
**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: September 29, 2018

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: 1-36214

Hologic, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or Other Jurisdiction of
Incorporation or Organization)

04-2902449
(I.R.S. Employer Identification No.)

250 Campus Drive, Marlborough, Massachusetts 01752
(Address of Principal Executive Offices) (Zip Code)

Registrant's Telephone Number, Including Area Code (508) 263-2900

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

Title of Each Class	Name of Each Exchange on which Registered
Common Stock, \$.01 par value	The NASDAQ Stock Market LLC

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

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

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/> (Do not check if a smaller reporting company)	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

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 is a shell company (as defined in Rule 12b-2 of the Exchange Act.) Yes No

The aggregate market value of the registrant's Common Stock held by non-affiliates of the registrant as of March 31, 2018 was \$10,174,623,483 based on the price of the last reported sale on Nasdaq Global Select Market on that date.

As of November 15, 2018 , 289,212,857 shares of the registrant's Common Stock, \$0.01 par value, were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement for the registrant's annual meeting of stockholders to be filed within 120 days of the end of its fiscal year ended September 29, 2018 are incorporated into Part III (Items 10, 11, 12, 13 and 14) of this Annual Report on Form 10-K where indicated.

HOLOGIC, INC.
ANNUAL REPORT ON FORM 10-K
For the Fiscal Year Ended September 29, 2018

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Some of the statements contained in this report are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. These statements involve known and unknown risks, uncertainties and other factors which may cause our or our industry's actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Forward-looking statements include, but are not limited to, statements regarding:

- the effect of the continuing worldwide macroeconomic uncertainty, including the United Kingdom's decision to leave the European Union, on our business and results of operations;
- the coverage and reimbursement decisions of third-party payors and the guidelines, recommendations, and studies published by various organizations relating to the use of our products and treatments;
- the uncertainty of the impact of cost containment efforts and federal healthcare reform legislation on our business and results of operations;
- the ability to successfully manage ongoing organizational and strategic changes, including our ability to attract, motivate and retain key employees;
- the impact and anticipated benefits of completed acquisitions, including our acquisition of Cynosure, Inc., or Cynosure, in the second quarter of fiscal 2017, and acquisitions we may complete in the future;
- the effect of the current trade war between the U.S. and other nations, most notably China, and the impending impact of tariffs on the sale of our products in those countries and potential increased costs we may incur to purchase materials from our suppliers to manufacture our products;
- the ability to consolidate certain of our manufacturing and other operations on a timely basis and within budget, without disrupting our business and to achieve anticipated cost synergies related to such actions;
- our goal of expanding our market positions;
- the development of new competitive technologies and products;
- regulatory approvals and clearances for our products, including the implementation of the new European Union Medical Device Regulations;
- production schedules for our products;
- the anticipated development of markets we sell our products into and the success of our products in these markets;
- the anticipated performance and benefits of our products;
- business strategies;
- estimated asset and liability values;
- the impact and costs and expenses of any litigation we may be subject to now or in the future;
- our compliance with covenants contained in our debt agreements;
- anticipated trends relating to our financial condition or results of operations, including the impact of interest rate and foreign currency exchange fluctuations; and
- our capital resources and the adequacy thereof.

In some cases, you can identify forward-looking statements by terms such as "may," "will," "should," "could," "would," "expects," "plans," "anticipates," "believes," "estimates," "projects," "predicts," "potential" and similar expressions intended to identify forward-looking statements. These statements are only predictions and involve known and unknown risks, uncertainties, and other factors that may cause our actual results, levels of activity, performance, or achievements to be materially different from any future results, levels of activity, performance, or achievements expressed or implied by such forward-looking statements. Given these uncertainties, you should not place undue reliance on these forward-looking statements. Also, these forward-looking statements represent our estimates and assumptions only as of the date of this report. Except as otherwise required by law, we expressly disclaim any obligation or undertaking to release publicly any updates or revisions to any forward-looking statement contained in this report to reflect any change in our expectations or any change in events, conditions or circumstances on which any of our forward-looking statements are based. Factors that could cause or contribute to differences in our future financial results include the cautionary statements set forth herein and in our other filings with the Securities and Exchange Commission, or SEC, including those set forth under "Risk Factors" set forth in Part I, Item 1A of this annual report on Form 10-K. We qualify all of our forward-looking statements by these cautionary statements.

TRADEMARK NOTICE

Hologic is a trademark of Hologic, Inc. Other trademarks, logos, and slogans registered or used by Hologic and its divisions and subsidiaries in the United States and other countries include, but are not limited to, the following: 2D Dimensions, 3Dimensions, 3D Mammography, 3D Performance, Accuprobe, Affirm Prone, Aptima, Aptima Combo 2, ATEC, Brevera, C-View, Celero, Cellulaze, Cervista, Cynergy, Cynosure, Dimensions, Discovery, Elite, Emsor, Eviva, Faxitron, Fluoroscan, Icon, Insight FD, Gen-Probe, Genius, Genius 3D, Genius 3D Mammography, Horizon, Invader, Medicor, MedLite, MonaLisa Touch, MyoSure, NovaSure, Panther, PicoSure, PrecisionTx, PreservCyt, Progensa, RevLite, SculpSure, SecurView, Selenia, Sertera, SmartLipo Triplex, Synthesized 2D, ThinPrep, Tigris, TLI IQ, Tomcat, TMA, and Vectus.

PART I

Item 1. Business

Overview

We are a developer, manufacturer and supplier of premium diagnostics products, medical imaging systems, surgical products and light-based aesthetic and medical treatment systems with an emphasis on women's health. We operate in five segments: Diagnostics, Breast Health, Medical Aesthetics, GYN Surgical and Skeletal Health. We sell and service our products through a combination of direct sales and service personnel and a network of independent distributors and sales representatives.

We offer a wide range of diagnostic products which are used primarily to aid in the diagnosis of human diseases, and through January 31, 2017, we offered products that screen donated human blood and plasma. Our primary diagnostics products include our Aptima family of molecular diagnostic assays, which run on our advanced instrumentation systems (Panther and Tigris), our ThinPrep cytology system, and the Rapid Fetal Fibronectin Test. The Aptima family of molecular diagnostic assays is used to detect, among other things, the infectious microorganisms that cause common sexually transmitted diseases, or STDs, such as chlamydia and gonorrhea, certain high-risk strains of human papillomavirus, or HPV, and *Trichomonas vaginalis*, the parasite that causes trichomoniasis. In addition, in 2017 and 2018 we introduced the Aptima quantitative viral load tests for HIV, Hepatitis C and Hepatitis B. The Aptima portfolio also includes diagnostic tests for a range of acute respiratory ailments that are run on the Panther Fusion system, a field upgradeable instrument addition to Panther. The ThinPrep System is primarily used in cytology applications, such as cervical cancer screening, and the Rapid Fetal Fibronectin Test assists physicians in assessing the risk of pre-term birth. In the first quarter of fiscal 2017, we entered into a definitive agreement to sell our blood screening business to Grifols for a sales price of \$1.85 billion in cash. The transaction closed on January 31, 2017 and we received \$1.865 billion. Following the closing of this disposition, we no longer operate our blood screening business, except to the limited extent we have agreed to support Grifols. We continue to provide Grifols with instrumentation and certain raw materials, manufacture assays, and perform research and development services.

Our Breast Health segment offers a broad portfolio of solutions for breast cancer care for radiology, pathology and surgery. These solutions include breast imaging and analytics, such as our 2D and 3D mammography systems and reading workstations, minimally invasive breast biopsy guidance systems and devices, breast biopsy site markers and localization, specimen radiology, ultrasound and connectivity solutions. Our most advanced breast imaging platforms, Selenia Dimensions and 3Dimensions, utilizes a technology called tomosynthesis to produce 3D images that show multiple contiguous slice images of the breast, which we refer to as the Genius 3D Mammography exam, as well as conventional 2D full field digital mammography images. Our clinical results for FDA approval demonstrated that conventional 2D digital mammography with the addition of 3D tomosynthesis is superior to 2D digital mammography alone for both screening and diagnostics for women of all ages and breast densities.

Our Medical Aesthetics segment offers a portfolio of aesthetic treatment systems, including SculpSure, PicoSure and MonaLisa Touch that enable plastic surgeons, dermatologists and other medical practitioners to perform non-invasive and minimally invasive procedures to remove hair, treat vascular and benign pigmented lesions, remove multi-colored tattoos, revitalize the skin, reduce fat through laser lipolysis, reduce cellulite, clear nails infected by toe fungus, ablate sweat glands and improve gynecologic health. This segment also markets TempSure a radio frequency, or RF, energy sourced platform that offers both non-surgical and surgical aesthetic treatments and procedures.

Our GYN Surgical products include our NovaSure Endometrial Ablation System, or NovaSure, and our MyoSure Hysteroscopic Tissue Removal System, or Myosure, as well as our Fluent Fluid Management system, or Fluent. The NovaSure portfolio is comprised of the NovaSure CLASSIC and NovaSure ADVANCED devices and involves a trans-cervical procedure for the treatment of abnormal uterine bleeding. The MyoSure suit of devices offers four options to provide incision-less removal of fibroids, polyps, and other pathology within the uterus. The Fluent system is a fluid management system that provides liquid distention during diagnostic and operative hysteroscopic procedures.

Our Skeletal Health segment's products includes the Horizon DXA, a dual energy x-ray system, which evaluates bone density and performs body composition assessments, and the Fluoroscans Insight FD mini C-arm, which assists in performing minimally invasive orthopedic surgical procedures on a patient's extremities, such as the hand, wrist, knee, foot, and ankle.

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Available Information

Our Internet website address is <http://www.hologic.com>. Through our website, we make available, free of charge, our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to those reports, as well as proxy statements, and, from time to time, other documents as soon as reasonably practicable after we electronically file such material with, or furnish it to, the Securities and Exchange Commission, or SEC. These SEC reports can be accessed through the investor relations section of our website. The information found on our website is not part of this or any other report we file with or furnish to the SEC.

Investors and others should note that we announce material financial information to our investors using our investor relations website (<http://investors.hologic.com>), SEC filings, press releases, public conference calls and webcasts. We use these channels as well as social media to communicate with our members and the public about our company, our services and other issues. It is possible that the information we post on social media could be deemed to be material information. Therefore, we encourage investors, the media, and others interested in our company to review the information we post on the social media channels listed on our investor relations website. Hologic has used, and intends to continue to use, our investor relations website, as well as our Twitter account (@Hologic), as means of disclosing material non-public information and for complying with its disclosure obligations under Regulation FD. Further corporate governance information, including our certificate of incorporation, bylaws, governance guidelines, board committee charters, and code of business conduct and ethics, is also available on our investor relations website under the heading "Corporate Governance." The contents of our websites are not intended to be incorporated by reference into this Annual Report on Form 10-K or in any other report or document we file with the SEC, and any references to our websites are intended to be inactive textual references only.

You may read and copy any materials we file with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Washington, DC 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC also maintains an Internet website that contains reports, proxy and information statements, and other information regarding Hologic and other issuers that file electronically with the SEC. The SEC's Internet website address is <http://www.sec.gov>.

Products

We view our operations and manage our business in five principal reporting segments: Diagnostics, Breast Health, Medical Aesthetics, GYN Surgical and Skeletal Health. Financial information concerning these segments is provided in Note 14 to our audited consolidated financial statements contained in Item 15 of this Annual Report. The following describes our principal products in each of our segments.

Diagnostics Products

Aptima Family of Molecular Diagnostic Assays

The Aptima family of molecular diagnostic assays is used to detect, among other things, the infectious microorganisms that cause the common sexually transmitted diseases, or STDs, such as chlamydia and gonorrhea, certain high-risk strains of human papillomavirus, or HPV, and *Trichomonas vaginalis*, the parasite that causes trichomoniasis. In addition, we also offer viral load assays for the quantitation of hepatitis B virus, or HBV, hepatitis C virus, or HCV, and human immunodeficiency virus, or HIV-1 for use on our Panther instrument system. All three of these viral load assays are both CE-marked and FDA approved. Our Aptima products integrate a proprietary number of core technologies, including our target capture technology, our Transcription Mediated Amplification, or TMA, technology, and our hybridization protection assay, or HPA, and dual kinetic assay, or DKA, technologies, to produce highly sensitive amplification assays that increase assay performance, improve laboratory efficiency and reduce laboratory costs. Each of these technologies is described in greater detail below.

Target Capture/Nucleic Acid Extraction Technology. The detection of target organisms that are present in small numbers in a large-volume clinical sample requires that target organisms be concentrated to a detectable level. One way to accomplish this is to isolate the particular nucleic acid of interest by binding it to a solid support. This support, with the target bound to it, can then be separated from the original sample. We refer to such techniques as "target capture." We have developed target capture techniques to immobilize nucleic acids on magnetic beads by the use of a "capture probe" that binds to the bead and to the target nucleic acid. We use magnetic separation to concentrate the target by drawing the magnetic beads to the sides of a sample tube, while the remainder of the sample is removed from the tube. When used in conjunction with our amplification procedures, target capture techniques concentrate the nucleic acid target(s) and also remove materials in the sample that might otherwise interfere with amplification.

