as incurred. The Company incurred advertising costs of $1.1 million, $1.8 million, and $2.2 million for the years ended December 31, 2023, 2022, and 2021, respectively.

Product Shipment Costs

The Company expenses product shipment costs in cost of product revenues in the accompanying statements of operations. Shipping and handling costs for the years ended December 31, 2023, 2022, and 2021 were $42.2 million, $36.0 million, and $22.0 million, respectively.

Income Taxes

Income taxes are recorded in accordance with Financial Accounting Standards Board ASC *Topic 740, Income Taxes* ("ASC 740"), which provides for deferred taxes using an asset and liability approach. 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. See further discussion in Note 12, *Income Taxes*.

Stock-Based Compensation

Stock-based compensation related to stock options, restricted stock units ("RSUs"), performance-based awards, market-based awards, and stock purchase rights under an Employee Stock Purchase Plan ("ESPP") granted to the Company's employees is measured at the grant date based on the fair value of the award. The fair value is recognized as expense over the requisite service period, which is generally the vesting period of the respective awards. If awards have both a service condition and performance or market condition, then a graded attribution method is used to recognize expense. No compensation cost is recognized when the requisite service has not been met and the awards are therefore forfeited.

Employee stock-based compensation expense is calculated based on awards ultimately expected to vest and has been reduced for estimated forfeitures. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods, if actual forfeitures differ from those estimates. Non-employee stock-based compensation expense is not adjusted for estimated forfeitures up until the occurrence of the actual forfeiture of the associated awards.

The Company uses the Black-Scholes option-pricing model to estimate the fair value of stock options issued to employees and non-employees. The fair value of stock option awards is recognized as compensation expense on a straight- line basis over the requisite service period in which the awards are expected to vest and forfeitures are estimated based on historical trends at the time of grant and revised as necessary.

Stock option awards that include a service condition and a performance condition are considered expected to vest when the performance condition is probable of being met. The Black-Scholes model considers several variables and assumptions in estimating the fair value of stock-based awards. These variables include the per share fair value of the underlying common stock, exercise price, expected term, risk-free interest rate, expected annual dividend yield and the expected stock price volatility over the expected term. For all stock options granted, we calculate the expected term based on the weighted average actual terms of stock option awards. Prior to January 1, 2023, the Company determined expected volatility using the historical volatility of the stock price of similar publicly traded peer companies, and beginning January 1, 2023, the Company utilized the historical volatility of its common stock over the expected term of the award. The risk-free interest rate is based on the yield available on U.S. Treasury zero-coupon issues similar in duration to the expected term of the equity-settled award.

For stock options and performance-based awards that vest upon meeting performance conditions or market conditions in combination with performance conditions, the Company derives the requisite service period from the grant date to the date it is probable that the vesting conditions will be met.

For stock options with market conditions, the Company derives the requisite service period using the Monte Carlo simulation model. For stock options and RSUs that vest upon meeting performance conditions or market conditions in combination with performance conditions, the Company derives the requisite service period from the grant date to the date it is probable that the vesting conditions will be met.

The Monte Carlo simulation model is used to estimate the fair value of market-based condition awards. The model requires the input of the Company's expected stock price volatility, the expected term of the awards, and a risk-free interest rate. See further discussion on the valuation assumptions used under Note 9.

The Company determines the fair value of RSUs based on the closing price of our stock price, which is listed on Nasdaq, at the date of the grant.

Net Loss Per Share

Basic net loss per share is computed by dividing the net loss by the weighted-average number of common shares outstanding for the period, excluding shares subject to repurchase and without consideration of potentially dilutive securities. Diluted net loss per share is computed by giving effect to all potentially dilutive common shares outstanding for the period. For purposes of this computation, outstanding common stock options, and restricted stock units are considered to be common share equivalents. Common share equivalents are excluded from the computation in periods in which they have an anti-dilutive effect, unless the consideration of any one of them gives a dilutive effect.

Fair Value

The Company discloses the fair value of financial instruments for financial assets and liabilities for which the value is practicable to estimate. Fair value is defined as the price that would be received upon the sale of an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (exit price).

Related Party Transactions

On December 6, 2021, the Company participated along with certain other investors in the series B financing of MyOme, Inc. ("MyOme"), and purchased preferred shares and warrants in exchange for a cash payment of approximately $4.0 million, which represents 5.25% of MyOme on a fully diluted basis. The Company does not hold a seat on MyOme's board of directors. The Company's investment in MyOme is recorded at cost and no impairment was identified as of December 31, 2023. The following are the Company's related persons and the basis of each such related person's relationship with MyOme:

- Matthew Rabinowitz, the Company's executive chairman and co-founder, is the chairman of the board and founder of MyOme, and a beneficial holder of approximately 28.6% of the outstanding shares of MyOme on a fully dilutive basis;

- Jonathan Sheena, the Company's co-founder and a member of the Company's board of directors, is a stockholder and a member of the board of directors of Myome;

- Daniel Rabinowitz, the Company's Secretary and Chief Legal Officer, is a stockholder of MyOme; and

- Roelof Botha, the Lead Independent Director of the Company's board of directors, is a managing member of Sequoia Capital. Certain funds affiliated with Sequoia Capital also participated in MyOme's series B financing.

None of the related party investments in MyOme by our executives and directors noted above were at the behest of the Company nor funded by the Company.

In February 2024, the Company entered into a collaboration and commercialization agreement (the "Collaboration Agreement") with MyOme pursuant to which the parties will partner to offer certain genetic testing services to be developed and funded solely by MyOme and overseen by a joint steering committee. In connection with the Collaboration Agreement, the Company received a 10-year warrant to purchase 3,058,485 shares of MyOme's common stock at a strike price of $0.25 per share, which will vest upon a MyOme liquidity event (as defined in MyOme's certificate of incorporation). Subject to the Company's achievement of certain commercialization milestones, the Company may receive additional warrants to purchase MyOme's Series B Preferred Stock. To the extent the genetic testing services are successfully commercialized, the Company will owe certain royalty payments to MyOme.

Risk and Uncertainties

Financial instruments that potentially subject the Company to credit risk consist of cash, cash equivalents, and restricted cash, accounts receivable and investments. The Company limits its exposure to credit loss by placing its cash in financial institutions with high credit ratings. The Company's cash may consist of deposits held with banks that may at times exceed federally insured limits. The Company performs evaluations of the relative credit standing of these financial institutions and limits the amount of credit exposure with any one institution.

For the years ended December 31, 2023, 2022, and 2021, there were no customers exceeding 10% of total revenues on an individual basis. As of December 31, 2023 and 2022, there were no customers with an outstanding balance exceeding 10% of net accounts receivable.

For the years ended December 2023, 2022, and 2021, approximately 12.8%, 11.2%, and 5.1%, respectively, of total revenue were paid by Medicare on behalf of multiple customers. For the years ended December 2023 and 2022, approximately 13.9% and 14.1%, respectively, of accounts receivable expected to be paid by Medicare on behalf of multiple customers.

Recent Accounting Pronouncements

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board ("FASB") under its accounting standard codifications or other standard setting bodies and adopted by the Company as of the specified effective date. Unless otherwise discussed below, the Company believes that the impact of accounting standards updates recently issued that are not yet effective will not have a material impact on its financial position or results of operations upon adoption.

New Accounting Pronouncements Not Yet Adopted

In March 2020, ASU 2020-04, *Reference Rate Reform (Topic 848)* was issued which provides temporary optional guidance to ease the potential burden in accounting for reference rate reform. The new guidance provides optional expedients and exceptions for applying generally accepted accounting principles to transactions affected by reference rate reform if certain criteria are met. These transactions include contract modifications, hedging relationships, and sale or transfer of debt securities classified as held-to-maturity. The Company does not expect adoption of this standard to have a material impact on its consolidated financial statements.

In November 2023, ASU 2023-07, *Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures*, was issued which requires disclosure of incremental segment information on an interim and annual basis. This ASU is effective for fiscal years beginning after December 15, 2023, and interim periods within fiscal periods beginning after December 15, 2024, and requires retrospective application to all prior periods presented in the financial statements. The Company is currently evaluating the impact of the guidance on the consolidated financial statements.

In December 2023, ASU 2023-09, *Income Taxes - Improvements to Income Tax Disclosures*, was issued, which requires enhanced disclosures in connection with an entity's effective tax rate reconciliation and income taxes paid disaggregated by jurisdiction. The amendments are effective for annual periods beginning after December 15, 2024. The Company does not expect the adoption of the amendments to have a significant impact on its consolidated financial statements.

3. Revenue Recognition

The Company recognizes revenues when, or as, performance obligations in the contracts are satisfied, in the amount reflecting the expected consideration to be received from the goods or services transferred to the customers.

Product Revenues

Product revenues are derived by performing genetic testing services and the Company's performance obligation is complete when test results are delivered to a clinic or patient, who are considered the customer for such services as further discussed below.

Additionally, the Company enters into agreements with pharmaceutical companies to utilize the Company's Signatera tests typically to study new cancer treatments or to validate the outcomes of clinical trials for which the pharmaceutical companies are identified as customers. Such arrangements generally involve performing whole exome sequencing ("WES") services and the testing of patient samples to detect cancer mutations using its Signatera test. In addition to performing Signatera tests, these agreements typically include certain activities to fulfill the contract, such as customer data setup and management and ongoing reporting. Each test result is billable to customers upon delivery and the personalized cancer profile also makes each test distinct within the context of the contract as customers can exercise control over the test results upon delivery. Accordingly, the Company recognizes the test processing revenue as individual test results are delivered to customers.

For certain contracts with pharmaceutical companies where the Company is developing a companion diagnostic test in addition to performing regular testing services, revenue is primarily recognized proportionally as services are performed and/or tests are delivered.

A performance obligation represents a promise in a contract to transfer a distinct good or service to a customer, which represents a unit of accounting in accordance with ASC 606. A performance obligation is considered distinct from other obligations in a contract when it provides a benefit to the customer either on its own or together with other resources that are readily available to the customer and is separately identified in the contract. The Company considers a performance obligation satisfied once the Company has transferred control of a good or service to the customer, meaning the customer has the ability to use and obtain the benefit of the good or service. A portion of the consideration should be allocated to each distinct performance obligation and recognized as revenue when, or as, the performance obligation is satisfied. The Company evaluates its contracts with laboratory partners and patients and identifies the performance obligations in those contracts, which are the delivery of the test results.

The total consideration which the Company expects to collect in exchange for the Company's products is an estimate and may be fixed or variable. Consideration includes reimbursement from both patients and insurance carriers, adjusted for variable consideration related to disallowed cases, percent of patient responsibility collected, refunds and doubtful accounts, and is estimated using the most likely method. For insurance carriers and product types with similar reimbursement characteristics, the Company uses a portfolio of relevant historical data to estimate variable consideration and total collections for the Company's products. The Company constrains the estimated variable consideration when it assesses it is probable that a significant reversal in the amount of cumulative revenue recognized may occur in future periods. The consideration expected from laboratory partners usually includes a fixed amount, but it can be variable depending on the volume of tests performed, and the Company determines the variable consideration using the expected value approach. For laboratory partners and patients, the Company allocates the total consideration to a single performance obligation, which is the delivery of the test results to the customers.

When assessing the total consideration expected to be received from insurance carriers and patients, a certain percentage of revenues is further constrained for estimated refunds.