Transcription-Mediated Amplification (TMA) Technology. The goal of amplification technologies is to increase the copy number of a target nucleic acid sequences that may be present in samples in small numbers. These copies can then be

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detected using nucleic acid probes. Amplification technologies can yield results in only a few hours versus the several days or weeks required for traditional culture methods. TMA is a transcription-based amplification system that uses two different enzymes to drive the process. The first enzyme is a reverse transcriptase that creates a double-stranded DNA copy from an RNA or DNA template. The second enzyme, an RNA polymerase, makes thousands of copies of the complementary RNA sequence, known as the “RNA amplicon,” from the double-stranded DNA template. Each RNA amplicon serves as a new target for the reverse transcriptase and the process repeats automatically, resulting in an exponential amplification of the original target that can produce over a billion copies of amplicon in less than thirty minutes.

Hybridization Protection Assay (HPA) and Dual Kinetic Assay (DKA) Technologies . With our HPA technology, we have simplified testing, further increased test sensitivity and specificity, and increased convenience. In the HPA process, the acridinium ester, or AE, molecule is protected within the double-stranded helix that is formed when the probe binds to its specific target. Prior to activating the AE molecule, known as “lighting off,” a chemical is added that destroys the AE molecule on any unhybridized probes, leaving the label on the hybridized probes largely unaffected. When the “light off” or detection reagent is added to the specimen, only the label attached to the hybridized probe is left to produce a signal indicating that the target organism’s DNA or RNA is present. All of these steps occur in a single tube and without any wash steps, which were required as part of conventional probe tests. Our DKA technology uses two types of AE molecules that can be differentiated from each other—one that “flashes” and another one that “glows.” By using DKA technology, we have created nucleic acid test, or NAT, assays that can detect two separate targets simultaneously.

Instrumentation

We have developed and continue to develop instrumentation and software designed specifically for use with certain of our assays, including the Aptima family of molecular diagnostic assays. We also provide technical support and instrument service to maintain these instrument systems in the field. By placing our proprietary instrumentation in laboratories and hospitals, we can establish a platform for future sales of our assays.

Our instrumentation includes the Tigris system, an integrated, fully-automated testing instrument for high-volume laboratories which is approved for use with a number of our Aptima assays, the Panther instrument system, an integrated, fully-automated testing instrument capable of serving both high- and low-volume laboratories, and our semi-automated direct tube sampling, or DTS, instruments which are used to run a number of infectious disease assays. In the fourth quarter of fiscal 2014, we also introduced our Tomcat instrument, a fully-automated general purpose instrument designed to improve pre-analytical sample processing by eliminating the inefficient and error-prone activities associated with manually transferring samples from one tube to another. In fiscal 2017, we released our new Panther Fusion system and related Fusion assays for flu and respiratory testing, which extends the capabilities of the existing Panther system by adding the flexibility of polymerase chain reaction, or PCR, functionality to our existing TMA-based technology, all as a modular in-lab upgrade to the existing Panther system. We received CE-mark approval, for the Panther Fusion system, in the third quarter of fiscal 2017 and FDA clearance in October 2017.

Invader Chemistry Platform

Our Invader chemistry platform is a DNA probe-based system for highly sensitive detection of specific nucleic acid sequences. It is an accurate and specific method for detecting single-base pair changes, insertions, deletions, gene copy number, infectious agents, and gene expression. Invader reactions can be performed using genomic DNA, amplified RNA, PCR, or real-time PCR products. Our products and clinical diagnostic offerings based upon our Invader chemistry include our Cervista HPV tests and products to assist in the diagnosis of cardiovascular risk and other diseases.

ThinPrep System

The ThinPrep System is the most widely used method for cervical cancer screening in the U.S. The ThinPrep System consists of any one or more of the following: the ThinPrep 2000 Processor, ThinPrep 5000 Processor, ThinPrep5000 Processor with Autoloader, ThinPrep Imaging System, and related reagents, filters and other supplies, such as the ThinPrep Pap Test and our ThinPrep PreservCyt Solution.

The ThinPrep Process. The ThinPrep process begins with the patient’s cervical sample being obtained by the physician using a cervical sampling device that, rather than being smeared on a microscope slide as in a conventional Pap smear, is inserted into a vial filled with our proprietary ThinPrep PreservCyt Solution. This enables most of the patient’s cell samples to be preserved before the cells can be damaged by air drying. The ThinPrep specimen vial is then labeled and sent to a laboratory equipped with a ThinPrep Processor for slide preparation. At the laboratory, the ThinPrep specimen vial is inserted into a ThinPrep Processor, a proprietary sample preparation device, which automates the process of preparing cervical slides for staining and microscopic examination.

In the case of manual screening, the cytotechnologist screens each Pap test slide with a microscope to first determine

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the adequacy of the slide and then to examine the entire slide to differentiate diseased or abnormal cells from normal cells. With the ThinPrep Imaging System, the screening process has been automated to combine the power of computer imaging technology and human interpretive skills. Prior to human review, the ThinPrep Imaging System rapidly scans, locates and highlights areas of interest for review. By directing the cytotechnologist to areas of interest on a slide, the system may increase a cytology laboratory's screening productivity and diagnostic accuracy.

Additional Applications. In addition to serving as a replacement for the conventional Pap smear, the ThinPrep System can also be used for non-gynecological cytology screening applications including fine-needle aspiration specimens (e.g., breast, thyroid, lung or liver), body fluids (e.g., urine, pleural fluid, ascitic fluid or pericardial fluid), respiratory specimens (e.g., sputum or brushing of respiratory tracts) and ancillary testing (e.g., cell blocks, immunocytochemistry or special stains).

Rapid Fetal Fibronectin Test

The Rapid Fetal Fibronectin Test is a patented single-use disposable test used to determine a woman's risk of pre-term birth by detecting the presence of a specific protein, fetal fibronectin, in vaginal secretions during pregnancy. The test utilizes a single-use, disposable cassette and is analyzed on our patented instrument, the TLI IQ System.

Breast Health Products

Dimensions: Breast Tomosynthesis

Our Dimensions platform includes the Selenia Dimensions and 3Dimensions gantries capable of performing both 2D and tomosynthesis image acquisition and display. When operating in tomosynthesis mode, each system acquires a series of low dose x-ray images taken in a scanning motion at various angles. The images are mathematically processed into a series of small slices, allowing for visualization of the breast in multiple contiguous slices. Our clinical results for FDA approval demonstrated that conventional 2D digital mammography with the addition of our Genius 3D Mammography is superior to 2D digital mammography alone for both screening and diagnostics.

Synthesized 2D System

Our Synthesized 2D product has two offerings: C-View and Intelligent 2D. These software products provide a 2D image that is mathematically synthesized from the data within a tomosynthesis exam. Our current recommended clinical practice involves what we refer to as a "combo" exam involving a tomosynthesis exam and a conventional digital 2D exam, but performed under the same breast compression. The C-View product allows for the mathematical construction of a 2D image in standard resolution format from the tomosynthesis data, without the need for an actual 2D exposure. Elimination of the 2D exposure reduces the breast compression time and patient dose compared to the current combo exam. The new Intelligent 2D product, allows for the mathematical construction of a 2D image in high resolution format.

SecurView Workstation

The images captured by digital mammography systems are typically transmitted electronically for review by a radiologist at a work station. To this end, we developed the SecurViewDX breast imaging softcopy workstation, approved for interpretation of digital mammograms from most vendors as well as images from other diagnostic breast modalities. To complement this product, we also developed the SecurViewRT workstation, a technologist workstation enabling bi-directional exchange of electronic communications between the reviewer and the technologist.

CAD (Computer Aided Detection) Systems

We have CAD software tools for our mammography products. Mammography CAD is used by radiologists as "a second pair of eyes" when reading a woman's mammogram. Use of this technology provides reviewers with the potential to detect findings that might otherwise be overlooked during the review process, thus potentially increasing cancer detection.

Stereotactic Breast Biopsy Systems

We provide clinicians with the flexibility of choosing upright or prone systems for breast biopsy by offering two minimally invasive stereotactic breast biopsy guidance systems: Affirm Prone breast biopsy table and the Affirm upright attachment. The Affirm upright attachment is employed with our Dimensions systems. These breast biopsy systems provide an alternative to open surgical biopsy and can be performed as an outpatient procedure under local anesthesia, allowing shorter recovery times. The Affirm tomosynthesis option provides faster lesion targeting and reduced patient procedure time compared to traditional stereotactic biopsy procedures. The Affirm system is pre-programmed for use with our Brevera, Eviva and ATEC vacuum-assisted breast biopsy devices.

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Breast Biopsy Products

We offer a wide range of minimally invasive products for breast biopsy and biopsy site marking. Our breast biopsy portfolio includes three types of tethered vacuum-assisted breast biopsy products, the Brevera, ATEC, and Eviva devices. Each tethered device is powered by a console and utilizes our patented fluid management system. The ATEC device can be used under all standard imaging guidance modalities (stereotactic x-ray, ultrasound, MRI and molecular breast imaging) whereas our Brevera and Eviva devices are used exclusively under stereotactic x-ray guidance. We also offer the Celero and Sertera biopsy devices, both of which are non-tethered (no separate console), spring-loaded, disposable core biopsy devices, which are used exclusively under ultrasound-guidance.

Medical Aesthetics

SculpSure

Our SculpSure laser system is a hyperthermic laser treatment for non-invasive body contouring. Utilizing a 1060 nanometer (nm) diode laser, SculpSure is designed to reduce fat non-invasively by eliminating subcutaneous fat cells. Over time, the body naturally eliminates the fat cells that were disrupted by the SculpSure treatment. The hands-free device features a flexible applicator system to treat multiple anatomical areas of the body. SculpSure is currently approved for treatment on flanks, abdomen, submental (below the chin area) and back as well as inner and outer thighs. The SculpSure system requires the use of a Patented Applicator for Contouring, or PAC, to activate each applicator handpiece used in a treatment cycle.

PicoSure, MedLite and RevLite

Our PicoSure system uses a 755 nm wavelength laser for the removal of tattoos and benign pigmented lesions, as well as the reduction of wrinkles. PicoSure uses short bursts of energy which are measured in picoseconds (trillionths of a second) in contrast to nanosecond technology, used in our MedLite and RevLite products, which delivers pulses in billionths of a second. The bursts of energy cause the tattoo ink or other damage to break apart into tiny particles which are eliminated by the body. MedLite and RevLite are used for the removal of benign pigmented lesions and multi-colored tattoos. We also offer PicoSure 532 nm wavelength and the PicoSure 1064 nm wavelength to more effectively treat certain colors in tattoos.

MonaLisa Touch

The MonaLisa Touch is a CO₂ laser for incision, excision, ablation, vaporization and coagulation of body soft tissues in medical specialties including aesthetic (dermatology and plastic surgery), podiatry, otolaryngology (ENT), gynecology, neurosurgery, orthopedics, general and thoracic surgery (including open and endoscopic), dental and oral surgery and genitourinary surgery. We distribute and market the MonaLisa Touch in North America pursuant to an exclusive distribution agreement with El.En. S.p.A., or El.En. We and El.En. have agreed to market and distribute the MonaLisa Touch under separate distribution agreements with our respective wholly-owned subsidiaries in the United Kingdom and Germany.

Other Products .

Other product offerings in our Medical Aesthetics business include, among others:

- the Icon aesthetic system for hair removal, wrinkle reduction and scar and stretch mark treatment;
- the Vectus diode laser for high volume hair removal;
- TempSure is a radiofrequency platform that offers both non-surgical and surgical aesthetic treatments and procedures;
- the Synchro REPLA:Y is a high-powered hair removal device that can be used across a variety of skin and hair types;
- Nitronox is a versatile nitrous oxide and oxygen analgesia system that can be used for a variety of medical and aesthetic procedures;
- the Cellulaze laser device for the treatment of cellulite;
- the Cynergy product line for the treatment of vascular lesions;
- the Elite product line for hair removal and treatment of facial and leg veins and pigmentations; and
- the SmartLipo product line for Laser Body Sculpting for the minimally invasive removal of unwanted fat.

System Components .

Each of our Medical Aesthetics systems consists of a control console and one or more handpieces. Some of our systems consist of RF-based control consoles where energy is transferred through a handpiece or electrode. Our control consoles are each comprised of a graphical user interface, control system software and high voltage electronics. Depending

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on the system, the laser or other light source may be within the control console or the handpiece. The graphical user interface allows the practitioner to set the appropriate laser or flash lamp parameters, such as energy and pulse duration, to meet the requirements of a particular application for each particular patient. The control system software communicates the operator's instructions from the graphical user interface to the system's components and manages system performance and calibration.

For many applications, practitioners use cooling to protect the skin. The cooling system may be a separate system or integrated into the laser or intense pulsed light system itself. When not integrated, we offer our customers the SmartCool treatment cooling system, which we purchase from a third-party supplier and sell as a private label product under the SmartCool brand. The SmartCool handpiece, which is specially designed for use with our laser systems, interlocks with the laser handpiece.

GYN Surgical Products

NovaSure

The NovaSure endometrial ablation system allows physicians to treat women suffering from abnormal uterine bleeding. The system consists of a disposable device and a controller that delivers radio frequency, or RF, energy to ablate the endometrial lining of the uterus in order to eliminate or reduce the patient's abnormal bleeding. The NovaSure disposable device is a hand-held, single-use device that incorporates a flexible gold-plated mesh electrode used to deliver the RF energy to the endometrial tissue. The NovaSure RF Controller generates and delivers the RF energy customized for each patient, monitors several critical treatment and safety parameters, and automatically controls the endpoint of the procedure. In the second quarter of fiscal 2017, we released a new NovaSure ADVANCED device with slimmer diameter designed to improve patient comfort and physician ease-of-use while maintaining the clinical efficacy of the NovaSure system.

MyoSure

The MyoSure system is designed to provide efficient and effective hysteroscopic removal of fibroids located just below the lining of the uterus as well as uterine polyps and other pathology within the uterus. Removal of fibroids can provide effective relief of heavy menstrual bleeding commonly attributed to such pathology. Unlike other methods of tissue removal, the excavated tissue samples remain intact, which allows them to be tested for abnormalities. The MyoSure system consists of a tissue removal device, control unit, and hysteroscope. The MyoSure tissue removal device is single-use and features simultaneous tissue cutting and removal. The device incorporates a rapidly rotating cutting blade. During the procedure, the tissue removal device is inserted through the MyoSure hysteroscope. This tissue removal device is powered by a control unit, which features a simple user interface and is foot pedal activated. We offer four handpiece devices that differ in size and are focused on addressing different pathology types.

Skeletal Health Products

Horizon DXA System

Bone densitometry is the measurement of bone density to assist in the diagnosis and monitoring of osteoporosis and other metabolic bone diseases that can lead to frailty and debilitating bone fractures. Osteoporosis is a disease that is most prevalent in post-menopausal women. Our Horizon line of x-ray bone densitometers incorporates advanced features designed for bone health screening and body composition assessment. Body composition assessment is the precise measurement of bone, lean mass, fat mass within the body. These measurements are valued within the human performance category, informing nutrition and exercise intervention decisions.

Fluoroscanner Insight FD

Our Fluoroscanner Insight FD is a mini C-arm imaging system that provides low intensity, real-time x-ray imaging, with high-resolution images at radiation levels and at a cost below those of conventional x-ray and standard sized fluoroscopic equipment. Mini C-arm systems are used primarily by orthopedic surgeons to assist in performing minimally invasive surgical procedures on a patient's extremities, such as the hand, wrist, knee, foot and ankle.

Marketing, Sales and Service

We sell and service our products through a combination of direct sales and service forces and a network of independent distributors and sales representatives. In fiscal 2018, 2017, and 2016, no customer accounted for more than 10% of our consolidated revenues. In fiscal 2017, and 2016, revenues generated from Grifols, to whom we sold our blood screening business in fiscal 2017, accounted for 11.7%, and 18.8% of our Diagnostics segment revenue, respectively. In addition, in fiscal 2018 and 2017, revenues from another customer accounted for 14.2% and 12.8% of our Diagnostics segment revenue, respectively. No other customer accounted for more than 10% of our revenues in any other business segment in fiscal 2018, 2017, or 2016. In fiscal 2018, 2017, and 2016, international revenues accounted for 24.9%, 22.4% and 21.1% of our consolidated revenues, respectively.

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Our U.S. sales force is structured to specifically target the customers in each of our business segments. We maintain distinct teams focused on the Diagnostics, Breast Health, Medical Aesthetics, GYN Surgical, and Skeletal Health markets. Our end customers include clinical laboratories, hospitals, healthcare providers and surgeons in both hospital and office settings, and we target various specialists at healthcare entities who use our products, such as ob-gyns, dermatologists, radiologists and breast surgeons.

A critical element of our strategy in the U.S. for our Diagnostics, Breast and Skeletal Health and GYN Surgical divisions has been to utilize the results of our clinical trials and expanded FDA labeling to demonstrate safety, efficacy and productivity improvements to our target customers. Our U.S. sales efforts for these divisions also include the use of national account managers focused on obtaining purchasing contracts from large purchasing entities, such as managed care organizations, integrated delivery networks and government healthcare facilities. In addition, in certain regions of the U.S., we use a limited number of independent dealers or distributors to sell and service certain of our products. Internationally, our products in all divisions are marketed and sold through a combination of a direct sales force and a network of distributors.

In our Medical Aesthetics division, we target potential customers through office visits, trade shows and trade journals. We also conduct clinical workshops and webinars featuring recognized expert panelists and opinion leaders to promote existing and new treatment techniques using our products. We believe that these workshops and webinars enhance customer loyalty and provide us with new sales opportunities. We also use direct mail programs to target specific segments of the market that we seek to access, such as members of medical societies and attendees at meetings sponsored by medical societies or associations. We actively maintain a public relations program to promote coverage of our products on daytime television shows in the U.S. and Europe and we are active on popular social media outlets.

Our service organization is responsible for installing our products and providing warranty and repair services, applications training and biomedical training. In our Medical Aesthetics business, we also provide business and practice development consulting. Products sold by our direct sales force typically carry limited warranties covering parts and labor for twelve months. Products sold through dealers also carry limited warranties that typically last for twelve months and cover only parts and components. We also offer service contracts that generally last one to five years after the original warranty period. We provide both repair services and routine maintenance services under these arrangements, and also offer repair and maintenance services on a time and materials basis to customers that do not have service contracts. Internationally, we primarily use distributors, sales representatives and third parties to provide maintenance service for our products.

El.En. Commercial Relationship

We have several distribution agreements with El.En. S.p.A. Under one of these agreements, we purchase from El.En. its *SmartLipo MPX* system and its proprietary *SLT II* laser system. The *SLT II* laser system is an essential component of our *SmartLipo Triplex*, *Cellulaze*, and *PrecisionTx* systems, which also incorporate our proprietary software and delivery systems. We have exclusive worldwide rights under this agreement to sell the *SmartLipo MPX* system and our products containing the *SLT II* laser system. We have entered into separate agreements with El.En. through certain of our wholly-owned subsidiaries related to distribution of the *MonaLisa Touch* laser system in the United Kingdom and Germany.

The prices at which we purchase these laser systems from El.En. are specified in the agreements; however, they may be changed by El.En. at its discretion upon 30 days' notice. El.En. is required to provide us with training for the products we distribute under these agreements, as well as marketing and other sales support for such products as we and El.En. may agree. We are required to use commercially reasonable efforts to sell and promote our systems containing these laser systems, and generally we are responsible for obtaining and maintaining regulatory approvals for such products. We or El.En. may terminate these agreements at any time based upon material uncured breaches by, or the insolvency of, the other party. In addition, El.En. may terminate each agreement if we do not meet annual minimum purchase obligations specified in the agreement and we may terminate if El.En. rejects a purchase order that is in line with our forecast.

Competition

The healthcare industry is highly competitive and characterized by continual change and improvements in technology. This is particularly the case in the market segments in which we operate. A number of companies have developed, or are expected to develop products that compete or will compete with our products. Many of these competitors offer a broader product portfolio and have greater brand recognition than we do, which may make these competitors more attractive to hospitals, radiology clients, group purchasing organizations, laboratories, physicians and other potential customers. Competitors may develop superior products or products of similar quality for sale at the same or lower prices. Moreover, our products could be rendered obsolete by changes to industry standards or guidelines or advances in technology. We can give no assurance that we will be able to compete successfully with existing or new competitors.

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In the current environment of managed care, economically-motivated buyers, consolidation among healthcare providers, increased competition and declining reimbursement rates, we have been increasingly required to compete on the basis of price, value, reliability and efficiency. We believe the current global economic conditions and healthcare reform measures are putting additional competitive pressure on us, including on our average selling prices, overall procedure rates and market sizes.

We believe that the success of our products depends on our ability to differentiate ourselves and to demonstrate that our products deliver the clinical and operational attributes that are most important and cost-effective to customers. These attributes include, but are not limited to, superiority in efficacy, ease of use, reliability, accuracy, quality and cost. We believe our continued success depends in large part upon our ability to invest in product enhancements and technologies that will help us distinguish ourselves from our competitors.

Diagnostics. Our ThinPrep liquid-based cytology product faces direct competition in the U.S. primarily from Becton, Dickinson and Company, or BD, which manufactures a competitive offering. We also compete with the conventional Pap smear and other alternative methods for detecting cervical cancer and/or its precursors. Internationally, our ThinPrep product competes with a variety of companies and other non-FDA approved tests, since fewer regulatory barriers exist in most international markets as compared to the U.S.

We believe that our Rapid Fetal Fibronectin Test is currently the only approved in vitro diagnostic test for predicting the risk of pre-term birth in the U.S. Internationally, our Rapid Fetal Fibronectin Test competes with Actim Partus manufactured by Medix Biochemical. However, this product could experience competition from companies that manufacture and market pregnancy-related diagnostic products and services. In addition, healthcare providers use diagnostic techniques such as clinical examination and ultrasound to diagnose the likelihood of pre-term birth and may choose these techniques rather than use the Rapid Fetal Fibronectin Test.

In the molecular diagnostics market, our products compete with many companies in the U.S. and abroad engaged in the development, commercialization and distribution of similar products intended for clinical molecular diagnostic applications. Clinical laboratories also may offer testing services that are competitive with our products and may use reagents purchased from us or others to develop their own diagnostic tests.

In the global clinical diagnostics market, we compete with several companies offering alternative technologies to our diagnostic products. For example, in the U.S., our Aptima Combo 2 test competes against BD and Roche Diagnostics Corporation, or Roche, and our Aptima HPV and Cervista HPV tests compete with tests marketed by Qiagen and Roche.

Breast Health. Our mammography and related products and subsystems compete on a worldwide basis with products offered by a number of competitors, including General Electric Company, or GE, Siemens, Koninklijke Philips NV, or Philips, Planmed Oy, or Planmed, Carestream Health, Inc., FUJIFILM Holdings Corporation, or Fuji, I.M.S., and Toshiba Corporation. In the U.S., our digital mammography systems compete with digital mammography systems from GE, Siemens, Fuji, I.M.S., Philips and Planmed. Our digital mammography systems also compete with Fuji's and Carestream Health's Computed Radiography, or CR mammography systems, and other lower-priced alternatives to 2D digital mammography and analog mammography systems. In the U.S., GE, Siemens and Fuji have received FDA approval for their breast tomosynthesis systems, and we believe that other competitors are developing tomosynthesis systems for commercial use in the U.S. Our Dimensions tomosynthesis systems also compete in certain countries outside of the U.S. with tomosynthesis systems developed by GE, Siemens, Fuji, and I.M.S.

The primary competitor for our breast biopsy product line is Devicor Medical Products, Inc., part of Danaher Corporation's Leica Biosystems division. In addition, other competitors include CareFusion, a BD Company, Sanarus Technologies, LLC and Intact Medical Corporation.

Medical Aesthetics. Our Medical Aesthetics products compete against laser and other energy-based products offered by companies such as Cutera, Inc., Syneron Medical Ltd. and ZELTIQ Aesthetics, Inc. (acquired by Allergan plc in April 2017), as well as several smaller specialized companies, such as Alma Lasers Inc. (acquired in May 2013 by Shanghai Fosun Pharmaceutical) and Lumenis Inc. Some of these competitors have strong financial and human resources and have established reputations, as well as established worldwide distribution channels and sales and marketing capabilities. Additional competitors may enter the Medical Aesthetics market, and we are likely to compete with new Medical Aesthetics companies in the future. Our Medical Aesthetics products also compete against non-laser and non-light-based medical products, such as BOTOX and collagen injections, and surgical and non-surgical aesthetic procedures, such as face lifts, chemical peels, abdominoplasty, liposuction, microdermabrasion, sclerotherapy and electrolysis.

GYN Surgical. Our NovaSure system currently faces direct competition from Boston Scientific Corporation, or Boston Scientific, The Cooper Companies, Inc., or CooperSurgical, and Minerva Surgical, Inc., or Minerva, each of which currently

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markets an FDA approved endometrial ablation device for the treatment of abnormal uterine bleeding. In addition to these devices, we also compete with alternative treatments to our NovaSure system, such as drug therapy, intrauterine devices, hysterectomy, dilation and curettage and rollerball ablation. Because drug therapy is an alternative to our NovaSure procedure, NovaSure's competitors also include many major pharmaceutical companies that manufacture hormonal drugs for women.

Our MyoSure product competes directly with hysteroscopic loop resection, as well as hysteroscopic tissue removal systems such as Medtronic's TruClear device and Boston Scientific's Symphion device. The MyoSure product also competes with alternative therapeutic techniques such as hysteroscopic resection with a monopolar or bipolar loop, which is currently the most common technique for removing intrauterine fibroids and polyps.

Skeletal Health. GE is our primary competitor in the bone densitometry market, and we also compete with Orthoscan in the mini-C arm market.

Manufacturing

We purchase many of the components, subassemblies, and raw materials used in our products from numerous suppliers worldwide. For reasons of quality assurance, scarcity and/or cost effectiveness, certain components, subassemblies, and raw materials used in our products are available only from one or a limited number of suppliers. We work closely with our suppliers to develop contingency plans to ensure continuity of quality and reliable supply. We established long-term supply contracts with many of our suppliers and in other instances, we developed in-house capability to offset potential shortages caused by sole source suppliers. Due to the high standards and FDA requirements applicable to manufacturing our products, such as the FDA's Quality System Regulation and Good Manufacturing Practices, we may not be able to quickly establish additional or replacement sources for certain components or materials. In the event that we are unable to obtain sufficient quantities of raw materials or components or subassemblies on commercially reasonable terms or in a timely manner, our ability to manufacture our products on a timely and cost-competitive basis may be compromised, which may have a material adverse effect on our business, financial condition and results of operations.

Our current supplier of certain key raw materials for certain of our amplified NAT diagnostic assays is Roche Diagnostics Corporation. The parent company of Roche Diagnostics Corporation is F. Hoffmann-La Roche Ltd, a direct competitor of our Diagnostics business. Our Diagnostic business has two supply agreements with GE Healthcare Bio-Sciences Corp., an affiliate of GE, for membranes used in connection with our ThinPrep product line and for primers used in the manufacture of Aptima, Fusion, Cervista, Progensa and AccuProbe product lines. GE is a direct competitor with our Breast Health and Skeletal Health businesses.