The Company enters into contracts with insurance carriers with primarily payment terms related to tests provided to the patients who have health insurance coverage. Insurance carriers are considered as third-party payers on behalf of the patients, and the patients are considered as the customers who receive genetic test services. Tests may be billed to insurance carriers, patients, or a combination of insurance carriers and patients. Further, the Company sells tests to a number of domestic and international laboratory partners and identifies the laboratory partners as customers provided that there is a test services agreement between the two parties.

The Company generally bills an insurance carrier, a laboratory partner or a patient upon delivery of test results. The Company also bills patients directly for out-of-pocket costs involving co-pays and deductibles that they are responsible for. The Company generally collects approximately 90% of tests billed to insurance carriers, laboratory distribution partners, and directly to patients within 9 months with the remaining collections generally taking an additional 6 months. The Company may or may not get reimbursed for the full amount billed. Further, the Company may not get reimbursed at all for tests performed if such tests are not covered under the insurance carrier's reimbursement policies or the Company is not a qualified provider to the insurance carrier, or if the tests were not previously authorized.

Product revenue is recognized in an amount equal to the total consideration (as described above) expected to be received at a point in time when the test results are delivered. Approximately 90% of cash collections attributable to such product revenue occurs within 9 months with the remaining collections generally taking an additional 6 months. During this time, management routinely reassesses its estimates of actual to expected cash collections, which are based on historical collection rates and adjusted for current information and trends. To the extent cash collections for tests delivered in prior periods are trending higher than expectations, the Company will increase revenue recognized when sufficient evidence is obtained to conclude the additional revenue will not result in a reversal of revenue in a future period. If cash collections for tests delivered in prior periods are trending below expectations, the Company will reduce revenue to the amount expected to be collected based on the latest information and expectations. Increases or decreases to the amount of cash expected to be collected for tests delivered in prior periods are recognized in product revenue with a corresponding

impact to accounts receivable during the period such determination is made. During the years ended December 31, 2023, 2022 and 2021, the Company increased revenue by a net of $5.3 million, $19.5 million and $12.5 million, respectively, for changes in estimate that increased revenue for tests delivered in prior periods that were fully collected, which increased revenue and decreased net loss by a corresponding amount and decreased loss per share by $0.05, $0.20 and $0.14, respectively.

Product revenue is constrained via refunds estimated to be paid to insurance carriers. Such refunds are recognized in accrued liabilities until they are either paid to the respective insurance carrier or it is determined the refund will not ultimately be paid, at which time the related accrual is reduced with a corresponding increase to revenue. During the year ended December 31, 2023, 2022 and 2021, the reserves for refunds to insurance carriers were reduced and product revenue increased by $13.1 million, $5.8 million and $5.7 million, respectively, for amounts the Company determined would not be refunded to insurance carriers. The increased revenue and corresponding decreased net loss resulted in a decreased loss per share by $0.11, $0.06 and $0.06 for the year ended December 31, 2023, 2022 and 2021, respectively.

Licensing and Other Revenues

The Company recognizes licensing revenues from its cloud-based distribution service offering, Constellation, by granting licenses to its licensees to use certain of the Company's proprietary intellectual properties and cloud-based software and IVD kits. The Company also recognizes revenues from its strategic collaboration agreements, such as those with BGI Genomics Co., Ltd. and Foundation Medicine, Inc. The Company recognizes licensing revenue through agreements with pharmaceutical companies in support of potential clinical trials managed by the pharmaceutical companies. Other revenues include data sales, patient referral services and royalties.

Constellation

The laboratory partners with whom the Company enters into a licensing arrangement represent the licensees and are identified as customers. The licensees do not have the right to possess the Company's software, but rather receive services through the cloud software. These arrangements often include: (i) the delivery of the services through the cloud software, (ii) the necessary support and training, and (iii) the IVD kits to be consumed as tests are processed. The Company does not consider the software as a service, the support or the training as being distinct in the context of such arrangements, and therefore they are combined as a single performance obligation. The software, support and training are delivered simultaneously to the licensees over the term of the arrangement.

The Company bills the majority of licensees, who process the tests in their laboratories, a fixed price for each test processed. Licensing revenues are recognized as the performance obligations are satisfied (i.e., upon the delivery of each test) and reported in licensing and other revenues in the Company's statements of operations and comprehensive loss.

Qiagen

In March 2018, the Company entered into a License, Development and Distribution Agreement (the "Qiagen Agreement") with Qiagen under which the Company granted Qiagen a license to develop, manufacture, distribute and commercialize NGS-based genetic testing assays and sequencing systems utilizing such assays, which incorporate the Company's proprietary technology. Effective in March 2020, the Company terminated the Qiagen Agreement. Subsequently, in March 2021, the Company and Qiagen signed a Termination and Settlement Agreement where the Company agreed to refund a net $10.0 million as a result of the termination. The remaining $28.6 million of deferred revenue was recognized as licensing and other revenue in the first quarter of 2021.

BGI Genomics

In February 2019, the Company entered into a License Agreement (the "BGI Genomics Agreement") with BGI Genomics to develop, manufacture, and commercialize NGS-based genetic testing assays for clinical and commercial use. The BGI Genomics Agreement has a term of ten years and expires in February 2029. Pursuant to the BGI Genomics Agreement, the Company licensed its intellectual property to and provided development services for BGI. Following completion of development services, the Company began providing assay interpretation services over the term of the

agreement. Revenue associated with the development services performance obligation was recognized over time using the input method, based on costs incurred to perform the development services, since the level of costs incurred over time best reflect the transfer of development services. Revenue associated with the assay interpretation services will be recognized upon delivery of these services. Funds received in advance are recorded as deferred revenue and will be recognized as the related services are delivered.

In accordance with ASC 340-40, any incremental costs incurred to obtain a contract with a customer are required to be capitalized and amortized over the period in which the goods and services are transferred to the customer. The incremental costs incurred in connection with the BGI Genomics arrangement are not material on an accumulated basis and therefore have not been capitalized but have been expensed as incurred.

The initial transaction price was primarily comprised of license and milestone fees. The Company constrains the estimated variable consideration when it assesses it is probable that a significant reversal in the amount of cumulative revenue recognized may occur in future periods. Certain milestone and license fees were constrained and not included in the transaction price due to the uncertainties of research and development. The Company re-evaluates the transaction price, including the estimated variable consideration included in the transaction price and all constrained amounts, in each reporting period and as uncertain events are resolved or other changes in circumstances occur. The allocation of the transaction price was performed based on standalone selling prices, which are based on estimated amounts that the Company would charge for a performance obligation if it were sold separately.

According to the BGI Genomics Agreement, the Company is entitled to a total of $50.0 million, comprised of upfront technology license fees, prepaid royalties relating to future sales of licensed products and performance of assay interpretation services, and milestone payments. Due to uncertainties in achieving certain milestones, $6.0 million of the $50.0 million was constrained. A net of $44.0 million has been collected by the Company in cash, which includes $20.0 million in prepaid royalties.

The Company concluded that the license is not a distinct performance obligation as it does not have a stand-alone value to BGI Genomics apart from the related development services. Therefore, license and related development services, for each of the NIPT and Oncology products, representing two separate performance obligations, to which $24.0 million of transaction consideration was allocated. Of this amount, $0.1 million, $8.0 million and $0.6 million were recognized in the years ended December 31, 2023, 2022 and 2021, respectively. This performance obligation was fully satisfied in March 2023 and no further related amounts will be recognized as revenue.

As of December 31, 2023, the Company's performance obligation to provide ongoing NIPT assay interpretation services was removed. Therefore, the Company now has a single remaining performance obligation related to Oncology assay interpretation services, to which $20.0 million of transaction consideration was allocated and prepaid by BGI Genomics. During the year ended December 31, 2023, the Company recognized $1.5 million related to oncology assay interpretation services, of which $1.2 million was recognized against deferred royalties. The Company did not recognize revenue in 2022 and 2021. The Company currently has $18.8 million in deferred revenue as of December 31, 2023.

As required by the BGI Genomics Agreement, in June 2019 the Company prepaid $6.0 million to BGI Genomics for future sequencing services and $4.0 million for future sequencing equipment. These advance payments are for equipment and services to be received in future periods, which was assessed as a standalone transaction that did not reduce revenue, aggregated to $10.0 million and was originally recorded in long-term advances on the Company’s Consolidated Balance Sheet and will be periodically assessed for impairment. During the year ended December 31, 2023, $5.1 million in equipment and services was received, which brought the remaining advanced payments to $4.9 million, with $3.1 million recorded in prepaid expenses and other current assets and $1.8 million recorded in other assets.

Foundation Medicine, Inc.

In August 2019, the Company entered into a License and Collaboration Agreement (the “Foundation Medicine Agreement”) with Foundation Medicine to develop and commercialize personalized circulating tumor DNA monitoring assays, for use by biopharmaceutical and clinical customers who order Foundation Medicine’s FoundationOne CDx. The Foundation Medicine Agreement has an initial term of five years, expiring in August 2024, with automatic renewals

thereafter for successive one-year terms, unless the Foundation Medicine Agreement is earlier terminated in accordance with its terms. Natera and Foundation Medicine will share the revenues generated from both biopharmaceutical and clinical customers in accordance with the terms of the Foundation Medicine Agreement.

Pursuant to the Foundation Medicine Agreement, the Company will provide development services that are required to customize its proprietary Signatera test to work with Foundation Medicine's FoundationOne CDx in conjunction with granting the use of the Company's intellectual property. Following completion of those development services, the Company is currently providing assay testing services over the term of the agreement. The intellectual property has been licensed to Foundation Medicine for the customized test. In addition, the Company is responsible for delivering clinical study plans in order to demonstrate efficacy of the customized test which commenced in the second quarter of 2021. Revenues associated with each of the performance obligations are recognized over time using the input method, based on costs incurred to perform the development services, since the level of costs incurred over time best reflect the transfer of development services. Revenue associated with the assay testing services will be recognized upon delivery of these services. Funds received in advance are recorded as deferred revenue and will be recognized as the related services are delivered.

The initial transaction price was primarily comprised of license and milestone fees. The Company constrains the estimated variable consideration when it assesses it is probable that a significant reversal in the amount of cumulative revenue recognized may occur in future periods. Certain milestone fees were constrained and not included in the transaction price due to the uncertainties of research and development. The Company re-evaluates the transaction price, including the estimated variable consideration included in the transaction price and all constrained amounts, in each reporting period and as uncertain events are resolved or other changes in circumstances occur. The allocation of the transaction price was performed based on standalone selling prices, which are based on estimated amounts that the Company would charge for a performance obligation if it were sold separately.

The Company is entitled to a total of $32.0 million, comprised of upfront technology license fees, prepaid royalties relating to future sales of licensed products and performance of assay interpretation services, and milestone payments. $7.7 million is constrained due to uncertainties in achieving certain milestones. A net of $24.3 million has been collected by the Company in cash, which includes $5.0 million of prepaid royalties.

The Company concluded that the license is not a distinct performance obligation as it does not have a stand-alone value to Foundation Medicine apart from the related development services. Therefore, license and related development services, for Oncology products, represent a single performance obligation, to which $19.3 million of transaction consideration was allocated. Of this amount, $0.2 million, $3.5 million, and $8.0 million were recognized in the years ended December 31, 2023, 2022 and 2021, respectively. This performance obligation was fully satisfied in March 2023 and no further related amounts will be recognized as revenue.