We have sole-source third-party contract manufacturers for each of our molecular diagnostics instrument product lines and for our Skeletal Health products. KMC Systems, Inc., or KMC Systems, is the only manufacturer of the Tigris instrument spare parts, Stratec Biomedical AG, or Stratec, is the only manufacturer of the Panther instrument and Flextronics Medical Sales and Marketing, LTD, or Flextronics, is the only manufacturer of our Skeletal Health finished goods products. We are dependent on these sole source third-party manufacturers, and this dependence exposes us to increased risks associated with production delays, delivery schedules, manufacturing capability, quality control, quality assurance and costs. We have no firm long-term volume commitments with either KMC Systems, Stratec or Flextronics. If KMC Systems, Stratec, Flextronics or any of our other third-party manufacturers experiences delays, disruptions, capacity constraints or quality control problems in its development or manufacturing operations or becomes insolvent or otherwise fails to supply us with products in sufficient quantities, instrument and equipment shipments to our customers could be delayed, which would decrease our revenues and may harm our competitive position and reputation. Further, because we place orders with our manufacturers based on forecasts of expected demand for our instruments and Skeletal Health products, if we inaccurately forecast demand we may be unable to obtain adequate manufacturing capacity or adequate quantities of components to meet our customers' delivery requirements.

In our Medical Aesthetics business, we use Alexandrite rods in the lasers for our Elite+, Apogee+, and PicoSure systems and our sole source supplier is Northrop Grumman SYNOPTICS. We are aware of no alternative supplier of Alexandrite rods meeting our quality standards. We also offer our SmartCool cooling systems for use with our laser aesthetic treatment systems, and our sole source supplier is Zimmer Elektromedizin GmbH. We use diode laser bars from Coherent, Inc. to manufacture our Vectus diode laser, and we use diode laser modules from Dilas Diode Laser Inc. to manufacture our SculpSure laser system. Although alternative suppliers exist for the diode laser bars, it could take months for these suppliers to qualify and provide us with the needed materials. We also have El.En. as our sole source supplier for the MonaLisa Touch, as well as the SLT II laser system that we integrate with our own proprietary software and delivery systems for our SmartLipo Triplex, Cellulaze and PrecisionTx systems. We use one third-party to assemble and test many of the components

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and subassemblies for our Cynergy, Accolade, MedLite, RevLite, and PicoSure product families. We also utilize one third-party to assemble and test Elite+, Apogee+, Icon, Vectus, and the SculpSure finished devices.

We, and our contract manufacturers, manufacture our products at a limited number of different facilities located in the U.S. and throughout the world. In most cases, the manufacturing of each of our products is concentrated in one or a few locations. An interruption in manufacturing capabilities at any of these facilities, as a result of equipment failure or other reasons, could reduce, delay or prevent the production of our products. Some of our manufacturing operations are located outside of the U.S., including in Costa Rica and the United Kingdom. Those manufacturing operations are also subject to additional challenges and risks associated with international operations described under the caption “Risk Factors” set forth in Part I, Item 1A of this annual report on Form 10-K.

From time to time new regulations are enacted that can affect the content and manufacturing of our products. We continue to evaluate the necessary steps for compliance with regulations as they are enacted. In August 2012, the SEC adopted a rule requiring disclosures of specified minerals, known as conflict minerals, that are necessary to the functionality or production of products manufactured or contracted to be manufactured by public companies. The conflict minerals rule requires companies annually to disclose and report whether or not such minerals originate from the Democratic Republic of Congo or an adjoining country. The conflict minerals rule could affect sourcing at competitive prices and availability in sufficient quantities of certain minerals used in the manufacture of our products, including tantalum, tin, gold and tungsten. The number of suppliers who provide conflict-free minerals may be limited. In addition, there may be material costs associated with complying with the disclosure requirements, such as costs related to determining the source of certain minerals used in our products, as well as costs of possible changes to products, processes, or sources of supply as a consequence of such verification activities. Since our supply chain is complex, we may not be able to sufficiently verify the origins of the relevant minerals used in our products through the due diligence procedures that we implement, which may harm our reputation. In addition, we may encounter challenges to satisfy those customers who require that all of the components of our products be certified as conflict-free, which could place us at a competitive disadvantage if we are unable to do so.

Other regulations which affect the content and manufacturing of our products include, for example, the Registration, Evaluation, Authorization and Restriction of Chemical substances, or REACH, the Restriction on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Directive, or RoHS, and the Waste Electrical and Electronic Equipment Directive, or WEEE, enacted in the European Union which require the registration of and regulate the use of certain hazardous substances and chemicals in, and require the collection, reuse and recycling of waste from, certain products we manufacture. Similar legislation that has been or is in the process of being enacted in Japan and China and various states of the U.S. may require us to re-design our products to ensure compliance with the applicable standards, for example by requiring the use of different types of materials. These redesigns or alternative materials may detrimentally impact the performance of our products, add greater testing lead-times for product introductions, result in additional costs or have other similar effects.

Backlog

Our backlog as of October 27, 2018 and October 28, 2017 totaled \$263.7 million and \$294.1 million, respectively. Backlog consists of customer orders for which a delivery schedule within the next twelve months has been specified. Orders included in backlog may be canceled or rescheduled by customers without significant penalty. Backlog as of any particular date should not be relied upon as indicative of our net revenues for any future period.

Research and Development

The markets in which we participate are characterized by rapid technological change, frequent product introductions and evolving customer requirements. Investment in research and development is critical to driving our future growth. Our research and development efforts are focused on the further development and improvement of our existing products, the design and development of innovative medical technologies and regulatory compliance.

In addition to product development, our research and development personnel play an active role in the review of product specifications, clinical protocols and FDA submissions, as well as ensuring that certain of our products conform to European health, safety and environmental requirements, or CE-marking.

Patents and Proprietary Rights

We rely primarily on a combination of trade secrets, patents, copyrights, trademarks and confidentiality procedures to protect our products and technology. Due to the rapid technological changes that characterize the markets we operate in, we believe that trade secrets and other unpatented know-how relied upon in connection with the development of new products and the enhancement of existing products are generally as important as patent protection in establishing and maintaining a competitive advantage. Nevertheless, we have obtained patents and will continue to make efforts to obtain patents, when

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available, in connection with our product development programs. We do not consider our business to be materially dependent upon any individual patent.

We own numerous U.S. patents and have applied for numerous additional U.S. patents relating to our technologies. We also own or have applied for corresponding patents in selected foreign countries. These patents relate to various aspects of most of our products. We do not know if current or future patent applications will be issued with the full scope of the claims sought, if at all, or whether any patents issued will be challenged or invalidated. There is a risk that our patent applications will not result in granted patents or that granted patents will not provide significant protection for our products and technology. Third parties may infringe, misappropriate or otherwise violate our intellectual property rights, or copy or reverse engineer portions of our technology. Our competitors may independently develop similar or superior technology that our patents do not cover. In addition, because patent applications in the U.S. are not generally publicly disclosed until eighteen months after the application is filed, applications may have been filed by third parties that relate to our technology. Moreover, there is a risk that foreign intellectual property laws will not protect our intellectual property rights to the same extent as intellectual property laws in the U.S. The rights provided by a patent are finite in time. Over the coming years, certain patents relating to current products will expire in the U.S. and abroad which may allow third parties to exploit those technologies. In the absence of significant patent protection, we may be vulnerable to competitors who attempt to copy our products, processes or technology.

In addition to the patents we have been issued or we have acquired, we license patents from others on a variety of terms and conditions.

We are engaged in intellectual property litigation as described in Note 12 to our consolidated financial statements entitled "Litigation and Related Matters", and as may also be described herein, and we may be notified in the future of claims that we may be infringing, misappropriating or otherwise violating the intellectual property rights of third-parties. In connection with any such claims, we may seek to enter into settlement and/or licensing arrangements. There is a risk in these situations that no license will be available or that a license will not be available on reasonable terms. Alternatively, we may decide or be required to litigate such claims. A successful claim by a third-party may require us to remove the alleged infringing product from the market or to design around the patented technology, potentially resulting in less market demand for the product.

Regulatory and Reimbursement

Regulatory

The manufacture, sale, lease and service of medical diagnostic and surgical devices intended for commercial use are subject to extensive governmental regulation by the FDA in the U.S. and by a variety of regulatory agencies in other countries. Under the Federal Food, Drug and Cosmetic Act, known as the FD&C Act, manufacturers of medical products and devices must comply with certain regulations governing the design, testing, manufacturing, packaging, servicing and marketing of medical products. Some of our products are also subject to the Radiation Control for Health and Safety Act, administered by the FDA, which imposes performance standards and record keeping, reporting, product testing and product labeling requirements for devices that emit radiation, such as x-rays. FDA product approvals may be withdrawn or suspended if compliance with regulatory standards is not maintained or if problems occur following initial marketing.

The FDA classifies medical devices into three classes based on risk. Regulatory control increases from Class I (lowest risk) to Class III (highest risk). The FDA generally must clear or approve the commercial sale of new medical devices in Classes II and III. Commercial sales of our Class II (except for Class II exempt devices) and III medical devices within the U.S. must be preceded by either a pre-market notification filing pursuant to Section 510(k) of the FD&C Act (Class II) or the granting of a pre-market approval, or PMA (Class III). Our Class I and Class II exempt medical devices must follow Hologic's internal Quality System processes prior to commercialization. All classes of devices must meet FDA's quality system (QS), establishment registration, medical device listing, labeling and medical device reporting (MDR) regulations.

A 510(k) pre-market notification filing must contain information establishing that the device to be sold is substantially equivalent to a device commercially distributed prior to May 28, 1976 or to a device that has been determined by the FDA to be substantially equivalent. The PMA procedure involves a complex and lengthy testing process that is subject to review by the FDA and may require several years to obtain. We may need to first obtain an investigational device exemption (for significant risk devices), known as an IDE, in order to conduct extensive clinical testing of the device to obtain the necessary clinical data for submission to the FDA. The FDA will approve a PMA only if after evaluating the supporting technical data it finds that the PMA contains sufficient, valid scientific evidence to assure that the device is safe and effective for its intended use(s). This approval may be granted with post-approval requirements including inspection of manufacturing facilities and/or additional patient follow-up for an indefinite period of time.

The laboratories that purchase certain of our products, including the ThinPrep System, ThinPrep Imaging System,

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Rapid Fetal Fibronectin Test, Aptima Combo 2, Aptima HPV and Cervista HPV tests are subject to extensive regulation under the Clinical Laboratory Improvement Amendments of 1988, or CLIA, which requires laboratories to meet specified standards in the areas of personnel qualifications, administration, participation in proficiency testing, patient test management, quality control, quality assurance and inspections. Adverse interpretations of current CLIA regulations or future changes in CLIA regulations could have an adverse effect on sales of any affected products.

Certain analyte specific reagents, referred to as ASR products, as with other Class I products, may be sold without 510(k) clearance or PMA approval. However, ASR products are subject to significant restrictions. The manufacturer may not make clinical or analytical performance claims for the ASR product, may not promote their use with specific laboratory equipment and may only sell the ASR product to clinical laboratories that are qualified to run high complexity tests under CLIA. Each laboratory must validate the ASR product for use in diagnostic procedures as a laboratory developed test.

We are also subject to a variety of federal, state and foreign laws which broadly relate to our interactions with healthcare practitioners and other participants in the healthcare system, including, among others, the following:

- anti-kickback and anti-bribery laws, such as the Foreign Corrupt Practices Act, or FCPA, the UK's Bribery Act 2010, or the UK Anti-Bribery Act;
- laws regulating the confidentiality of sensitive personal information and the circumstances under which such information may be released and/or collected, such as the Health Insurance Portability and Accountability Act of 1996, or HIPAA, the Health Information Technology for Economic and Clinical Health Act, or HITECH Act, and the new European Union General Data Protection Regulation, or GDPR; and
- healthcare reform laws, such as the Patient Protection and Affordable Care Act and the Health Care and Education Affordability Reconciliation Act of 2010, which we refer to together as PPACA, which include new regulatory mandates and other measures designed to constrain medical costs, as well as stringent new reporting requirements of financial relationships between device manufacturers and physicians and teaching hospitals.

In addition, we are subject to numerous federal, state, foreign and local laws relating to safe working conditions, manufacturing practices, environmental protection, fire hazard control and disposal of hazardous or potentially hazardous substances, data privacy and protection among others. We may be required to incur significant costs to comply with these laws and regulations in the future, and complying with these laws may result in a material adverse effect upon our business, financial condition and results of operations.

Sales of medical devices outside of the U.S. are subject to foreign requirements that vary widely from country to country. For example, our ability to market our products outside of the U.S. is contingent upon maintaining our International Standards Organization, or ISO, Quality System certification, complying with European directives and in some cases receiving specific marketing authorization from the appropriate foreign regulatory authorities. Foreign registration is an ongoing process as we register additional products and/or product modifications.

The time required to obtain approval from a foreign country to market and sell our products may be longer or shorter than that required for FDA approval and the requirements may differ. In addition, we may be required to meet the FDA's export requirements or receive FDA export approval for the export of our products to foreign countries.

In 2012, the European Commission proposed two new regulations, one each for medical devices and In-vitro Diagnostics (IVD). The European regulators have now reached consensus on the texts for both new regulations and they became official in May of 2017. There will be a three-year transition period for medical devices and a five-year transition period for IVDs. The adoption of these regulations may impact our international operations through a broadened scope of medical device and IVD oversight and/or regulatory reach. Compliance with the new European Commission regulations may impose additional administrative and financial burdens on us.

Federal, state and foreign regulations regarding the manufacture and sale of medical devices and pharmaceuticals are subject to future change. We cannot predict what impact, if any, such changes might have on our business.

For additional information about the regulations to which our business is subject and the impact such regulations may have on our business, see the disclosures under the caption "Risk Factors" in Item 1A below.

Reimbursement

Market acceptance of our medical products in the U.S. and other countries is dependent upon the purchasing and procurement practices of our customers, patient demand for our products and procedures, and, other than for our Medical Aesthetics products, the reimbursement of patients' medical expenses by government healthcare programs, private insurers or other healthcare payors. In the U.S., the Centers for Medicare & Medicaid Services, known as CMS, establishes coverage

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policies and payment rates for Medicare beneficiaries. CMS publishes payment rates for physician, hospital, laboratory and ambulatory surgical center services on an annual basis. Under current CMS policies and regulations, varying payment levels have been established for tests and procedures performed using our products. Coverage policies for Medicare patients may vary by regional Medicare contractor in the absence of a national coverage determination and payment rates for procedures will vary based on the geographic price index. Coverage policies and reimbursement rates for Medicaid patients are dependent on each State Medicaid plan and will vary. Coverage policies and reimbursement rates for patients with private insurance is dependent on the individual private payor's decisions and may not follow the policies and rates established by CMS. Moreover, private insurance carriers may choose not to follow the CMS coverage policies or payment rates. The use of our products outside of the U.S. is similarly affected by reimbursement policies adopted by foreign regulatory authorities and insurance carriers.

Healthcare policy and payment reform proposals and medical cost containment measures are being adopted in the U.S. and in many foreign countries. The ability of our customers to obtain appropriate reimbursement for our products and services from private and governmental third-party payors is critical to the success of medical technology companies because it affects which products customers purchase and the prices they are willing to pay. Reimbursement and coverage varies by country and can significantly impact acceptance of new products and technologies. Even if we develop a promising new product, we may find limited demand for the product unless reimbursement approval and coverage is obtained from private and governmental third-party payors. Further legislative or administrative reforms to the reimbursement system in the U.S. and other countries in a manner that significantly reduces reimbursement for procedures using our medical products or denies coverage for those procedures facilitated by our products, including price regulation, competitive bidding and tendering, coverage and payment policies, comparative effectiveness of therapies, technology assessments and managed-care arrangements, could have a material adverse effect on our business, financial condition or results of operations.

Employees

As of September 29, 2018, we had 6,252 full-time employees, including 1,535 in manufacturing operations, 722 in research and development, 3,266 in marketing, sales and support services, and 729 in general administration. The 56 non-management employees of our Hitec-Imaging subsidiary located in Germany are represented by a union and are subject to collective bargaining agreements. In addition, Hitec-Imaging's German employees are represented by a works council, a Betriebsrat, with respect to various shop agreements for social matters and working conditions. We believe that our relationship with our employees is good. Except as described herein, none of our other employees are represented by a union.

Seasonality

Worldwide sales, including U.S. sales, do not reflect any significant degree of seasonality; however, customer purchases of our GYN Surgical products have been historically lower in our second fiscal quarter as compared to our other fiscal quarters. Our respiratory infectious disease product line within our Diagnostics segment is also subject to significant seasonal and year-over-year fluctuations. In addition, the summer months, which occur during our fiscal fourth quarter, typically have had lower order rates internationally for most of our products.

Item 1A. Risk Factors

In evaluating our business, the risks described below, as well as other information contained in this Annual Report on Form 10-K and in our other filings with the Securities and Exchange Commission should be considered carefully. Additional risks not presently known to us or that we currently deem immaterial may also adversely affect our business. The occurrence of any of these events or circumstances could individually or in the aggregate have a material adverse effect on our business, financial condition, cash flow or results of operations. This report contains forward-looking statements; please refer to the cautionary statements made under the heading "Special Note Regarding Forward-Looking Statements" for more information on the qualifications and limitations on forward-looking statements.

Risks Relating to our Business

Successful execution of the revenue growth plan for all of our divisions, but particularly for our Medical Aesthetics division, is essential to achieving our growth objectives and involves risk.

Our successful execution of the growth plan for our Medical Aesthetics business, which is essential to achieving our growth objectives, involves a number of risks. Among other things:

- we may not be able to successfully commercialize our Medical Aesthetics product pipeline on a timely basis or at all;
- there is high turn-over in the sales force in the medical aesthetics industry;

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- we may be unable to drive increased disposable utilization of our SculpSure or other future products;
- we and other medical aesthetic companies are facing increased scrutiny by the FDA; and
- we face competition from well-established companies operating in the Medical Aesthetics field, some of whom are much larger than we are and have more resources to devote to promoting the business.

Competition in the Medical Aesthetics device industry is intense. Our Medical Aesthetics products compete against products offered by companies such as Cutera, Syneron Medical, and ZELTIQ Aesthetics (which was acquired by Allergan in 2017), as well as several smaller specialized companies, such as Alma Lasers (acquired in 2013 by Shanghai Fosun Pharmaceutical) and Lumenis. We also face competition against non-laser and non-light-based medical products, such as BOTOX and collagen injections, and surgical and non-surgical aesthetic procedures, such as face lifts, chemical peels, abdominoplasty, liposuction, microdermabrasion, sclerotherapy and electrolysis. We may also face competition from manufacturers of pharmaceutical and other products that have not yet been developed. Additional competitors may enter the market, and we are likely to compete with new companies in the future.

We, and other medical aesthetic companies, are facing increased scrutiny by the FDA with respect to products for vaginal health. On July 30, 2018, the FDA issued a public statement and sent letters to a number of companies in the medical aesthetics industry expressing concerns regarding “vaginal rejuvenation” procedures using energy-based devices. As previously disclosed, Hologic and its division, Cynosure, received such a letter relating to the MonaLisa Touch® laser. Cynosure recently launched the TempSure™ Vitalia handpiece and probe under an FDA 510(k) clearance and was marketing the device for heating of vaginal tissue. Although the FDA did not mention Vitalia in its recent comments or letter, Cynosure carefully considered the FDA’s broader concerns and elected to suspend marketing and distribution of Vitalia handpieces and single-use probes until it has assessed the implications of recent FDA considerations for devices in this category. Cynosure also asked customers to return any Vitalia handpieces and unused probes they have purchased. Lost sales of the Vitalia handpieces as well as refunds and rebates associated with prior sales of Vitalia handpieces, unused probes and TempSure systems and reduced sales of MonaLisa Touch has and will likely impact our revenue and the growth of the division. We believe, however, that a higher level of scrutiny from regulatory authorities ultimately will benefit us as well as our customers and patients.

In addition, Medical Aesthetics is a new type of business for the Company, requiring understanding of a new market as well as new products and procedures that are not subject to reimbursement. As noted in a subsequent risk factor, the elective nature of the Medical Aesthetics procedures subjects our business to increased volatility due to macroeconomic conditions. We market our aesthetic treatment systems to physicians and other practitioners as well as to end-users directly. We believe, and our growth expectations assume, that we and other companies selling lasers and other aesthetic treatment systems have not fully penetrated these markets and that we will receive a significant percentage of our revenues from selling to these markets. In addition, the commercial success of the Medical Aesthetics products and technology we develop will depend upon the acceptance of these products by providers of aesthetic procedures and their patients and clients. It is difficult for us to predict how successful recently introduced products, or products we are currently developing, will be over the long term. If our expectations as to the size of these markets and our ability to sell our products to participants in these markets are not correct, our revenues will suffer and our business will be harmed.

Finally, the aesthetic laser and light-based treatment system industry is subject to continuous technological development and product innovation. If we do not continue to innovate and develop new products and applications within our Medical Aesthetics business, our competitive position will likely deteriorate as other companies successfully design and commercialize new products and applications. Accordingly, the success of our Medical Aesthetics business depends in part on developing or acquiring new and innovative applications of laser and other light-based technology and identifying new markets for and applications of existing products and technology.

Any or all of these factors could impact our ability to successfully execute our Medical Aesthetics revenue growth plan, which could have a material adverse effect on our business and financial results.

Our long-term success will depend upon our ability to successfully develop and commercialize new products and treatments and enhance our existing products and treatments; the internal research and development and external business development activities necessary to do so involve risk.

The markets for our products have been characterized by rapid technological change, frequent product introductions and evolving customer requirements. Our growth potential depends in large part on our ability to identify and develop new products or new indications for or enhancements of existing products, either through internal research and development or through collaborations, acquisitions, joint ventures or licensing or other arrangements with third parties. The development of new products and enhancement of existing products requires significant investment in research and development, clinical trials and regulatory approvals.

The results of our product development efforts may be affected by a number of factors, including our ability to anticipate customer needs, innovate and develop new products, complete clinical trials, obtain regulatory approvals and reimbursement in the U.S. and abroad, manufacture products in a cost-effective manner, obtain, maintain, protect and enforce appropriate

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intellectual property protection for our products, gain and maintain market approval of our products and access capital. If we are not able to successfully enhance existing products or develop new products, our products may be rendered obsolete or uncompetitive by new industry standards or changing technology. We cannot assure that any products now in development or that we may seek to develop in the future will achieve technological feasibility, obtain regulatory approval or gain market acceptance, and we may be unable to recover all or a meaningful part of our investment in such products and technologies.

Additionally, as part of our long-term strategy, we are engaged in business development activities including evaluating acquisitions, joint development opportunities, technology licensing arrangements and other opportunities to further expand our presence in or diversify into priority growth areas by accessing new products and technologies. We may not be able to identify appropriate acquisition candidates, consummate transactions or obtain agreements with favorable terms. Further, once we acquire a business, such as Cynosure or Faxitron, for example, any inability to successfully integrate the business, decreases in customer loyalty or product orders, failure to retain and develop the acquired workforce, failure to establish and maintain appropriate controls or unknown or contingent liabilities could adversely affect our ability to realize the anticipated benefits of any acquisition. The integration of an acquired business such as Cynosure or Faxitron or any other acquired business, whether or not successful, requires significant efforts which may result in additional expenses and divert the attention of our management and technical personnel from other projects. These transactions are inherently risky, and there can be no assurance that any past or future transaction will be successful.

If we are successful in pursuing future acquisitions, we may be required to expend significant funds, incur additional debt or other obligations, or issue additional securities, which may negatively affect our operating results and financial condition. If we spend significant funds or incur additional debt or other obligations, our ability to obtain financing for working capital or other purposes could be adversely affected, and we may be more vulnerable to economic downturns and competitive pressures. We cannot guarantee that we will be able to finance additional acquisitions or that we will realize any anticipated benefits from acquisitions that we complete.

If we fail to develop and successfully manufacture and launch new products, enhance existing products and identify, acquire and integrate complementary businesses, technologies and products, our business, results of operations and/or financial condition could be adversely affected.

International expansion is a key component of our growth strategy, although our international operations and foreign acquisitions expose us to additional operational challenges that we might not otherwise face.

We are focused on international expansion as a key component of our growth strategy and have identified specific areas of opportunity in various international markets. In fiscal 2018, 24.9% of our revenue came from outside of the U.S. If we fail to capitalize on the opportunities we have identified, our future growth may be materially adversely affected.

In addition, even if we do succeed in our plans to grow internationally, our future and existing international operations may subject us to a number of additional risks and expenses. Any of these risks or expenses could harm our operating results. These risks and expenses include:

- political and economic changes and disruptions, export/import controls and tariff regulations;
- difficulties in developing staffing and simultaneously managing operations in multiple locations as a result of, among other things, distance, language and cultural differences;
- governmental currency controls;
- multiple, conflicting and changing government laws and regulations (including, among other things, antitrust and tax requirements);
- protectionist laws and business practices that favor local companies;
- difficulties in the collection of trade accounts receivable;
- difficulties and expenses related to implementing internal control over financial reporting and disclosure controls and procedures;
- expenses associated with customizing products for clients in foreign countries;
- possible adverse tax consequences;
- the inability to obtain and maintain required regulatory approvals or favorable third-party reimbursement;
- operation in parts of the world where strict compliance with anti-bribery laws may conflict with local customs and practices;
- the inability to effectively obtain, maintain, protect or enforce intellectual property rights, reduced protection for intellectual property rights in some countries, and the inability to otherwise protect against clone or “knock off” products;

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- the lack of ability to enforce non-compete agreements with former owners of acquired businesses competing with us in China and other foreign countries; and
- lower margins on a number of our products sold outside of the U.S.

As a result of the United Kingdom's impending withdrawal from the European Union, commonly referred to as "Brexit," we may face new regulatory costs and challenges that may have a material adverse effect on us and our operations. We have a manufacturing facility in the UK, and, depending on the terms of Brexit, we could become subject to export tariffs and regulatory restrictions that could increase the costs and time related to doing business in Europe. Additionally, Brexit could result in the UK or the European Union significantly altering its regulations affecting the clearance or approval of our products that are developed or manufactured in the UK. Any new regulations could add time and expense to the conduct of our business, as well as the process by which our products receive regulatory approval in the UK, the European Union and elsewhere. Given the lack of comparable precedent, it is unclear what economic, financial, trade and legal implications the withdrawal of the UK from the European Union would have and how such withdrawal may affect us.

Our global operations are required to comply with the U.S. Foreign Corrupt Practices Act of 1977, as amended ("FCPA"), Chinese anti-corruption and similar anti-bribery laws in other jurisdictions and with U.S. and foreign export control, trade embargo and customs laws. If we fail to comply with any of these laws, we could suffer civil and criminal sanctions which could affect our financial results.