Royalties related to assay interpretation services represent separate performance obligations for Oncology products, to which $5.0 million of transaction consideration was allocated and prepaid by Foundation Medicine. During the years ended December 31, 2023, 2022, and 2021, the Company recognized $1.0 million, $0.4 million and $0.4 million, respectively, related to oncology assay interpretation services. The Company currently has $3.2 million in deferred revenue as of December 31, 2023.

Disaggregation of Revenues

The following table shows disaggregation of revenues by payer types:

	Year Ended December 31,		
	2023	2022	2021
		(in thousands)	
Insurance carriers	$ 954,155	$ 690,754	$ 492,563
Laboratory partners	98,891	94,910	100,019
Patients	29,525	34,558	32,904
Total revenues	$ 1,082,571	$ 820,222	$ 625,486

The following table presents total revenues by geographic area based on the location of the Company's payers:

	Year ended December 31,		
	2023	2022	2021
		(in thousands)	
United States	$ 1,047,636	$ 785,849	$ 590,872
Americas, excluding U.S.	4,908	3,705	4,047
Europe, Middle East, India, Africa	22,811	16,640	20,429
Asia Pacific and Other	7,216	14,028	10,138
Total	$ 1,082,571	$ 820,222	$ 625,486

The following table summarizes the Company's beginning and ending balances of accounts receivable and deferred revenues:

	Balance at December 31, 2023	Balance at December 31, 2022
	(in thousands)	
Assets:		
Accounts receivable	$ 278,289	$ 244,385
Liabilities:		
Deferred revenue, current portion	$ 16,612	$ 10,777
Deferred revenue, long-term portion	19,128	20,001
Total deferred revenues	$ 35,740	$ 30,778

The following table shows the changes in the balance of deferred revenues during the period:

	Balance at December 31, 2023	Balance at December 31, 2022
	(in thousands)	
Beginning balance	$ 30,778	$ 28,722
Increase in deferred revenues	35,573	28,978
Reclasses from deferred revenues to other short-term liabilities	(522)	(337)
Revenue recognized during the period that was included in deferred revenues at the beginning of the period	(10,564)	(8,782)
Revenue recognized from performance obligations satisfied within the same period	(19,525)	(17,803)
Ending balance	$ 35,740	$ 30,778

During the year ended December 31, 2023, revenue recognized that was included in the deferred revenue balance at the beginning of the period totaled $10.6 million with approximately $1.3 million related to BGI Genomics and Foundation Medicine, and the remaining $9.3 million related to genetic testing services. During the year ended December 31, 2023, $19.5 million was recognized as deferred revenue and later earned as revenue in the same period with approximately $1.2 million related to BGI Genomics and Foundation Medicine, and the remaining $18.3 million related to genetic testing services. The current portion of deferred revenue includes $13.7 million from genetic testing services, $1.7 million from Foundation Medicine and $1.2 million from the BGI Genomics agreement. The non-current portion of deferred revenue includes $17.6 million from the BGI Genomics agreement and $1.5 million from Foundation Medicine.

4. Fair Value Measurements

The Company's financial assets and liabilities carried at fair value are comprised of investment assets that include money market and investments.

The fair value accounting guidance requires that assets and liabilities be carried at fair value and classified in one of the following three categories:

Level I: Quoted prices in active markets for identical assets and liabilities that the Company has the ability to access.

Level II: Observable market-based inputs or unobservable inputs that are corroborated by market data, such as quoted prices, interest rates, and yield curves; and

Level III: Inputs that are unobservable data points that are not corroborated by market data.

This hierarchy requires the Company to use observable market data, when available, and to minimize the use of unobservable inputs when determining fair value.

Assets and Liabilities That Are Measured at Fair Value on a Recurring Basis

The following table represents the fair value hierarchy for the Company's financial assets and financial liabilities measured at fair value on a recurring basis:

	December 31, 2023				December 31, 2022			
	Level I	Level II	Level III	Total	Level I	Level II	Level III	Total
				(in thousands)				
Financial Assets:								
Cash, cash equivalents and restricted cash[(1)]	642,095	—	—	642,095	466,091	—	—	466,091
U.S. Treasury securities	200,418	—	—	200,418	346,057	—	—	346,057
Corporate bonds and notes	—	—	—	—	—	23,529	—	23,529
Municipal securities	—	36,464	—	36,464	—	62,715	—	62,715
Total financial assets	$ 842,513	$ 36,464	$ —	$ 878,977	$ 812,148	$ 86,244	$ —	$ 898,392

(1) Cash equivalents includes money market deposits, liquid demand deposits, and other liquid investments with original maturity dates less than three months.

Fair Value of Short-Term and Long-Term Debt:

As of December 31, 2023, the estimated fair value of the total principal outstanding and accrued interest of the Credit Line, which are not presented at fair value on the Consolidated Balance Sheets for both December 31, 2023 and 2022, was $80.4 million, and was based upon observable Level 2 inputs, including the interest rate based on the 30-day Secured Overnight Financing Rate ("SOFR") average, plus 0.5%.

As of December 31, 2023, the estimated fair value of the Convertible Notes, which are not presented at fair value on the Consolidated Balance Sheets as of December 31, 2023 and 2022, was $491.8 million and $358.4 million, respectively, was based upon observable Level 2 inputs, including pricing information from recent trades of the Convertible Notes. See Note 10, *Debt*, for additional details.

5. Financial Instruments

The Company elected to invest a portion of its cash assets in conservative, income earning, and liquid investments. Cash, cash equivalents, restricted cash and investments, which are classified as available-for-sale securities, consisted of the following:

	December 31, 2023				December 31, 2022			
	Amortized Cost	Gross Unrealized Gain	Gross Unrealized (Loss)	Estimated Fair Value	Amortized Cost	Gross Unrealized Gain	Gross Unrealized (Loss)	Estimated Fair Value
				(in thousands)				
Cash, cash equivalents and restricted cash [2]	642,095	—	—	642,095	466,091	—	—	466,091
U.S. Treasury securities [1]	201,522	14	(1,118)	200,418	358,385	—	(12,328)	346,057
Corporate bonds and notes [1]	—	—	—	—	24,045	—	(516)	23,529
Municipal securities [1]	38,091	—	(1,627)	36,464	65,973	1	(3,259)	62,715
Total	$ 881,708	$ 14	$ (2,745)	$ 878,977	$ 914,494	$ 1	$ (16,103)	$ 898,392
Classified as:								
Cash, cash equivalents and restricted cash [2]				$ 642,095				$ 466,091
Short-term investments				236,882				432,301
Total				$ 878,977				$ 898,392

(1) Per the Company's investment policy, all debt securities are classified as short-term investments irrespective of holding period.
(2) Cash equivalents includes liquid demand deposits, money market funds, and other liquid investments having an original maturity of less than three months.

The Company invests in U.S. Treasuries, U.S. agency and high quality municipal bonds which mature at par value and are all paying their coupons on schedule. The Company has therefore concluded there is currently no other than temporary impairment of its investments and will continue to recognize unrealized gains and losses in other comprehensive income (loss). The Company did not sell any investments in the year ending December 31, 2023. $248.5 million of investments were sold in the year ended December 31, 2022 resulting in a gross realized losses upon sales of investments of $0.9 million. The Company uses the specific investment identification method to calculate realized gains and losses and amounts reclassified out of other comprehensive income to net income. As of December 31, 2023, the Company had 19 investments in an unrealized loss position in its portfolio. Gross unrealized losses were not material as of December 31, 2023. As of December 31, 2022, gross unrealized losses were primarily due to declines in the value of fixed rate instruments as interest rates in the broader market increased, and were not indictive of a decline in the credit worthiness of the underlying issuers. Accordingly, the Company did not record a credit loss reserve as of December 31, 2022.

The following table presents debt securities available-for-sale that were in an unrealized loss position as of December 31, 2023, aggregated by major security type and length of time in a continuous loss position. There were no debt securities available-for-sale in an unrealized loss position for less than 12 months as of December 31, 2023.

	Total	
	Fair Value	Unrealized Loss
	(in thousands)	
U.S. Treasury securities	$ 78,908	$ (1,118)
Corporate bonds and notes	—	—
Municipal securities	36,464	(1,627)
Total	$ 115,372	$ (2,745)

The following table summarizes the Company's portfolio of available-for-sale securities by contractual maturity as of December 31, 2023:

	December 31, 2023	
	Amortized Cost	Fair Value
	(in thousands)	
Less than or equal to one year	$ 216,548	$ 215,095
Greater than one year but less than five years	23,065	21,787
Total	$ 239,613	$ 236,882

6. Balance Sheet Components

Allowance for Doubtful Accounts

The following is a roll-forward of the allowances for doubtful accounts related to trade accounts receivable for the years ended December 31, 2023, 2022 and 2021:

	December 31,		
	2023	2022	2021
		(in thousands)	
Beginning balance	$ 3,830	$ 2,429	$ 4,220
Provision for doubtful accounts	2,645	1,770	(156)
Write-offs	6	(369)	(1,635)
Total	$ 6,481	$ 3,830	$ 2,429

Property and Equipment, net

The Company's property and equipment consisted of the following:

	Useful Life	December 31, 2023	December 31, 2022
		(in thousands)	
Machinery and equipment	3-5 years	$ 85,626	$ 66,262
Computer equipment	3 years	1,850	1,308
Purchased and capitalized software held for internal use	3 years	11,636	5,464
Leasehold improvements	Lesser of useful life or lease term	38,999	29,747
Construction-in-process		29,392	25,370
		167,503	128,151
Less: Accumulated depreciation and amortization		(56,293)	(35,698)
Total Property and Equipment, net		$ 111,210	$ 92,453

The Company's property and equipment are mostly located in the United States.

During the years ended December 31, 2023, 2022, and 2021, depreciation expense of $22.7 million, $16.7 million, $11.3 million was recorded, respectively. The Company did not incur any material impairment charges during the years ended December 31, 2023, 2022, and 2021.

As of December 31, 2023, 2022, and 2021, the Company's consolidated balance sheets included $5.5 million, $4.7 million, and $3.5 million, respectively, of capitalized cloud-based implementation costs recorded as other assets within the Company's consolidated balance sheets. These balances primarily consist of capitalized implementation costs

related to the enterprise resource planning system which the Company implemented in 2022. Accumulated amortization associated with these assets was $2.5 million, $0.9 million, and $1.5 million as of December 31, 2023, 2022, and 2021, respectively. The net book value of these capitalized cloud-based implementation was $3.0 million, $3.8 million, and $2.1 million for the years ended December 31, 2023, 2022, and 2021, respectively.