Government policies on international trade and investment such as import quotas, capital controls or tariffs, whether adopted by individual governments or addressed by regional trade blocs, can affect the demand for our products and services, impact the competitive position of our products or prevent us from being able to sell products in certain countries. The implementation of more restrictive trade policies, such as more detailed inspections, higher tariffs or new barriers to entry, could negatively impact our business, results of operations and financial condition. For example, a government's adoption of "buy national" policies or retaliation by another government against such policies could have a negative impact on our results of operations.

Additionally, the regulatory environment in China is evolving, and officials in the Chinese government exercise broad discretion in deciding how to interpret and apply regulations. It is possible that the Chinese government's current or future interpretation and application of existing or new regulations will negatively impact our China operations, result in regulatory investigations or lead to fines or penalties.

Changes in currency exchange rates may reduce the reported value of our revenues outside the U.S., net of expenses, and cash flows. We cannot predict changes in currency exchange rates, the impact of exchange rate changes, nor the degree to which we will be able to manage the impact of currency exchange rate changes. We currently have limited hedging arrangements in place to mitigate some of the impact of lower exchange rates.

We have only one third-party manufacturer for certain of our product lines and rely on one or a limited number of suppliers for some key raw materials, components or subassemblies for our products. This reliance exposes us to increased risks associated with production delays, delivery schedules, manufacturing capability, quality control, quality assurance and costs.

Certain of our raw materials, components or subassemblies are purchased from a single-source due to cost, quality, expertise or other considerations. Obtaining alternative sources of supply of these raw materials, components or subassemblies could involve significant delays and other costs and regulatory challenges and may not be available to us on reasonable terms, if at all. The failure of a supplier to provide sufficient quantities, acceptable quality and timely delivery of goods at an acceptable price, or an interruption in the delivery of goods from such a supplier could harm our business and prospects. Any disruption of supplies of goods could delay or reduce shipments, which could result in lost or deferred sales.

For example, we have sole-source third-party manufacturers for each of our molecular diagnostics instruments and for our Skeletal Health products. KMC Systems, Inc., or KMC Systems, is the only manufacturer of the Tigris instrument, Stratec Biomedical AG, or Stratec, is the only manufacturer of the Panther instrument and Flextronics Medical Sales and Marketing LTD, or Flextronics, is the only manufacturer of our Skeletal Health finished goods products. We have no firm long-term volume commitments with either KMC Systems or Stratec. If KMC Systems, Stratec, Flextronics or any of our other third-party manufacturers experiences delays, disruptions, capacity constraints or quality control problems in its development or manufacturing operations or becomes insolvent or otherwise fails to supply us with goods in sufficient quantities, then instrument shipments to our customers could be delayed, which would decrease our revenues and harm our competitive position and reputation. Further, because we place orders with our manufacturers based on forecasts of expected demand for our products, if we inaccurately forecast demand we may be unable to obtain adequate manufacturing capacity or adequate quantities of components to meet our customers' delivery requirements.

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Similarly, we rely on one or a limited number of suppliers for some key raw materials for our products and some of these suppliers are competitors. For example, our current supplier of certain key raw materials for certain of our amplified NAT diagnostic assays, pursuant to a fixed-price contract, is Roche Diagnostics Corporation and we have a supply and purchase agreement for oligonucleotides for HPV with Roche Molecular Systems, Inc. The parent company of both Roche Diagnostics Corporation and Roche Molecular Systems, Inc. is F. Hoffmann-LaRoche Ltd, a direct competitor of our Diagnostics business. We also have a supply agreement with GE Healthcare Bio-Sciences Corp., an affiliate of GE, for membranes used in connection with our ThinPrep product line. GE is a direct competitor with our Breast Health and Skeletal Health businesses. In our Medical Aesthetics business, we use Alexandrite rods in the lasers for our Elite and PicoSure systems. We depend exclusively on Northrop Grumman SYNOPTICS to supply the Alexandrite rods to us, and we are aware of no alternative supplier of Alexandrite rods meeting our quality standards. We offer our SmartCool cooling systems for use with our laser aesthetic treatment systems, and we depend exclusively on Zimmer Elektromedizin GmbH to supply SmartCool systems to us. We use diode laser bars from Coherent, Inc. to manufacture our Vectus diode laser, and we use diode laser modules from Dilas Diodenlaser GmbH to manufacture our SculpSure laser system. Although alternative suppliers exist for the diode laser bars, they could take months to qualify and implement. We also depend on El.En. for the SLT II laser system that we integrate with our own proprietary software and delivery systems into our SmartLipo Triplex, Cellulaze and PrecisionTx systems. El.En. markets, sells, promotes and licenses other products that compete with our products.

We may in the future need to find new contract manufacturers or suppliers to replace existing manufacturers or suppliers, increase our volumes or reduce our costs. We may not be able to find contract manufacturers or suppliers that meet our needs, and even if we do the process is expensive and time consuming. If we are required or elect to change contract manufacturers or suppliers, we may lose revenues and our customer relationships may suffer.

If we or our contract manufacturers are unable to manufacture our products in sufficient quantities, on a timely basis, at acceptable costs and in compliance with regulatory and quality requirements, our ability to sell our products and our business will be harmed.

The manufacture of many of our products is highly complex and requires precise high quality manufacturing that is difficult to achieve. We have in the past and may in the future experience difficulties in manufacturing our products on a timely basis and in sufficient quantities. These difficulties have primarily related to delays and difficulties associated with ramping up production of newly introduced products and may result in increased delivery lead-times and increased costs of manufacturing these products. In addition, production of these newer products may require the development of new manufacturing technologies and expertise, which we may be unable to develop. Our failure, including the failure of our contract manufacturers, to achieve and maintain the required high manufacturing standards could result in further delays or failures in product testing or delivery, cost overruns, product recalls or withdrawals, increased warranty costs or other problems that could harm our business and prospects.

In determining the required quantities of our products and the manufacturing schedule, we must make significant judgments and estimates based on historical experience, inventory levels, current market trends and other related factors. Because of the inherent nature of estimates, there could be significant differences between our estimates and the actual amounts of products we and our distributors require, which could harm our business and results of operations.

Medical diagnostic and surgical device products are regulated by the FDA as well as other foreign medical regulatory bodies. In some cases, such as in the U.S. and the European Union, certain products may also require individual lot release testing. Maintaining compliance with multiple regulators, and multiple centers within the FDA, adds complexity and cost to our manufacturing processes. In addition, our manufacturing facilities and those of our contract manufacturers are subject to periodic regulatory inspections by the FDA and other regulatory agencies, and these facilities are subject to the FDA's Quality System Regulation and Good Manufacturing Practices. We or our contractors may fail to satisfy these regulatory requirements in the future, and any failure to do so may prevent us from selling our products.

If, despite internal testing and testing by customers, any of our products contain errors or defects or fail to meet applicable specifications, then we may be required to enhance or improve those products or technologies. We may not be able to do so on a timely basis, if at all, and may only be able to do so at considerable expense.

Additionally, the FDA and similar governmental bodies in other countries have the authority to require the recall of medical products in the event of material deficiencies or defects in design or manufacture. A government mandated or voluntary recall by us could occur as a result of component failures, manufacturing errors or design defects, including defects in labeling. Any recall could divert managerial and financial resources, be difficult and costly to correct, result in the suspension of sales of certain of our products, harm our reputation and the reputation of our products and adversely affect our business and prospects.

Our success depends on our ability to attract and retain key personnel.

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We constantly monitor the dynamics of the economy, the healthcare industry and the markets in which we compete, and we continue to assess the key personnel that we believe are essential to our long-term success. Five years ago, we effected a leadership change and have made significant organizational and strategic changes in connection therewith. If we fail to effectively manage our ongoing organizational and strategic changes, our financial condition, results of operations, and reputation, as well as our ability to successfully attract, motivate and retain key employees, could be harmed. Additionally, facilitating seamless leadership transitions for key positions is a critical factor in sustaining the success of an organization. If our succession planning efforts are not effective, it could adversely impact our business.

Moreover, in our industry, there is substantial competition for key personnel in the regions in which we operate and we may face increased competition for such employees. The loss of any of our key personnel, particularly management or key research and development personnel, could harm our business and prospects and could impede the achievement of our research and development, operational or strategic objectives. Our success also depends upon our ability to attract and retain other qualified managerial and technical personnel. Competition for such personnel is intense. We may not be able to attract and retain personnel necessary for the development of our business.

Increased cybersecurity requirements, vulnerabilities, threats and more sophisticated and targeted computer crime could pose a risk to our systems, networks, products, solutions, services and data.

Increased global cybersecurity vulnerabilities, threats, computer viruses and more sophisticated and targeted cyber-related attacks, as well as cybersecurity failures resulting from human error and technological errors, pose a risk to the security of Hologic and its customers, business partners and suppliers products, systems and networks and the confidentiality, availability and integrity of data on these products, systems and networks. As the perpetrators of such attacks become more capable, and as critical infrastructure is increasingly becoming digitized, the risks in this area continue to grow. While we attempt to mitigate these risks by employing a number of measures, including employee training, monitoring and testing, and maintenance of protective systems and contingency plans, we remain potentially vulnerable to additional known or unknown threats, and there is no assurance that the impact from such threats will not be material. In addition to existing risks, the adoption of new technologies may also increase our exposure to cybersecurity breaches and failures. We also may have access to sensitive, confidential or personal data or information that is subject to privacy and security laws, regulations or customer-imposed controls. Despite our implementation of controls to protect our systems and sensitive, confidential or personal data or information, we may be vulnerable to material security breaches, theft, misplaced, lost or corrupted data, employee errors and/or malfeasance (including misappropriation by departing employees) that could potentially lead to the compromising of sensitive, confidential or personal data or information, improper use of our systems, software solutions or networks, unauthorized access, use, disclosure, modification or destruction of information, defective products, production downtimes and operational disruptions. Data privacy and protection laws are evolving and present increasing compliance challenges, which increase our costs, affect our competitiveness and can expose us to substantial fines or other penalties. In addition, a cyber-related attack could result in other negative consequences, including damage to our reputation or competitiveness, remediation or increased protection costs, litigation or regulatory action. Although we have experienced occasional actual or attempted breaches of our computer systems, to date none of these breaches has had a material effect on our business, operations or reputation.

Our inability to obtain, or any delay in obtaining, any necessary U.S. or foreign regulatory clearances or approvals for our newly developed products and treatments or product enhancements could harm our business and prospects.

Our products and treatments are subject to a high level of regulatory oversight. Our inability to obtain, or any delay in obtaining, any necessary U.S. or foreign regulatory clearances or approvals for our newly developed products or product enhancements could harm our business and prospects. The process of obtaining clearances and approvals can be costly and time-consuming. In addition, there is a risk that any approvals or clearances, once obtained, may be withdrawn or modified.

Most medical devices cannot be marketed in the U.S. without 510(k) clearance or premarket approval by the FDA. Any modifications to a device that has received a pre-market approval that affect the safety or effectiveness of the device require a pre-market approval supplement or possibly a separate pre-market approval, either of which is likely to be time-consuming, expensive and uncertain to obtain. If the FDA requires us to seek one or more pre-market approval supplements or new pre-market approvals for any modification to a previously approved device, we may be required to cease marketing or to recall the modified device until we obtain approval, and we may be subject to significant criminal and/or civil sanctions, including, but not limited to, regulatory fines or penalties. As discussed in a prior risk factor, we recently received a letter from the FDA regarding the MonaLisa Touch® laser and whether our existing 510(k) clearances adequately include certain claims made on our website. In connection with this, we elected to suspend marketing and distribution of our TempSure Vitalia handpieces and single-use probes until we have assessed the implications of recent FDA considerations for devices in this category. This has had a negative impact on our revenue in the short term, and could impact our forecasts.

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Medical devices sold in the U.S. must also be manufactured in compliance with FDA Good Manufacturing Practices, which regulate the design, manufacture, packing, storage and installation of medical devices. Moreover, medical devices are required to comply with FDA regulations relating to investigational research and labeling. States may also regulate the manufacture, sale and use of medical devices, particularly those that employ x-ray technology. Our products are also subject to approval and regulation by foreign regulatory and safety agencies.

Delays in receipt of, or failure to obtain, clearances or approvals for future products could delay or preclude realization of product revenues from new products or result in substantial additional costs which could decrease our profitability. In 2012, the European Commission proposed two new regulations, one each for medical devices and In-vitro Diagnostics (IVD). The European regulators have now reached consensus on the texts for both new regulations and they became official in May of 2017. There will be a three-year transition period for medical devices and a five-year transition period for IVDs. The adoption of these regulations may impact our international operations through a broadened scope of medical device and IVD oversight and/or regulatory reach. Compliance with the new European Commission regulations, if and when adopted, may impose additional administrative and financial burdens on us.

We operate in a highly regulated industry, and changes in healthcare-related laws and regulations could adversely affect our revenues and profitability.

We operate in a highly regulated industry. As a result, governmental actions may adversely affect our business, operations or financial condition, including:

- new laws, regulations or judicial decisions, or new interpretations of existing laws, regulations or decisions, related to healthcare availability, method of delivery and payment for healthcare products and services;
- changes in the FDA and foreign regulatory approval processes that may delay or prevent the approval of new products and treatments and result in lost market opportunity;
- changes in FDA and foreign regulations that may require additional safety monitoring, labeling changes, restrictions on product distribution or use, or other measures after the introduction of our products and treatments to market, which could increase our costs of doing business, adversely affect the future permitted uses of approved products or treatments, or otherwise adversely affect the market for our products and treatments; and
- new laws, regulations and judicial decisions affecting pricing or marketing practices.

We anticipate that governmental authorities will continue to scrutinize the healthcare industry closely and that additional regulation by governmental authorities may cause increased compliance costs, exposure to litigation and other adverse effects to our operations.

The continuing worldwide macroeconomic uncertainty may adversely affect our business and prospects.

Market acceptance of our medical products in the U.S. and other countries is dependent upon the medical equipment purchasing and procurement practices of our customers, patient demand for our products and procedures, the reimbursement of patients' medical expenses by government healthcare programs and third-party payors and, for our Medical Aesthetics business, individual economic health. The continuing uncertainty surrounding world financial markets and continuing weak worldwide macroeconomic conditions have caused and may continue to cause the purchasers of medical equipment to decrease their medical equipment purchasing and procurement activities. Economic uncertainty as well as increasing health insurance premiums and co-payments may continue to result in cost-conscious consumers making fewer elective trips to their physicians and specialists, which in turn would adversely affect demand for our products and procedures. Job losses in the U.S. may result in a smaller percentage of our patients being covered by an employer health group and a larger percentage being covered by lower paying Medicare and Medicaid programs. Furthermore, governments and other third-party payors around the world facing tightening budgets could move to further reduce the reimbursement rates or the scope of coverage offered, which could adversely affect sales of our products.

Additionally, the aesthetic laser and energy-based treatment system industry in which our Medical Aesthetics business operates is particularly vulnerable to economic trends. Most procedures performed using our aesthetic treatment systems are elective procedures that are not reimbursable through government or private health insurance. The cost of these elective procedures must be borne by the patient. As a result, the decision to undergo a procedure that uses our products may be influenced by the cost. Consumer demand, and therefore our Medical Aesthetics business, is sensitive to a number of factors that affect consumer spending, including political and macroeconomic conditions, health of credit markets, disposable consumer income levels, consumer debt levels, interest rates, consumer confidence and other factors. If there is not sufficient consumer demand for the procedures performed with our Medical Aesthetics products, practitioner demand for our Medical Aesthetics products would decline, and our Medical Aesthetics business would suffer.

In the event of deterioration of general business conditions or the availability of credit, the financial strength and stability of our Medical Aesthetics customers and potential customers may deteriorate over time, which may cause them to cancel or

delay their purchase of our products. In addition, we may be subject to increased risk of non-payment of our accounts receivables for our Medical Aesthetics business. We may also be adversely affected by bankruptcies or other business failures of our customers and potential customers. A significant delay in the collection of funds or a reduction of funds collected may impact our liquidity or result in bad debts. If the current adverse macroeconomic conditions continue, our business and prospects may be negatively impacted.

The failure of third-party payors to provide appropriate levels of coverage and reimbursement for the use of our diagnostics, breast and skeletal health and surgical products and treatments facilitated by our products could harm our business and prospects.

Sales and market acceptance of our diagnostics, breast and skeletal health and surgical products and the treatments facilitated by these products is dependent upon the coverage decisions and reimbursement policies established by government healthcare programs and private health insurers. The ability of customers to obtain appropriate reimbursement for the products and services they use from private and governmental third-party payors is critical to the success of medical technology companies because it affects which products customers purchase and the prices they are willing to pay. Reimbursement varies by country and can significantly impact the acceptance of new products and technologies. Even if we develop a promising new product, we may find limited demand for the product unless appropriate reimbursement approval is obtained from private and governmental third-party payors. Further legislative or administrative reforms to the reimbursement systems in the U.S. and other countries in a manner that significantly reduces reimbursement for procedures using our diagnostics, breast and skeletal health and surgical products or denies coverage for those procedures facilitated by our products, including price regulation, competitive bidding and tendering, coverage and payment policies, comparative effectiveness of therapies, technology assessments and managed-care arrangements, could have a material adverse effect on our business, financial condition or results of operations.

Healthcare policy changes, including healthcare reform legislation and the uncertainty surrounding the implementation of any such legislation, could harm our business and prospects.

The Patient Protection and Affordable Care Act, as amended by the Health Care and Education Affordability Reconciliation Act (collectively, “the Healthcare Reform Act”) was enacted into law in the U.S. in March 2010. As a U.S. headquartered company with significant sales in the U.S., the medical device tax included in this law has materially affected us. The law imposed on medical device manufacturers a 2.3 percent excise tax on U.S. sales of Class I, II and III medical devices beginning in January 2013. As such, this excise tax applied to the majority, if not all of our products sold in the U.S. The implementation of the medical device tax has been suspended for calendar years 2016, 2017, 2018, and 2019. The tax for sales after December 31, 2019 will be reinstated unless there is legislative effort to temporarily suspend or permanently repeal the tax.

The law also includes regulatory mandates and other measures designed to constrain medical costs, as well as stringent reporting requirements of financial relationships between device manufacturers and physicians and teaching hospitals. Specifically, under one provision of the law, which is commonly referred to as the Physician Payment Sunshine Act, we are required to collect data on and annually report to CMS certain payments or other transfers of value to physicians and teaching hospitals and annually report certain ownership and investment interests held by physicians or their immediate family members.

Compliance with this healthcare legislation, including with these reporting requirements and the excise tax, imposed significant additional administrative and financial burdens on us. Various healthcare reform proposals have also emerged at the state level in the U.S. The Healthcare Reform Act and these proposals could reduce medical procedure volumes and impact the demand for our products or the prices at which we sell our products. These reforms include a national pilot program on payment bundling to encourage hospitals, physicians and other providers to improve the coordination, quality and efficiency of certain healthcare services through bundled payment models. In addition, while the excise tax was in effect, it increased our costs of doing business. The impact of this healthcare reform legislation, and practices including price regulation, competitive pricing, comparative effectiveness of therapies, technology assessments, and managed care arrangements could harm our business and prospects, results of operations and/or financial condition. Healthcare reform proposals and medical cost containment measures in the U.S. and in many foreign countries could:

- limit the use of our products and treatments;
- reduce reimbursement available for such use;
- further tax the sale or use of our products;
- adversely affect the use of new therapies for which our products may be targeted; and
- further increase the administrative and financial burden of compliance.

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These reforms, cost containment measures and new taxes, including the uncertainty in the medical community regarding their nature and effect, could also have an adverse effect on our customers' purchasing decisions regarding our products and treatments and could harm our business, results of operations, financial condition and prospects. We cannot predict the specific healthcare programs and regulations that will be ultimately implemented by regional and national governments globally. However, any changes that lower reimbursements for our products and/or procedures using our products, reduce medical procedure volumes or increase cost containment pressures on us or others in the healthcare sector could adversely affect our business and results of operations. In addition, the draft Clinical Laboratory Fee Schedule (CLFS) published by CMS under the Protecting Access to Medicare Act of 2014 (PAMA), may impact our diagnostic laboratory customers. This impact could in turn, over time, put pressure on the prices at which we sell our diagnostic assays and instruments to these customers.

Guidelines, recommendations and studies published by various organizations may reduce the use of our products.

Professional societies, government agencies, practice management groups, private health/science foundations, and organizations involved in healthcare issues may publish guidelines, recommendations or studies to the healthcare and patient communities. Recommendations of government agencies or these other groups/organizations may relate to such matters as usage, cost-effectiveness, and use of related therapies. Organizations like these have in the past made recommendations about our products and those of our competitors. Recommendations, guidelines or studies that are followed by healthcare providers and insurers could result in decreased use of our products. For example, in November 2012, the American Congress of Obstetrics and Gynecologists, known as the ACOG, released updates in which they have recommended less frequent cervical cancer screening similar to guidelines released in March 2012 by the U.S. Preventative Services Task Force, or the USPSTF, and the American Cancer Society. We believe that these recommendations and guidelines may have contributed to increased screening intervals for cervical cancer, which we believe has and may continue to adversely affect our ThinPrep revenues. In addition, on October 20, 2015, the American Cancer Society issued new guidelines recommending that women start annual mammograms at age 45 instead of 40 and have a mammogram every two years instead of annually. This recommendation could result in a decrease in purchases of our mammography systems.

Consolidation in the healthcare industry could lead to increased demands for price concessions or the exclusion of some suppliers from certain of our significant market segments, which could harm our business and prospects.

The cost of healthcare has risen significantly over the past decade and numerous initiatives and reforms by legislators, regulators and third-party payors to curb these costs have resulted in a consolidation trend in the healthcare industry, including with respect to hospitals and clinical laboratories. This consolidation has resulted in greater pricing pressures, decreased average selling prices, and the exclusion of certain suppliers from important market segments as group purchasing organizations, independent delivery networks and large single accounts continue to consolidate purchasing decisions for some of our customers. We expect that market demand, government regulation, third-party reimbursement policies, government contracting requirements, and societal pressures will continue to change the worldwide healthcare industry, resulting in further business consolidations and alliances among our customers and competitors, which may reduce competition and continue to exert further downward pressure on the prices of our products and adversely impact our business, financial condition or results of operations. In particular, we are dependent upon a relatively small number of large clinical laboratory customers in the U.S. for a significant portion of our sales of diagnostics products. Due in part to a trend toward consolidation of clinical laboratories in recent years and the relative size of the largest U.S. laboratories, it is likely that a significant portion of these sales will continue to be concentrated among a relatively small number of large clinical laboratories.

Interruptions, delays, shutdowns or damage at our manufacturing facilities could harm our business.

We and our contract manufacturers manufacture our products at a limited number of different facilities located in the United States and throughout the world. In most cases, the manufacturing of each of our products is concentrated in one or a few locations. An interruption in manufacturing capabilities at any of these facilities, as a result of equipment failure or other reasons, could reduce, delay or prevent the production of our products. Our manufacturing facilities and those of our contract manufacturers are subject to the risk of catastrophic loss due to unanticipated events, such as fires, earthquakes, explosions, floods or weather conditions. Manufacturing facilities may experience plant shutdowns, strikes or other labor disruptions, or periods of reduced production as a result of equipment failures, loss of power, gray outs, delays in deliveries or extensive damage, which could harm our business and prospects. Some of our manufacturing operations are located outside the U.S., including in Costa Rica and the United Kingdom. Those manufacturing operations are also subject to additional challenges and risks associated with international operations described herein.

Some of our activities may subject us to risks under federal and state laws prohibiting "kickbacks" and false or fraudulent claims.

We are subject to the provisions of a federal law commonly known as the anti-kickback statute, and several similar state laws, which prohibit payments intended to induce physicians or others either to refer patients or to acquire or arrange for or

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recommend the acquisition of healthcare products or services. While the federal law applies only to products or services for which payment may be made by a federal healthcare program, state laws often apply regardless of whether federal funds may be involved. These laws constrain the sales, marketing and other promotional activities of manufacturers of medical devices by limiting the kinds of financial arrangements, including sales programs that may be used with hospitals, physicians, laboratories and other potential purchasers of medical devices. Other federal and state laws generally prohibit individuals or entities from knowingly presenting, or causing to be presented, claims for payment from Medicare, Medicaid, or other third-party payors that are false or fraudulent, or are for items or services that were not provided as claimed. Anti-kickback and false claims laws prescribe civil and criminal penalties (including fines) for noncompliance that can be substantial.

Similarly, our international operations are subject to the provisions of the FCPA, which prohibits U.S. companies and their representatives from offering, promising, authorizing, or making payments to foreign officials for the purpose of influencing any act or decision of such official in his or her official capacity, inducing the official to do any act in violation of his or her lawful duty, or to secure any improper advantage in obtaining or retaining business. In many countries, the healthcare professionals we regularly interact with may meet the definition of a foreign official for purposes of the FCPA. In addition to the FCPA, our international operations are also subject to various other international anti-bribery laws such as the UK Anti-Bribery Act. Despite meaningful measures that we undertake to facilitate lawful conduct, which include training and compliance programs and internal policies and procedures, we may not always prevent unauthorized, reckless or criminal acts by our employees or agents, or employees or agents of businesses or operations we may acquire. It is possible that our practices might be challenged under federal or state anti-kickback, FCPA or similar laws due to the breadth of the statutory provisions and the absence of extensive guidance regarding compliance. Violations of these laws, or allegations of such violations, could disrupt our operations, involve significant management distraction and have a material adverse effect on our business, financial condition and results of operations. We also could be subject to adverse publicity, severe penalties, including criminal and civil penalties, disgorgement, further changes or enhancements to our procedures, policies and controls, personnel changes and other remedial actions. Moreover, our failure to comply with domestic or foreign laws could result in various adverse consequences, including possible delay in approval or refusal to approve a product, recalls, seizures, and withdrawal of an approved product from the market.

Our Diagnostics segment depends on a small number of customers for a significant portion of its product sales, the loss of any of these customers or any cancellation or delay of a large purchase by any of these customers could significantly reduce revenues in our Diagnostics segment.

Although we do not currently have any customers that represent more than 10% of our consolidated revenues, a material portion of product sales in our Diagnostics segment comes from a limited number of customers, one of whom accounted for more than 14.2% of our Diagnostics segment revenue in fiscal 2018. We anticipate that our operating results in our Diagnostics segment will continue to depend, to a significant extent, upon revenues from a small number of customers. The contract with one of our key Diagnostics customer is up for renewal in the next year. The loss of any of these key customers, or a significant reduction in sales volume or pricing to these customers, could significantly reduce our Diagnostics segment revenues or profitability.

If we cannot maintain our current corporate collaborations and enter into new corporate collaborations, our product development could be delayed and our revenue could be adversely impacted.