Accrued Compensation

The Company's accrued compensation consisted of the following:

	December 31, 2023	December 31, 2022
	(in thousands)	
Accrued paid time off	$ 3,121	$ 2,930
Accrued commissions	10,522	11,821
Accrued bonuses	24,651	20,426
Other accrued compensation	7,563	8,833
Total accrued compensation	$ 45,857	$ 44,010

Other Accrued Liabilities

The Company's other accrued liabilities consisted of the following:

	December 31, 2023	December 31, 2022
	(in thousands)	
Reserves for refunds to insurance carriers	$ 23,245	$ 18,948
Accrued charges for third-party testing	14,823	17,036
Testing and laboratory materials from suppliers	11,229	13,281
Marketing and corporate affairs	10,085	8,943
Legal, audit and consulting fees	43,897	36,710
Accrued shipping charges	3,646	485
Sales and income tax payable	3,731	4,319
Accrued third-party service fees	7,111	6,631
Clinical trials and studies	12,126	23,301
Operating lease liabilities, current portion	11,621	7,639
Property and equipment purchases	4,316	1,821
Other accrued interest	1,078	1,078
Other accrued expenses	2,497	4,022
Total other accrued liabilities	$ 149,405	$ 144,214

Reserves for refunds to insurance carriers include overpayments from and amounts to be refunded to insurance carriers, and additional amounts that the Company estimates for potential refund requests during the period. When and if these previously accrued amounts are no longer required based on actual refunds requested, any remaining reserve amounts are released. When the Company releases these previously accrued amounts, they are recognized as product revenues in the statements of operations and comprehensive loss.

The following table summarizes the reserve balance and activities for refunds to insurance carriers for the years ended December 31, 2023 and 2022:

	December 31, 2023	December 31, 2022
	(in thousands)	
Beginning balance	$ 18,948	$ 17,210
Additional reserves	14,974	23,717
Refunds to carriers	(1,583)	(1,800)
Reserves released to revenue	(9,094)	(20,179)
Ending balance	$ 23,245	$ 18,948

7. Leases

Operating Leases

In September 2015, the Company entered into a long-term lease agreement for laboratory and office space totaling approximately 94,000 square feet in Austin, Texas. The original lease term was 132 months beginning in December 2015 and expiring in November 2026 with monthly payments beginning in December 2016. In December 2021, the Company entered into an amendment of the Austin lease agreement which extended the lease of the current premises through March 2033. The amendment also includes two additional office spaces (the "First Expansion Premises" and the "Second Expansion Premises"). The First Expansion Premises consists of 32,500 rentable square feet and commenced in February 2022. The Second Expansion Premises consists of 65,222 rentable square feet and commenced in September 2022. The terms of the First and Second Expansion Premises expire in March 2033.

In October 2016, the Company entered into a lease directly with its landlord for laboratory and office spaces at its facilities located in San Carlos, California. The Company currently occupies approximately 136,000 square feet comprised of two office spaces (the "First Space" and the "Second Space"). The First Space covers approximately 88,000 square feet, and the Second Space totals approximately 48,000 square feet. In January 2021, the Company entered into an amendment of the lease to extend the term for 48 months to October 2027. The combined annual rent for the First Space and Second Space will be $9.3 million commencing in October 2023.

The Company entered into a lease agreement commencing June 2018 for its cord blood tissue storage facility in Tukwila, Washington that covers approximately 10,000 square feet. The lease term is 62 months and expired in July 2023. The Company had the option to extend this lease for five years, and the fair market rent upon renewal was not determinable. However, since the Company sold its business related to cord blood and tissue storage in September 2019, the Company has subleased the facility and did not exercise its option to renew the facility upon expiration.

The Company entered into a lease agreement in November 2020 to lease 11,395 square feet of space located in South San Francisco, California over a 36-month term. The premises are used for general office, laboratory and research use. The annual lease payment starts at $0.9 million and increases annually commencing in December 2021. In December 2022, the Company exercised the renewal option of the South San Francisco lease agreement. In January 2023, the Company entered in an amendment to extend the lease term of the South San Francisco premises by three years, through November 2026.

The Company entered into a lease agreement in September 2023 to lease 16,319 square feet of space located in Pleasanton, California over a 60-month term. The premises will be used for laboratory and research use and commenced in December 2023. The annual lease payment starts at $0.5 million and increases annually.

As part of the IPR&D asset acquisition in September 2021, the Company inherited a 24-month lease for 7,107 square feet of laboratory space in Canada. The annual lease payment starts at $0.2 million and expired in August 2023.

The Company has also historically entered into leases of individual workspaces and storage spaces at various locations on both a month-to-month basis without an established lease term, and more recently for certain locations, has committed to terms approximating one to five years. For the facilities without a committed lease term, the Company has elected to not recognize them as right-of-use assets on the consolidated balance sheets as they are all considered short-term leases. For individual workspaces where the committed lease term exceeds one year, the Company has recorded a right-of-use asset on the consolidated balance sheets.

For the year ended December 31, 2023, the Company recorded noncash activities of $2.1 million primarily related to additional right-of-use assets primarily as a result of the Pleasanton, California lease. For the year ended December 31, 2022, the Company recorded noncash activities of $22.1 million primarily related to additional right-of-use assets of which $20.1 million was a result of the first and second Austin expansion premises.

The operating lease right-of-use assets are classified as noncurrent assets in the balance sheet. The corresponding lease liabilities are separated into current and long-term portions for the years ending December 31, 2023 and 2022 as follows:

	December 31, 2023	December 31, 2022
	(in thousands)	
Operating lease liabilities, current portion included in other accrued liabilities	$ 11,621	$ 7,639
Operating lease liabilities, long-term portion	67,025	76,577
Total operating lease liabilities	$ 78,646	$ 84,216

The initial recognition of the operating lease liabilities was measured as the present value of the future minimum lease payments using a discount rate determined as of January 1, 2019. The operating right-of-use assets was calculated as the operating lease liabilities discounted at the present value, less the amount of unamortized tenant improvement allowance and deferred rent. The discount rate used was the Company's incremental borrowing rate given that the implicit rate to each lease was not readily determinable. In accordance with ASC 842, the incremental borrowing rate was estimated as the annual percentage yield resulting from a corporate debt financing over a loan term approximating the remaining term of each lease, with the effect of certain credit risk rating. As of December 31, 2023, the weighted-average remaining lease term was 6.69 years and the weighted-average discount rate was 6.8%.

The Company continues to recognize lease expense on a straight-line basis. The lease expense includes the amortization of the right-of-assets with the associated interest component estimated by applying the effective interest method. Total lease expense recognized in the statements of operations and comprehensive loss were $14.5 million, $13.8 million, and $10.9 million for the years ended December 31, 2023, 2022, and 2021, respectively. Cash paid for amounts in the measurement of operating lease liabilities totaled $12.4 million, $9.4 million, and $10.3 million for the years ended December 31, 2023, 2022, and 2021, respectively.

The present value of the future minimum lease payments under all non-cancellable operating leases as of December 31, 2023 is as follows:

	Operating Leases
	(in thousands)
Year ending December 31:	
2024	$ 16,554
2025	16,899
2026	17,263
2027	14,223
2028	6,590
2029 and thereafter	27,924
Total future minimum lease payments	99,453
Less: imputed interest	(20,807)
Operating lease liabilities	$ 78,646

8. Commitments and Contingencies

Legal Proceedings

The Company is involved in legal matters, including investigations, subpoenas, demands, disputes, litigation, requests for information, and other regulatory or administrative actions or proceedings, including those with respect to intellectual property, testing and test performance, billing, reimbursement, marketing, short seller and media allegations, employment, and other matters.

An independent committee of the Company's board of directors initiated and has completed an internal investigation into the allegations made in a March 2022 short seller report, with the assistance of the law firm of WilmerHale LLP. WilmerHale had access to company executives, personnel, records, communications, and documents. Based on the investigation, the independent committee, on behalf of the board, has concluded that the allegations of wrongdoing against the Company in the report were unfounded.

The Company is responding to ongoing regulatory and governmental investigations, subpoenas and inquiries, and contesting its current legal matters, but cannot provide any assurance as to the ultimate outcome with respect to any of the foregoing. There are many uncertainties associated with these matters. Such matters may cause the Company to incur costly litigation and/or substantial settlement charges, divert management attention, result in adverse judgments, fines, penalties, injunctions or other relief, and may result in loss of customer or investor confidence regardless of their merit or ultimate outcome. In addition, the resolution of any intellectual property litigation may require the Company to make royalty payments, which could adversely affect gross margins in future periods. If any of the foregoing were to occur, the Company's business, financial condition, results of operations, cash flows, prospects, or stock price could be adversely affected.

The Company assesses legal contingencies to determine the degree of probability and range of possible loss for potential accrual in its financial statements. When evaluating legal contingencies, the Company may be unable to provide a meaningful estimate due to a number of factors, including the procedural status of the matter in question, the presence of complex or novel legal theories, and/or the ongoing discovery and development of information important to the matters. In addition, damage amounts claimed in litigation or other matters may be unsupported, exaggerated or unrelated to possible outcomes, and as such are not meaningful indicators of its potential liability. Loss contingencies, including claims and legal actions arising in the ordinary course of business, are recorded as liabilities when the likelihood of loss is probable and an amount or range of loss can be reasonably estimated. During the periods presented, the Company does not believe there are such matters that will have a material effect on its financial condition.

Intellectual Property Litigation Matters.

The Company has been involved in two patent litigations against CareDx, Inc. ("CareDx") in the United States District Court for the District of Delaware ("CareDx Patent Cases"). In the first CareDx Patent Case, CareDx alleged, in a complaint filed jointly with the Board of Trustees of the Leland Stanford Junior University ("Stanford") in March 2019 and amended in March 2020, that the Company infringed three patents (the "CareDx Patents"). The complaint sought unspecified damages and injunctive relief. In September 2021, the Court granted the Company's motion for summary judgment, finding all three CareDx Patents invalid. This finding was affirmed on appeal by the United States Court of Appeals for the Federal Circuit. CareDx's petition for rehearing by the Federal Circuit, and its subsequent petition for certiorari to the United States Supreme Court, were both denied. In the second CareDx Patent Case, the Company alleged, in suits filed in January 2020 and May 2022, infringement by CareDx of certain of the Company's patents, seeking unspecified damages and injunctive relief. In January 2024, after trial, the jury returned a verdict in favor of the Company, finding both asserted patents valid and one patent infringed by CareDx. The jury awarded damages to the Company for lost profits and past royalties totaling $96.3 million.

In January 2020, the Company filed suit against ArcherDX, Inc. ("ArcherDX") in the United States District Court for the District of Delaware. In January 2021, the Company named an additional Archer DX entity, ArcherDx LLC, and Invitae Corp. ("Invitae") as defendants. The Company alleged, among other things, that certain ArcherDX products, including the Personalized Cancer Monitoring ("PCM") test, infringed three of the Company's patents (the "ArcherDX Case") and sought unspecified monetary damages and injunctive relief. Following a jury trial in May 2023 and a bench trial in June 2023, all three asserted patents were found to be valid and infringed by ArcherDX and Invitae, and the jury awarded damages totaling $19.35 million to the Company. In November 2023, the Court granted in part the Company's motion for a permanent injunction against the PCM test, which the defendants have appealed. In February 2024, Invitae and ArcherDX filed a voluntary Chapter 11 petition in the U.S. Bankruptcy Court for the District of New Jersey, resulting in an automatic bankruptcy stay in the case.

The Company is the subject of a lawsuit filed against it by Ravgen, Inc. ("Ravgen") in June 2020 in the United States District Court for the Western District of Texas, alleging infringement of two Ravgen patents and seeking monetary damages and injunctive relief. In January 2024, after trial, the jury returned a verdict of non-willful infringement by the Company and found damages of $57 million. The Company intends to appeal certain of the rulings. In addition, various parties, including the Company, have filed petitions challenging the validity of the asserted patents with the United States Patent and Trademark Office, all of which were instituted for review, and some of which were decided in favor of upholding the challenged claims. The petitions filed by the Company and certain others remain pending.

In October 2020, the Company filed suit against Genosity Inc. ("Genosity"), in the United States District Court for the District of Delaware, alleging that various Genosity products infringe one of the Company's patents and seeking unspecified monetary damages and injunctive relief. The case has been stayed pending the entry of a final judgment in the ArcherDX Case, in which the subject patent is also asserted. In February 2024, Genosity filed a voluntary Chapter 11 petition in the U.S. Bankruptcy Court for the District of New Jersey.

The Company filed suits against Inivata, Inc. and Inivata Ltd. (collectively "Inivata") in the United States District Court for the District of Delaware in January 2021 and December 2022, alleging that certain of Inivata's oncology products infringe certain of the Company's patents and seeking unspecified monetary damages and injunctive relief. The two suits have been consolidated. Inivata has filed a motion to dismiss the Company's complaint with respect to one patent, which motion is currently pending before the Court. Trial is currently set for October 2025.

The Company is the subject of lawsuits filed against it by Invitae in the United States District Court of the District of Delaware alleging, in complaints filed in May and November of 2021, infringement of three patents and seeking monetary damages and injunctive relief. The parties have filed cross-motions for summary judgment, which motions are currently pending before the Court. In February 2024, subsequent to Invitae's voluntary Chapter 11 petition described above, the Court granted Invitae's request to suspend the trial. A status conference is currently set for March 2024.

In July 2023, the Company filed suit against NeoGenomics Laboratories, Inc. ("NeoGenomics") in the United States District Court for the Middle District of North Carolina (the "District Court"), alleging infringement of certain Natera patents by NeoGenomics' commercialization of the RaDaR test. The complaint seeks monetary damages and

injunctive relief. In December 2023, the Court denied NeoGenomics' motion to dismiss the complaint, and granted the Company's motion for preliminary injunction. The injunction went into effect as of January 12, 2024. NeoGenomics filed a motion to modify and stay the injunction, which was denied by the District Court and will be heard on appeal by the Federal Circuit Court of Appeals in March 2024. NeoGenomics has also filed a petition challenging the validity of one of the asserted patents with the United States Patent and Trademark Office.

Other Litigation Matters.

CareDx filed suit against the Company in April 2019 in the United States District Court for the District of Delaware, alleging false advertising, and related claims based on statements describing studies that concern the Company's technology and CareDx's technology, seeking unspecified damages and injunctive relief. The Company filed a counterclaim against CareDx in the United States District Court for the District of Delaware, alleging false advertising, unfair competition and deceptive trade practices and seeking unspecified damages and injunctive relief. In March 2022, after trial, the jury returned a verdict that the Company was liable to CareDx and found damages of $44.9 million. The jury also returned a verdict against CareDx, finding that CareDx had engaged in false advertising. In July 2023, the Court granted in part the Company's motion for judgment as a matter of law requesting that the Court set aside the portions of the jury verdict adverse to the Company, ruling that CareDx is not entitled to any damages. The jury verdict of false advertising by CareDx remains in place. Both parties have filed notices of appeal.

In May 2021, Guardant. Inc. ("Guardant") filed suit against the Company in the United States District Court of the Northern District of California alleging false advertising and related claims and seeking unspecified damages and injunctive relief. Also in May 2021, the Company filed suit against Guardant in the Western District of Texas, alleging false advertising and related claims. The Company has voluntarily dismissed its Texas suit against Guardant and has asserted the claims from the Texas action as counterclaims in the California action, seeking unspecified damages and injunctive relief. In August 2021, Guardant moved to dismiss the Company's counterclaims, which motion was denied in all material respects. Both parties filed cross-motions for summary judgment, which were granted in part and denied in part. Trial is currently anticipated to be scheduled for 2024.

In November 2021, a purported class action lawsuit was filed against the Company in the United States District Court for the Northern District of California, by a patient alleging various causes of action relating to the Company's patient billing and seeks, among other relief, class certification, injunctive relief, restitution and/or disgorgement, attorneys' fees, and costs. In May 2023, the Court granted the Company's motion to dismiss the lawsuit, and the case was dismissed without prejudice. In July 2023, the plaintiff filed analogous claims in the Superior Court of California, County of San Mateo, and subsequently filed an amended claim with an additional plaintiff. Based on the additional plaintiff, the case was transferred back to the United States District Court for the Northern District of California.

In February 2022, two purported class action lawsuits were filed against the Company in the United States District Court for the Northern District of California. Each suit was filed by an individual patient alleging various causes of action related to the marketing of Panorama and seeking, among other relief, class certification, monetary damages, attorneys' fees, and costs. These matters have been consolidated. The Company filed a motion to dismiss the consolidated lawsuit, which resulted in the plaintiffs filing an amended complaint in April 2023.

In March 2022, a purported class action lawsuit was filed against the Company and certain of its management in the Supreme Court of the State of New York, County of New York, asserting claims under Sections 11, 12, and 15 of the Securities Act of 1933. The complaint alleges, among other things, that the Company failed to disclose certain information regarding its Panorama test. The complaint seeks, among other relief, monetary damages, attorneys' fees, and costs. This matter has been dismissed and the claims raised in this matter have been included in the lawsuit discussed below.

A purported class action lawsuit was filed against the Company and certain of its management in the United States District Court for the Western District of Texas, asserting claims under Sections 10(b) and 20(a) of the Securities Act of 1934 and Rule 10b-5 thereunder. The complaint, filed in April 2022 and amended in October 2022 (to include, among others, the claims raised in the lawsuit discussed in the preceding paragraph), alleges, among other things, that the management defendants made materially false or misleading statements, and/or omitted material information that was

required to be disclosed, about certain of the Company's products and operations. The complaint seeks, among other relief, monetary damages, attorneys' fees, and costs. The Company filed a motion to dismiss this lawsuit, which was granted in part and denied in part.

In each of October 2023 and January 2024, shareholder derivative complaints were filed in the United States District Court for the Western District of Texas and the United States District Court for the District of Delaware, respectively, against the Company as nominal defendant and certain of the Company's management. Each complaint alleges, among other things, that the management defendants made materially false or misleading statements, and/or omitted material information that was required to be disclosed, about certain of the Company's products and operations. Each complaint seeks, among other relief, monetary damages, attorneys' fees, and costs.

Director and Officer Indemnifications

As permitted under Delaware law, and as set forth in the Company's Amended and Restated Certificate of Incorporation and its Amended and Restated Bylaws, the Company indemnifies its directors, executive officers, other officers, employees and other agents for certain events or occurrences that may arise while in such capacity. The maximum potential future payments the Company could be required to make under this indemnification is unlimited; however, the Company has insurance policies that may limit its exposure and may enable it to recover a portion of any future amounts paid. Assuming the applicability of coverage, the willingness of the insurer to assume coverage, and subject to certain retention, loss limits and other policy provisions, the Company believes any obligations under this indemnification would not be material, other than standard retention amounts for securities related claims. However, no assurances can be given that the covering insurers will not attempt to dispute the validity, applicability, or amount of coverage without expensive litigation against these insurers, in which case the Company may incur substantial liabilities as a result of these indemnification obligations.

Third-Party Payer Reimbursement Audits

From time to time, the Company receives recoupment requests from third-party payers for alleged overpayments. The Company disagrees with the contentions of pending requests and/or has recorded an estimated reserve for the alleged overpayments if probable and estimable.

Contractual Commitments

The following table sets forth the material unconditional purchase obligations and contractual commitments as of December 31, 2023 with a remaining term of at least one year:

Party	Total Commitments	Expiry Date
	(in thousands)	
Laboratory instruments supplier	$ 9,400	December 2024
Material suppliers	20,709	March 2028
Application service providers	12,571	March 2026
Cloud platform service provider	40,000	December 2028
Other material suppliers	11,853	Various
Total	$ 94,533	

9. Stock-Based Compensation

Equity Plans

2015 Equity Incentive Plan

General. The Company's board of directors adopted its 2015 Equity Incentive Plan (the "2015 Plan"), in June 2015. The Company's 2015 Plan replaced all of its prior stock plans.

Share Reserve. The initial number of shares of the Company's common stock available for issuance under the 2015 Plan was 3,451,495 shares. The number of shares reserved for issuance under the 2015 Plan will be increased automatically on the first business day of each fiscal year, commencing in 2016, by a number equal to the least of:

- 3,500,000 shares;
- 4% of the shares of common stock outstanding on the last business day of the prior fiscal year; or
- the number of shares determined by the Company's board of directors.

Stock options vest as determined by the compensation committee. In general, they will vest over a four-year period following the date of grant. Stock options expire at the time determined by the compensation committee but in no event more than ten years after they are granted. These awards generally expire earlier if the participant's service terminates earlier.

Restricted Shares and Stock Units. Restricted shares and stock units (collectively "RSUs") may be awarded under the 2015 Plan in return for any lawful consideration, and participants who receive RSUs generally are not required to pay cash for their awards. These awards may be subject to vesting. Vesting may be based on length of service, the attainment of performance-based milestones or a combination of both, as determined by the compensation committee. Further, RSUs may be granted and immediately vested in lieu of certain obligations.

The Company also periodically awards phantom stock units, under a separate incentive arrangement, to certain international personnel, which are settled in cash upon vesting and accounted for as liability-based awards with no impact to the shares available for grant.

Employee Stock Purchase Plan

General. The Company's 2015 Employee Stock Purchase Plan (the "ESPP"), was adopted by its board of directors in June 2015 and its stockholders approved it in June 2015. The ESPP is intended to qualify under Section 423 of the Internal Revenue Code.

Share Reserve. The Company has 3,772,225 shares available for issuance under the Plan as of December 31, 2023, a number that is automatically increased on the first business day of each fiscal year of the Company during the term of the ESPP by the least of (i) 1% of the total number of shares of common stock actually issued and outstanding on the last business day of the prior fiscal year, (ii) 880,000 shares of common stock (subject to the ESPP), or (iii) a number of shares of common stock determined by the Company's board of directors. The number of shares reserved under the 2015 ESPP will automatically be adjusted in the event of a stock split, stock dividend or a reverse stock split (including an adjustment to the per-purchase period share limit).

Purchase Price. Employees may purchase each share of common stock under the 2015 ESPP at a price equal to 85% of the lower of the fair market values of the stock as of the beginning or the end of the six-month offering periods. An employee's payroll deductions under the ESPP are limited to 15% of the compensation, and up to a maximum of 5,000 shares may be purchased during any offering period. A participant shall not be granted an option under the ESPP if such option would permit the participant's rights to purchase stock to accrue at a rate exceeding $25,000 fair market value of stock for each calendar year in which such option is outstanding at any time.

Offering Periods. Each offering period will last a number of months determined by the compensation committee, not to exceed 27 months. A new offering period will begin periodically, as determined by the compensation committee. Offering periods may overlap or may be consecutive. Unless otherwise determined by the compensation committee, two offering periods of six months' duration will begin in each year on May 1 and November 1.

Stock Options and Restricted Stock Units

The following table summarizes option and RSU activity during the year ended December 31, 2023:

		Outstanding Options			
(in thousands, except for contractual life and exercise price)	Shares Available for Grant	Number of Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Life	Aggregate Intrinsic Value
				(in years)	
Balance at December 31, 2022	3,263	5,300	$ 21.11	4.84	$ 131,385
Additional shares authorized	3,500	—	$ —		
Options granted	(499)	499	$ 44.27		
Options exercised	—	(298)	$ 13.09		
RSUs granted	(6,096)				
RSUs forfeited/cancelled	934				
Balance at December 31, 2023	1,102	5,501	$ 23.65	4.36	$ 231,133
Exercisable at December 31, 2023		4,509	$ 13.97	3.49	$ 221,758
Vested and expected to vest at December 31, 2023		5,435	$ 23.12	4.31	$ 230,521

The total intrinsic value of stock options exercised during the years ended December 31, 2023, 2022, and 2021 were $14.7 million, $26.9 million, and $97.0 million, respectively.

The weighted-average grant date fair value of options granted during the years ended December 31, 2023, 2022, and 2021 were $27.31, $34.00, and $48.97 per share, respectively.

The total fair value of stock options vested during the years ended December 31, 2023, 2022, and 2021 were $57.5 million, $49.0 million, and $46.0 million, respectively.

Performance-based Awards

The Company grants certain senior-level executives performance stock options and units which vest based on either market and time-based service conditions or performance and time-based service conditions, which are referred to herein as performance-based awards. The Company assessed the performance-based awards with the appropriate valuation method and has recognized the applicable stock-based compensation expense.

The Company has recognized $54.2 million in stock-based compensation for performance-based awards for the year ended December 31, 2023 compared to $48.2 million for the year ended December 31, 2022. Performance-based awards with market conditions and a fair value estimated using a Monte Carlo simulation model were granted in the year ended December 31, 2021, with no such awards granted in the years ended December 31, 2023 and 2022. The following inputs were used to estimate the fair value of performance-based awards granted with market conditions using a Monte Carlo simulation model:

	December 31, 2023	December 31, 2022	December 31, 2021
Risk-free interest rate	—%	— %	0.80% — 1.52%
Expected dividend yield	—%	— %	—%
Expected volatility	—%	— %	60%
Expected term (years)	—	—	7.25 — 10.00

Restricted Stock Units

The following table summarizes unvested RSU for the year ended December 31, 2023:

	Number of Shares	Weighted-Average Grant Date Fair Value
	(in thousands)	
Balance at December 31, 2022	6,836	$ 57.12
Granted	6,096	$ 44.90
Vested	(2,750)	$ 57.74
Cancelled/Forfeited	(934)	$ 49.54
Balance at December 31, 2023	9,248	$ 49.50

Stock-Based Compensation Expense

The following table presents stock-based compensation expense recorded for equity classified awards in the statement of operations and comprehensive loss:

	Year ended December 31,								
	2023			2022			2021		
	Employee	Non-Employee	Total	Employee	Non-Employee	Total	Employee	Non-Employee	Total
					(in thousands)				
Cost of revenues	$ 11,665	$ 87	$ 11,752	$ 7,905	$ —	$ 7,905	$ 4,811	$ —	$ 4,811
Research and development	63,445	2,881	66,326	44,655	1,890	46,545	24,507	1,361	25,868
Selling, general and administrative	112,236	1,494	113,730	97,379	555	97,934	84,368	172	84,540
Total	$ 187,346	$ 4,462	$ 191,808	$ 149,939	$ 2,445	$ 152,384	$ 113,686	$ 1,533	$ 115,219

Additionally, the stock-based compensation expense for liability classified awards for the years ended December 31, 2023, 2022, and 2021 was $0.8 million, $0.6 million, and $0.4 million, respectively. As of December 31, 2023, approximately $331.5 million of unrecognized compensation expense, adjusted for estimated forfeitures, related to unvested option awards and RSUs will be recognized over a weighted-average period of approximately 2.4 years.

Valuation of Stock Option Grants

The Company utilizes Black-Scholes option pricing model when estimating the fair value of stock options. The following valuation assumptions were applied to options.

	Year ended December 31,		
	2023	2022	2021
Expected term (years)	5.20 — 6.11	5.12 — 10.00	5.11 — 10.00
Expected volatility	67.75 % — 70.07 %	55.91% — 62.30%	55.33% — 63.30%
Expected dividend rate	— %	— %	— %
Risk-free interest rate	3.41 % — 4.80 %	1.62 % — 4.16 %	0.81 % — 1.67 %

As of December 31, 2023, there were no options outstanding held by non-employees. Stock-based compensation expense related to stock options granted to non-employees is recognized as the stock option is earned and the services are rendered. The Company believes that the estimated fair value of the stock options is more readily measurable than the fair value of the services rendered.

10. Debt

Credit Line Agreement

In September 2015, the Company entered into a credit line with UBS (the "Credit Line") providing for a $50.0 million revolving line of credit which was fully drawn down in 2016. The Credit Line was amended in July 2017 and bears interest at 30-day LIBOR plus 1.10%. The interest rate was subsequently changed to the 30-day SOFR average, plus 1.21%. The SOFR rate is variable. The interest rate as of December 31, 2023 was 5.84%. The Credit Line was subsequently increased from $50.0 million to $150.0 million in 2020. In November 2022, the Company drew down $30.0 million from the $100.0 million available from the Credit Line. The Credit Line is secured by a first priority lien and security interest in the Company's money market and marketable securities held in its managed investment account with UBS. The Company is required to maintain a minimum of at least $150.0 million in its UBS accounts as collateral which is classified as short-term investments in the consolidated balance sheet. UBS has the right to demand full or partial payment of the Credit Line obligations and terminate the Credit Line, in its discretion and without cause, at any time. In June 2023, the Credit Line decreased from $150.0 million to $100.0 million. In October 2023, the interest rate for the Credit Line was subsequently changed to the 30-day SOFR average, plus 0.5%. As of December 31, 2023, the Company has drawn down a total of $80.0 million and there is $20.0 million remaining and available on the Credit Line.

For the years ended December 31, 2023, 2022, and 2021, the Company recorded interest expense of $4.9 million, $1.6 million, and $0.6 million, respectively. Interest payments totaling $4.9 million, $1.6 million, and $0.6 million had been made on the Credit Line during the years ended December 31, 2023, 2022, and 2021, respectively. As of December 31, 2023, and the total principal amount outstanding including accrued interest was $80.4 million.

Convertible Notes

In April 2020, the Company issued $287.5 million aggregate principal amount of Convertible Notes due 2027 in a private placement offering to qualified institutional buyers pursuant to Rule 144A under the Securities Act of 1933, as amended. The Convertible Notes are senior, unsecured obligations of the Company and bear interest at a rate of 2.25% per year, payable in cash semi-annually. The Convertible Notes mature in May 2027, unless earlier converted, repurchased or redeemed in accordance with their terms. Upon conversion, the Convertible Notes are convertible into cash, shares of the Company's common stock or a combination of cash and shares of the Company's common stock, at the Company's election.

The Company received net proceeds from the Convertible Notes of $278.3 million, after deducting the initial purchasers' discounts and debt issuance costs. The Company used approximately $79.2 million of the net proceeds from the Convertible Notes offering to repay its obligations under the 2017 Term Loan with OrbiMed in 2020.

The holders of the Convertible Notes may convert all or a portion of their Convertible Notes at their option at any time prior to the close of business on the business day immediately preceding February 1, 2027 in multiples of $1,000 principal amount, under any the following circumstances:

- During any fiscal quarter commencing after September 30, 2020 (and only during such fiscal quarter), 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 on, and including, the last trading day of the immediately preceding fiscal quarter is greater than or equal to 130% of the conversion price on each applicable trading day.
- During the five business day period after any five consecutive trading day period in which the trading price per $1,000 principal amount of Convertible Notes for each trading day of that five-day consecutive trading

period was less than 98% of the product of the last reported sale price of the Company's common stock and the conversion rate on each such trading day.

- If the Company calls any or all of the Convertible Notes for redemption at any time prior to the close of business on the second business day prior to the redemption date.
- Upon the occurrence of certain distributions.
- Upon the occurrence of specified corporate transactions.

The first circumstance has been met as of December 31, 2023. However, there were no conversions for the period ending December 31, 2023.

The Convertible Notes are convertible into shares of the Company's common stock, par value $0.0001 per share, at an initial conversion rate of 25.7785 shares of common stock per $1,000 principal amount of the Convertible Notes, which is equivalent to an initial conversion price of approximately $38.79 per share of common stock, convertible to 7,411,704 shares of common stock. The conversion rate and corresponding conversion price are subject to adjustment upon the occurrence of certain events but will not be adjusted for any accrued or unpaid interest. The holders of the Convertible Notes who redeem their Convertible Notes in connection with a make-whole fundamental change are, under certain circumstances, entitled to an increase in the conversion rate. Additionally, in the event of a fundamental change, the holders of the Convertible Notes may require the Company to repurchase for cash all or a portion of their Convertible Notes at a price equal to 100% of the principal amount, plus any accrued and unpaid interest.

The Company may not redeem the Convertible Notes prior to May 2024, and no sinking fund is provided for the Convertible Notes. The Company may redeem for cash all or any portion of the Convertible Notes, at the Company's option, on or after May 2024, if the last reported sale price of the Company's common stock has been at least 130% of the conversion price then in effect for at least 20 trading days during any 30 consecutive trading day period ending on the trading day immediately preceding the date on which the Company provides notice of redemption. The redemption price will be equal to 100% of the principal amount of the Convertible Notes to be redeemed plus accrued and unpaid interest.

Upon adoption of ASU 2020-06, the Company reallocated all of the debt discount to long-term debt financing. The debt discount is amortized to interest expense using the effective interest method, computed to be 2.72%, over the life of the Convertible Notes or approximately its seven-year term. The outstanding Convertible Notes balance is summarized in the following table:

	December 31,	
	2023	2022
	(in thousands)	
Long-Term Debt		
Outstanding Principal	$ 287,500	$ 287,500
Unamortized debt discount and debt issuance cost	(4,555)	(5,847)
Net carrying amount	$ 282,945	$ 281,653

The following table presents total interest expense recognized related to the Convertible Notes during the years as follows:

	December 31,		
	2023	2022	2021
		(in thousands)	
Cash interest expense			
Contractual interest expense	$ 6,469	$ 6,469	$ 6,469
Non-cash interest expense			
Amortization of debt discount and debt issuance cost	1,292	1,259	1,227
Total interest expense	$ 7,761	$ 7,728	$ 7,696

11. Stockholders' Equity

As of December 31, 2023, the Company had 50,000,000 authorized shares of its preferred stock, of which no shares were issued and outstanding; and 750,000,000 authorized shares of its common stock, at $0.0001 par value, and there were approximately 119,581,000 shares of common stock issued and outstanding.

In September 2023, the Company completed an underwritten equity offering and sold 4,550,000 shares of its common stock at a price of $55 per share to the public. Before estimated offering expenses of $0.4 million, the Company received proceeds of approximately $235.8 million net of the underwriting discount.

In November 2022, the Company completed an underwritten equity offering and sold 13,144,500 shares of its common stock at a price of $35 per share to the public. Before offering expenses of $0.5 million, the Company received proceeds of $433.2 million net of the underwriting discount.

On September 10, 2021, the Company entered into an agreement with a third party for an asset acquisition where the acquired asset was in-process research and development primarily in exchange for an equity consideration payment. The total upfront acquisition consideration amounts to $35.6 million composed of the issuance of 276,346 shares of the Company's common stock with a fair value of $30.9 million, approximately $3.9 million of cash consideration, assumed net liabilities of $0.2 million, as well as $0.6 million of acquisition related legal and accounting costs directly attributable to the acquisition of the asset. In November 2022, the remaining consideration was modified, resulting in a $10.0 million milestone payment primarily made in the form of the Company's common stock in December 2022 and a remaining $15.0 million milestone payment made in March 2023 primarily in the Company's common stock.

In July 2021, the Company completed an underwritten equity offering and sold 5,175,000 shares of its common stock at a price of $113 per share to the public. Before offering expenses of $0.4 million, the Company received proceeds of $551.2 million net of the underwriting discount.

12. Income Taxes

The Company's effective tax rates for the years ended December 31, 2023, 2022, and 2021 differ from the U.S. federal statutory rate as follows:

	December 31,					
	2023		2022		2021	
	(in thousands, except percentages)					
U.S. federal taxes (benefit) at statutory rate	$ (91,251)	21.00 %	$ (114,832)	21.00 %	$ (98,931)	21.00 %
State tax expense	(13,492)	3.10 %	(21,676)	3.96 %	(29,206)	6.20 %
Research and development credits	(10,837)	2.49 %	(7,024)	1.28 %	(9,193)	1.95 %
Stock-based compensation	(6,422)	1.48 %	3,949	(0.72)%	(46,128)	9.79 %
Foreign tax	(106)	0.02 %	332	(0.06)%	167	(0.04)%
Nondeductible officers' compensation	8,651	(1.99)%	4,883	(0.89)%	24,387	(5.18)%
Acquisition costs	563	(0.13)%	3,226	(0.59)%	8,901	(1.89)%
Other	(3,397)	0.79 %	1,964	(0.36)%	344	(0.05)%
Change in valuation allowance	116,562	(26.82)%	130,156	(23.80)%	150,277	(31.90)%
Provision for income taxes	$ 271	(0.06)%	$ 978	(0.18)%	$ 618	(0.13)%

During the years ended December 31, 2023, 2022, and 2021, the Company recorded total income tax expense of $0.3 million, $1.0 million and $0.6 million, respectively.

The total provision for income taxes includes foreign withholding and state income tax expense.

Deferred income taxes reflect the net tax effects of temporary differences between carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes as well as net operating loss and tax credit carryforwards. The components of the net deferred income tax assets are as follows:

	December 31,	
	2023	2022
	(in thousands)	
Deferred tax assets:		
Net operating loss carryforwards	$ 399,287	$ 358,109
Research and development tax credit carryforwards	67,035	52,319
Capitalized research costs	95,923	59,128
Reserves and accruals	34,898	22,781
Lease Liabilities	19,339	21,000
Stock-based compensation	29,005	23,814
Other	9,449	9,162
Total deferred tax assets before valuation allowance	654,936	546,313
Less: valuation allowance	(639,510)	(526,235)
Total deferred tax assets after valuation allowance	15,426	20,078
Deferred tax liabilities:		
Fixed Assets	(1,524)	(1,219)
Right-of-use lease assets	(13,902)	(18,859)
Total deferred tax liabilities	(15,426)	(20,078)
Net deferred tax assets	$ —	$ —

The Company established a full valuation allowance against its net deferred tax assets in 2023 and 2022 due to the uncertainty surrounding realization of these assets. The valuation allowance increased to $639.5 million as of 2023 from $526.2 million as of 2022 due to current year losses and credits claimed.

As of December 31, 2023, the Company had federal, state, and foreign net operating loss (“NOLs”) carryforwards of approximately $1.6 billion, $1.1 billion, and $3.8 million, respectively, which begin to expire in 2027, 2024, and 2027, respectively, if not utilized. Approximately $1.3 billion of federal net operating loss included above can be carried forward indefinitely.

The Company also had federal research and development credit carryforwards of approximately $64.3 million, which begin to expire in 2027, and state research and development credit carryforwards of approximately $36.7 million, which begin to expire in 2031. Realization is dependent on generating sufficient taxable income prior to expiration of the loss and credit carryforwards.

Federal, state and foreign tax laws impose substantial restrictions on the utilization of NOLs and credit carryforwards in the event of an "ownership change" for tax purpose, as defined in Section 382 of the Internal Revenue Code. Accordingly, the Company's ability to utilize these carryforwards may be limited as the result of such ownership change. Such a limitation could result in limitation in the use of the NOLs in future years and possibly a reduction of the NOLs available.

A reconciliation of the beginning and ending amount of gross unrecognized tax benefits is as follows:

	December 31,		
	2023	2022	2021
		(in thousands)	
Balance at beginning of year	$ 23,844	$ 17,514	$ 11,500
Additions based on tax positions related to the current year	7,034	6,301	6,017
Additions (reductions) for tax positions of prior years	34	29	(3)
Balance at end of year	$ 30,912	$ 23,844	$ 17,514

During the years ended December 31, 2023, 2022, and 2021, the amount of unrecognized tax benefits increased $7.1 million, $6.3 million, and $6.0 million, respectively, due to additional research and development credits generated during the year. As of December 31, 2023, 2022, and 2021, the total amount of unrecognized tax benefits was $30.9 million, $23.8 million, and $17.5 million, respectively. The reversal of the uncertain tax benefits would not affect the Company's effective tax rate to the extent that it continues to maintain a full valuation allowance against its deferred tax assets.

The Company is subject to U.S. federal, state, and foreign income taxes. Tax regulations within each jurisdiction are subject to the interpretation of the related tax laws and regulations, and require significant judgment to apply. The Company is subject to U.S. federal, state and local tax examinations by tax authorities for all prior tax years since incorporation. The Company does not anticipate significant changes to its current uncertain tax positions through December 31, 2023.

The Company recognizes any interest and/or penalties related to income tax matters as a component of income tax expense. As of December 31, 2023, there were no accrued interest and penalties related to uncertain tax positions.

In 2021, the OECD announced an Inclusive Framework on Base Erosion and Profit Shifting including Pillar Two Model Rules defining the global minimum tax. These rules broadly call for the taxation of large multinational corporations at a minimum rate of 15%. We continue to evaluate the enacted and pending legislation to implement these rules in the non-U.S. tax jurisdictions we operate in but do not currently believe the impact to be material.

13. Net Loss per Share

The Convertible Notes are convertible by the holders as of December 31, 2023. Upon conversion, the Company has the option to pay cash, issue shares of common stock, or any combination thereof for the aggregate amount due upon conversion. If converted, the value of the shares issued to settle the Convertible Notes would exceed the Convertible Note principal by $118.5 million based on the closing price of the Company’s common stock as of December 31, 2023. Since the Company is in a net loss position in the periods presented, the shares which would be issued upon conversion of the Convertible Notes are excluded from the net loss per share calculation as it would have an antidilutive effect. As such, the 7.4 million shares underlying the conversion option of the Convertible Notes have been excluded from the calculation of diluted earnings per share. If converted, the Company does not intend to settle the obligation in cash.

The following table shows the potentially dilutive common stock equivalents that were excluded from the computations of diluted net loss per share as their effect would be anti-dilutive, as of December 31, 2023, 2022, and 2021:

	December 31,		
	2023	2022	2021
		(in thousands)	
Options to purchase common stock	5,501	5,300	5,898
Performance-based awards and restricted stock units	9,248	6,836	3,988
Employee stock purchase plan	88	90	33
Convertible Note	7,411	7,411	7,411
Earnouts for development with acquired Canadian entity	—	361	353
	22,248	19,998	17,683

14. Subsequent Events

In January 2024, the Company acquired from Invitae Corp. certain assets relating to Invitae's non-invasive prenatal screening and carrier screening business. The Company has made an upfront payment in the amount of $10 million to Invitae. In addition, the transaction includes $42.5 million in potential milestone payments.

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

Our management, with the participation of our Chief Executive Officer and our Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2023. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Securities and Exchange Commission's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure.

Based on the evaluation of our disclosure controls and procedures as of December 31, 2023, management has concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Management's Annual Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act. Our internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management has evaluated the effectiveness of our internal control over financial reporting as of December 31, 2023 using the criteria set forth in the 2013 *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission, or COSO. Based on our evaluation, management has concluded that we maintained effective internal control over financial reporting as of December 31, 2023 based on the COSO criteria.

The effectiveness of our internal control over financial reporting as of December 31, 2023 has been audited by Ernst & Young LLP, an independent registered public accounting firm, as stated in their report which appears in Item 9A of this Annual Report on Form 10-K.

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the period ended December 31, 2023, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations on Effectiveness of Controls

Our management, including our Chief Executive Officer and Chief Financial Officer, do not expect that our disclosure controls or our internal control over financial reporting will prevent all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of a simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by management override of the controls. The design of any system of controls is also based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions; over time, controls may become inadequate because of changes in conditions, or the degree of compliance with policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Natera, Inc.

Opinion on Internal Control Over Financial Reporting

We have audited Natera, Inc.'s internal control over financial reporting as of December 31, 2023, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Natera, Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the 2023 consolidated financial statements of the Company and our report dated February 28, 2024 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Ernst & Young LLP

San Mateo, California
February 28, 2024

ITEM 9B. OTHER INFORMATION

On December 8, 2023, Steve Chapman, our chief executive officer, terminated a trading arrangement for the sale of the Company's common stock. Such trading arrangement was not intended to satisfy the affirmative defense conditions of Securities Exchange Act Rule 10b5-1(c), but complied with the then-applicable requirements of Rule 10b5-1(c) when adopted in December 2022. Such trading arrangement provided for the potential sale of approximately 1,029,696 shares between February 27, 2023 and December 31, 2024.

On December 11, 2023, Mr. Chapman adopted a trading arrangement for the sale of securities of the Company's common stock that is intended to satisfy the affirmative defense conditions of Securities Exchange Act Rule 10b5-1(c) (the "Chapman Trading Plan"). The Chapman Trading Plan provides for the potential sale of up to 876,564 shares of common stock pursuant to the terms of the plan between March 15, 2024 and December 8, 2025, with the majority of the potential sales scheduled for calendar year 2025. The actual number of shares of common stock sold under the Chapman Trading Plan will be less than the amount stated above due to tax and exercise price payment obligations, which amounts are not yet determinable. A significant portion of the shares subject to the plan would not be sold unless the Company achieves a share price target of $108.7, representing a 73% increase thereto as of December 31, 2023, or the Company achieves a specified performance target.

Also on December 11, 2023, Mr. Chapman adopted a separate trading arrangement for the sale of securities of the Company's common stock held by the Chapman Family Trust that is intended to satisfy the affirmative defense conditions of Securities Exchange Act Rule 10b5-1(c) (the "Chapman Family Trading Plan"). The Chapman Family Trading Plan provides for the potential sale of up to 50,910 shares of common stock pursuant to the terms of the plan between March 15, 2024 and March 15, 2026.

On December 12, 2023, Jonathan Sheena, our co-founder and a member of our board of directors, adopted a Rule 10b5-1 Trading Plan that provides for the sale of 88,400 shares of common stock pursuant to the terms of the plan between April 3, 2024 and April 3, 2025.

ITEM 9C. Disclosure Regarding Foreign Jurisdictions That Prevent Inspections

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 in connection with our 2024 annual meeting of stockholders (the "Proxy Statement"), which we expect to file no later than 120 days after the end of our fiscal year ended December 31, 2023, and is incorporated in this report by reference.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this item will be contained in the Proxy Statement, which we expect to file no later

than 120 days after the end of our fiscal year ended December 31, 2023, and is incorporated in this report 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, which we expect to file no later than 120 days after the end of our fiscal year ended December 31, 2023, and is incorporated in this report 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, which we expect to file no later than 120 days after the end of our fiscal year ended December 31, 2023, and is incorporated in this report by reference.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this item will be contained in the Proxy Statement, which we expect to file no later than 120 days after the end of our fiscal year ended December 31, 2023, and is incorporated in this report by reference.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) The following documents are filed as part of this Annual Report on Form 10-K:

(1) Financial Statements (included in Part II of this report):

- Report of Independent Registered Public Accounting Firm
- Balance Sheets
- Statement of Operations
- Statement of Stockholders' Equity
- Statement of Cash Flows
- Notes to Financial Statements

(2) Financial Statement Schedules:

All financial statement schedules are omitted because the information is inapplicable or presented in the notes to the financial statements.

(b) The following exhibits are filed with or incorporated by reference as part of this Annual Report on Form 10-K:

INDEX TO EXHIBITS

		Incorporated by Reference				
Exhibit No.	Description	Form	File No.	Exhibit	Filing Date	Filed Herewith
3.1	Amended and Restated Certificate of Incorporation of Registrant.	8-K	001-37478	3.1	07/09/2015	
3.2	Amended and Restated Bylaws of Registrant, effective as of November 3, 2021	10-Q	001-37478	3.1	11/05/2021	
4.1	Form of Common Stock Certificate	S-1/A	333-204622	4.1	06/22/2015	
4.2	Amended and Restated Investors' Rights Agreement, dated November 20, 2014.	S-1	333-204622	4.2	06/01/2015	
4.3	Description of Common Stock	10-K	001-37478	4.3	02/26/2021	
4.4	Indenture (including form of Note) with respect to the Company's 2.25% Convertible Senior Notes due 2027, dated as of April 16, 2020, between the Registrant and Wilmington Trust, National Association, as trustee	8-K	001-37478	4.1	04/16/2020	
10.1.1	UBS Credit Line Agreement, dated September 23, 2015, as amended.	10-Q	001-37478	10.2	11/13/2015	
10.1.2	Amendment to UBS Credit Line Agreement, dated July 5, 2017.	10-Q	001-37478	10.1	08/09/2017	
10.2.1*	Supply Agreement, dated September 18, 2014, by and between Registrant and Illumina, Inc., as amended (conformed copy).	S-1/A	333-204622	10.13	06/30/2015	
10.2.2*	Second Amendment to Supply Agreement, dated September 21, 2015, by and between Registrant and Illumina, Inc.	10-Q	001-37478	10.1	08/11/2016	
10.2.3*	Third Amendment to Supply Agreement, dated June 8, 2016, by and between Registrant and Illumina, Inc.	10-Q	001-37478	10.2	08/11/2016	
10.2.4*	Fourth Amendment to Supply Agreement, dated January 3, 2019, by and between Registrant and Illumina, Inc.	10-K	001-37478	10.8	03/15/2019	
10.2.5**	Fifth Amendment to Supply Agreement, dated December 18, 2019, by and between Registrant and Illumina, Inc.	10-K	001-37478	10.5.5	03/02/2020	
10.2.6**	Sixth Amendment to Supply Agreement, dated May 8, 2020, by and between Registrant and Illumina, Inc.	10-Q	001-37478	10.1	08/07/2020	
10.2.7**	Seventh Amendment to Supply Agreement, dated October 7, 2021, by and between the Registrant and Illumina, Inc.	10-Q	001-37478	10.1	11/05/2021	
10.2.8**	Eighth Amendment to Supply Agreement, dated December 31, 2023, by and between the Registrant and Illumina, Inc.					X

		Incorporated by Reference				
Exhibit No.	Description	Form	File No.	Exhibit	Filing Date	Filed Herewith
10.3.1*	Application Service Provider Agreement, dated September 19, 2014, by and between Registrant and DNAnexus, Inc., as amended	10-K	001-37478	10.11	03/16/2017	
10.3.2*	Third Amendment to Application Service Provider Agreement, dated January 1, 2018, by and between Registrant and DNAnexus, Inc.	10-Q	001-37478	10.1	11/09/2018	
10.3.3*	Fourth Amendment to Application Service Provider Agreement, dated July 1, 2018, by and between Registrant and DNAnexus, Inc.	10-Q	001-37478	10.2	11/09/2018	
10.3.4*	Fifth Amendment to Application Service Provider Agreement, dated October 18, 2019, by and between Registrant and DNAnexus, Inc.	10-Q	001-37478	10.2	11/08/2019	
10.4*	License, Development and Distribution Agreement, dated as of March 9, 2018, by and between Registrant and QIAGEN LLC	10-Q/A	001-37478	10.1	02/06/2019	
10.5.1	Lease, dated October 26, 2015, by and between Registrant and BMR-201 Industrial Road LP.	10-K	001-37478	10.23	03/24/2016	
10.5.2	First Amendment to Lease, dated October 6, 2016, by and between Registrant and BMR-201 Industrial Road LP.	10-Q	001-37478	10.1	11/14/2016	
10.6.1	Lease Agreement dated September 24, 2015, by and between NSTX, Inc. and Karlin McCallen Pass, LLC.	10-Q	001-37478	10.1	11/09/2022	
10.6.2	First Amendment to Lease Agreement dated January 26, 2016, by and between NSTX, Inc. and Karlin McCallen Pass, LLC.	10-Q	001-37478	10.2	11/09/2022	
10.6.3	Second Amendment to Lease Agreement dated March 10, 2021, by and between NSTX, Inc. and KCP Parmer 3.2 Fee Owner, LLC.	10-Q	001-37478	10.3	11/09/2022	
10.6.4	Third Amendment to Lease Agreement dated December 29, 2021, by and between NSTX, Inc. and 13011 McCallen Pass, LLC.	10-Q	001-37478	10.4	11/09/2022	.
10.7***	2007 Stock Plan and form of agreements thereunder.	S-1	333-204622	10.1	06/01/2015	
10.8***	2015 Equity Incentive Plan and forms of agreements thereunder.	10-K	001-37478	10.2	03/24/2016	
10.9***	2015 Employee Stock Purchase Plan.	S-1/A	333-204622	10.3	06/25/2015	
10.10	Form of Indemnification Agreement, by and between Registrant and each of its directors and executive officers.	10-K	001-37478	10.4	03/16/2017	
10.11.1***	Amended Compensation Program for Non-Employee Directors.	10-Q	001-37478	10.2	05/10/2019	

		Incorporated by Reference				
Exhibit No.	Description	Form	File No.	Exhibit	Filing Date	Filed Herewith
10.11.2***	Amended and Restated Compensation Program for Non-Employee Directors.	8-K	001-37478	10.1	03/14/2022	
10.11.3***	Amended Compensation Program for Non-Employee Directors.	10-Q	001-37478	10.1	05/10/2023	
10.11.4***	Amended Compensation Program for Non-Employee Directors.	10-Q	001-37478	10.2	08/04/2023	
10.12***	Natera, Inc. Management Cash Incentive Plan.	10-Q	001-37478	10.3	11/13/2015	
10.13.1***	Amended Employment Agreement, by and between Registrant and Matthew Rabinowitz, dated June 7, 2007.	S-1/A	333-204622	10.15	06/25/2015	
10.13.2***	Amendment to Employment Agreement, by and between Registrant and Matthew Rabinowitz, dated May 9, 2021.	8-K	001-37478	10.2	05/10/2021	
10.13.3***	Second Amendment to Employment Agreement, by and between Registrant and Matthew Rabinowitz, dated April 19, 2023.	10-Q	001-37478	10.1	08/04/2023	
10.14***	Amended Employment Agreement, by and between Registrant and Jonathan Sheena, dated June 7, 2007.	S-1/A	333-204622	10.16	06/25/2015	
10.15.1***	Amended and Restated Employment Agreement, by and between Registrant and Steve Chapman, dated January 2, 2019.	10-Q	001-37478	10.1	05/10/2019	
10.15.2***	Amendment No. 1 to Amended and Restated Employment Agreement, by and between Registrant and Steve Chapman, dated May 4, 2022	10-Q	001-37478	10.1	05/06/2022	
10.16***	Amended Employment Agreement, by and between Registrant and Daniel Rabinowitz, dated June 7, 2007.	10-Q	001-37478	10.1	08/05/2022	
21.1	List of Subsidiaries of the Registrant.	10-K	001-37478	21.1	03/16/2017	
23.1	Consent of Independent Registered Public Accounting Firm.					X
24.1	Power of Attorney (see signature page of 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 pursuant to 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

		Incorporated by Reference				
Exhibit No.	Description	Form	File No.	Exhibit	Filing Date	Filed Herewith
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
97.1***	Natera, Inc. Policy for the Recovery of Erroneously Awarded Compensation.					X
101.INS	XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL 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
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)					X

* Portions of this exhibit (indicated by asterisks) have been omitted pursuant to an order granting confidential treatment. Omitted portions have been submitted separately to the Securities and Exchange Commission (SEC).

** Portions of this exhibit (indicated by asterisks) have been omitted pursuant to a request for confidential treatment.

*** Indicates a management contract or compensatory plan.

† The certifications attached as Exhibits 32.1 and 32.2 that accompany this Annual Report on Form 10-K are not deemed filed with the SEC and are not to be incorporated by reference into any filing of Natera, 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 of this Annual Report on Form 10-K, regardless of any general incorporation language contained in any filing.

ITEM 16. FORM 10-K SUMMARY

None.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this Annual Report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Austin, State of Texas, on this 28th day of February 2024.

Natera, Inc.

/ s / Michael Brophy

Michael Brophy
Chief Financial Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Steve Chapman and Michael Brophy as his or her true and lawful attorney-in-fact and agent with full power of substitution, for him or her 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 attorney-in-fact and agent 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 for all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this Annual Report on Form 10-K has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Steve Chapman Steve Chapman	Chief Executive Officer, President and Director (Principal Executive Officer)	February 28, 2024
/s/ Michael Brophy Michael Brophy	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	February 28, 2024
/s/ Matthew Rabinowitz Matthew Rabinowitz	Executive Chairman	February 28, 2024
/s/ Jonathan Sheena Jonathan Sheena	Founder and Director	February 28, 2024
/s/ Roy Baynes Roy Baynes	Director	February 28, 2024
/s/ Roelof F. Botha Roelof F. Botha	Director	February 28, 2024
/s/ Rowan Chapman Rowan Chapman	Director	February 28, 2024
/s/ James I. Healy James I. Healy	Director	February 28, 2024
/s/ Gail Marcus Gail Marcus	Director	February 28, 2024
/s/ Herm Rosenman Herm Rosenman	Director	February 28, 2024
/s/ Ruth Williams-Brinkley Ruth Williams-Brinkley	Director	February 28, 2024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