With respect to certain of our products we have relied, to a significant extent, on corporate collaborators for funding development and marketing as well as distribution. We also expect to rely on our corporate collaborators for the commercialization of certain products. If any of our corporate collaborators were to breach or terminate its agreement with us or otherwise fail to conduct its collaborative activities successfully and in a timely manner, the development or commercialization and subsequent marketing of the products contemplated by the collaboration could be delayed or terminated. We cannot control the amount and timing of resources our corporate collaborators devote to our programs or potential products.

The continuation of any of these collaboration agreements depends upon their periodic renewal by us and our collaborators. If any of our current collaboration agreements are terminated, or if we are unable to renew those collaborations on acceptable terms, we may be required to devote additional internal resources to product development or marketing or to terminate some development programs or seek alternative corporate collaborations. In addition, in the event of a dispute under our current or any future collaboration agreements, a court or arbitrator may not rule in our favor and our rights or obligations under an agreement subject to a dispute may be adversely affected, which may have an adverse effect on our business or operating results. Any corporate collaboration may divert management time and resources. In some instances we have entered into corporate collaborations, including alliances and joint ventures, with certain partners or companies that could make it more difficult for us to enter into advantageous business transactions or relationships with others.

Failing to manage a collaboration effectively, failing to comply with the obligations associated with a collaboration, or entering into a disadvantageous corporate collaboration, could harm our business and prospects.

The markets for our newly developed products and treatments and newly introduced enhancements to our existing products and treatments may not develop as expected.

The successful commercialization of our newly developed products and treatments and newly introduced enhancements to our existing products and treatments are subject to numerous risks, both known and unknown, including:

- uncertainty of the development of a market for such product or treatment;
- trends relating to, or the introduction or existence of, competing products, technologies or alternative treatments or therapies that may be more effective, safer or easier to use than our products, technologies, treatments or therapies;
- the perception of our products or treatments as compared to other products and treatments;
- recommendation and support for the use of our products or treatments by influential customers, such as hospitals, radiological practices, breast surgeons and radiation oncologists and treatment centers;
- the availability and extent of data demonstrating the clinical efficacy of our products or treatments;
- competition, including the presence of competing products sold by companies with longer operating histories, more recognizable names and more established distribution networks; and
- other technological developments.

Often, the development of a significant market for a product or treatment will depend upon the establishment of a reimbursement code or an advantageous reimbursement level for use of the product or treatment. Moreover, even if addressed, such reimbursement codes or levels frequently are not established until after a product or treatment is developed and commercially introduced, which can delay the successful commercialization of a product or treatment.

If we are unable to successfully commercialize and create a significant market for our newly developed products and treatments and newly introduced enhancements to our existing products and treatments our business and prospects could be harmed.

Our business is dependent on technologies we license, and if we fail to maintain these licenses or license new technologies and rights to particular nucleic acid sequences for targeted diseases in the future, we may be limited in our ability to develop new products.

Our business is dependent on licenses from third parties for some of our key technologies. For example, our patented TMA technology is based on technology we licensed from Stanford University. We anticipate that we will enter into new licensing arrangements in the ordinary course of business to expand our product portfolio and access new technologies to enhance our products and develop new products. Many of these licenses will provide us with exclusive rights to the subject technology or disease marker. If our license with respect to any of these technologies or markers is terminated for any reason, we may not be able to sell products that incorporate the technology. Similarly, we may lose competitive advantages if we fail to maintain exclusivity under an exclusive license.

Additionally, the U.S. Supreme Court has issued several decisions, the full impact of which is not yet known. For example, in March 2012 in *Mayo Collaborative Services, DBA Mayo Medical Laboratories, et al. v. Prometheus Laboratories, Inc.*, the Court held that several claims drawn to measuring drug metabolite levels from patient samples and correlating them to drug doses were not patentable subject matter. The decision appears to impact diagnostics patents that merely apply a law of nature via a series of routine steps and has created uncertainty around the patentability of certain biomarker-related method claims. Additionally, in June 2013 in *Association for Molecular Pathology v. Myriad Genetics, Inc.*, the Court held that claims to isolated genomic DNA are not patentable, but claims to complementary DNA, or cDNA, molecules were held to be valid. The effect of the decision on patents for other isolated natural products is uncertain and we may lose competitive advantages should the subject matter of our patents or patents we exclusively license be deemed non-patentable subject matter and we therefore fail to maintain exclusivity to such subject matter as a result.

Our ability to develop additional diagnostic tests for diseases may depend on the ability of third parties to discover particular sequences or markers and correlate them with disease, as well as the rate at which such discoveries are made. Our ability to design products that target these diseases may depend on our ability to obtain the necessary rights from the third parties that make any of these discoveries. In addition, there are a finite number of diseases and conditions for which our NAT diagnostic assays may be economically viable. If we are unable to access new technologies or the rights to particular sequences or markers necessary for additional diagnostic products on commercially reasonable terms, we may be limited in our ability to develop new diagnostic products.

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Our products and manufacturing processes will require access to technologies and materials that may be subject to patents or other intellectual property rights held by third parties. We may need to obtain additional intellectual property rights in order to commercialize our products. We may be unable to obtain such rights on commercially reasonable terms or at all, which could adversely affect our ability to grow our business.

Our business could be harmed if we are unable to protect our proprietary technology.

We have relied primarily on a combination of trade secrets, patents, copyrights, trademarks and confidentiality procedures to protect our products and technology. Despite these precautions, unauthorized third parties may infringe, misappropriate or otherwise violate our intellectual property, or copy or reverse engineer portions of our technology. The pursuit and assertion of a patent right, particularly in areas like nucleic acid diagnostics and biotechnology, involve complex determinations and, therefore, are characterized by substantial uncertainty. We do not know if current or future patent applications will be issued with the full scope of the claims sought, if at all, or whether any patents that do issue will be challenged or invalidated. The patents that we own or license could also be subjected to invalidation proceedings or similar disputes, and an unfavorable outcome could require us to cease using the related technology or to attempt to license rights to the technology from the prevailing party. In addition, the laws governing patentability and the scope of patent coverage continue to evolve, particularly in the field of biotechnology. As a result, patents might not issue from certain of our patent applications or from applications licensed to us.

We have obtained or applied for corresponding patents and patent applications in several foreign countries for some of our U.S. patents and patent applications. There is a risk that these patent applications will not be granted or that the patent or patent application will not provide significant protection for our products and technology. Moreover, there is a risk that foreign intellectual property laws will not protect our intellectual property rights to the same extent as intellectual property laws in the U.S.

The rights provided by a patent are finite in time. Over the coming years, certain patents relating to current products will expire in the U.S. and abroad thus allowing third parties to utilize certain of our technologies.

Our competitors may independently develop similar or superior technology that our patents do not cover. In addition, because patent applications in the U.S. are not generally publicly disclosed until eighteen months after the application is filed, applications may have been filed by third parties that relate to our technology. Even if our proprietary information is protected by patents or otherwise, the initiation of actions to protect our proprietary information could be costly and divert the efforts and attention of our management and technical personnel, and the outcome of such litigation is often uncertain. As a result of these uncertainties, we could also elect to forego such litigation or settle such litigation without fully enforcing our proprietary rights. In the absence of significant patent protection, we may be vulnerable to competitors who attempt to copy our products, processes or technology.

Additionally, the effect of the Prometheus Laboratories and Myriad Genetics decisions on patents for other isolated natural products is uncertain and these decisions could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could have a material adverse effect on our business and financial condition.

Finally, within our Medical Aesthetics business, we jointly own certain patents and patent applications with third parties. In the absence of an agreement with each co-owner of jointly owned patent rights, we will be subject to default rules pertaining to joint ownership. Some countries require the consent of all joint owners to exploit, license or assign jointly owned patents, and if we are unable to obtain that consent from the joint owners, we may be unable to exploit the invention or to license or assign our rights under these patents and patent applications in those countries.

Our business could be harmed if we infringe upon the intellectual property rights of others.

There has been substantial litigation regarding patent and other intellectual property rights in the medical device, diagnostic products and related industries. We are and have been involved in patent litigation, and may in the future be subject to further claims of infringement of intellectual property rights possessed by third parties.

In connection with claims of patent infringement, we may seek to enter into settlement and/or licensing arrangements. There is a risk in these situations that no license will be available or that a license will not be available on reasonable terms. Alternatively, we may decide to litigate such claims or to design around the patented technology. These actions could be costly and would divert the efforts and attention of our management and technical personnel. As a result, any infringement claims by third parties or claims for indemnification by customers resulting from infringement claims, whether or not proven to be true, may harm our business and prospects.

We utilize distributors for a portion of our sales, the loss of which could harm our revenues in the territory serviced by these distributors.

We rely on strategic relationships with a number of key distributors for sales and service of our products. If any of our strategic relationships are terminated and not replaced or if our strategic partners fail to perform their contractual obligations, our revenues and/or ability to service our products in the territories serviced by these distributors could be adversely affected. If any of our distribution or marketing agreements are terminated or if we elect to distribute new products directly, we will have to invest in additional sales and marketing resources, including additional field sales personnel, which would significantly increase future selling, general and administrative expenses. We may not be able to enter into new distribution or marketing agreements on satisfactory terms, or at all. If we fail to enter into acceptable distribution or marketing agreements or fail to successfully market our products, our product sales will decrease. In addition, we cannot be sure that our distributors will agree with our interpretation of the terms of the agreements or that we will receive payments under the agreements. The third-party distributors with which we do not have written distributor agreements may also disagree with the terms of our relationship. We may also be exposed to risks as a result of transitioning a territory from a distributor sales model to a direct sales model, such as difficulties maintaining relationships with specific customers, hiring appropriately trained personnel or ensuring compliance with local product registration requirements, any of which could result in lower revenues than previously received from the distributor in that territory. We do not control our distributors, and these parties may not be successful in marketing our products. These parties may fail to commit the necessary resources to market and sell our products to the level of our expectations. Currently, we have written distributor agreements in place with most of our third-party distributors.

We face intense competition from other companies and may not be able to compete successfully.

A number of companies have developed, or are expected to develop, products that compete or will compete with our products. In addition, some companies may have significant competitive advantages over us, which may make them more attractive to hospitals, radiology clients, group purchasing organizations, laboratories, and physicians, including:

- greater brand recognition;
- larger or more established distribution networks and customer bases;
- a broader product portfolio, resulting in the ability to offer rebates or bundle products to offer discounts or incentives to gain a competitive advantage;
- higher levels of automation and greater installed bases of such equipment;
- more extensive research, development, sales, marketing, and manufacturing capabilities and greater financial resources; and
- greater technical resources positioning them to continue to improve their technology in order to compete in an evolving industry.

The markets in which we sell our products are intensely competitive, subject to rapid technological change and may be significantly affected by new product introductions and other market activities of industry participants, and these competitive pressures may reduce our gross margins. Other companies may develop products that are superior to and/or less expensive than our products. Improvements in existing competitive products or the introduction of new competitive products may reduce our ability to compete for sales, particularly if those competitive products demonstrate better safety or effectiveness, clinical results, ease of use or lower costs.

The current environment of managed care, economically-motivated buyers, consolidation among healthcare providers, increased competition and declining reimbursement rates, together with current global economic conditions and healthcare reform measures, may put additional competitive pressure on us, including on our average selling prices, overall procedure rates and market sizes.

If we are unable to compete effectively against existing and future competitors and existing and future alternative products and treatments, our business and prospects could be harmed.

Our results of operations are subject to significant quarterly variation.

Our results of operations have been and may continue to be subject to significant quarterly variation. Our results for a particular quarter may also vary due to a number of factors, including:

- the overall state of healthcare and cost containment efforts;
- the timing and level of reimbursement for our products domestically and internationally;
- the development status and demand for our products;

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- the development status and demand for therapies to treat the health concerns addressed by our products and treatments;
- economic conditions in our markets;
- foreign exchange rates;
- the timing of orders;
- the timing of expenditures in anticipation of future sales;
- the mix of products we sell and markets we serve;
- regulatory approval and compliance of products;
- the introduction of new products and product enhancements by us or our competitors;
- pricing and other competitive conditions;
- unanticipated expenses;
- complex revenue recognition rules pursuant to U.S. generally accepted accounting principles, which we refer to as U.S. GAAP;
- asset impairments;
- contingent consideration charges;
- restructuring and consolidation charges;
- debt refinancing charges and expenses; and
- seasonality of sales of certain of our products.

Customers may also cancel or reschedule shipments. Production difficulties could also delay shipments. Any of these factors also could harm our business and prospects.

Failure to comply with laws relating to the confidentiality of sensitive personal information or standards related to the transmission of electronic health data, may require us to make significant changes to our products, or incur penalties or other liabilities.

State, federal and foreign laws, such as the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, regulate the confidentiality of sensitive personal information and the circumstances under which such information may be released. These measures may govern the disclosure and use of personal and patient medical record information and may require users of such information to implement specified security measures, and to notify individuals in the event of privacy and security breaches. Evolving laws and regulations in this area could restrict the ability of our customers to obtain, use or disseminate patient information, or could require us to incur significant additional costs to re-design our products in a timely manner to reflect these legal requirements, either of which could have an adverse impact on our results of operations. Other health information standards, such as regulations under HIPAA, establish standards regarding electronic health data transmissions and transaction code set rules for specified electronic transactions, for example transactions involving submission of claims to third party payors. These standards also continue to evolve and are often unclear and difficult to apply. In addition, under the federal Health Information Technology for Economic and Clinical Health Act, or HITECH Act, some of our businesses that were previously only indirectly subject to federal HIPAA privacy and security rules became directly subject to such rules because the businesses may be deemed to serve as “business associates” to certain of our customers.

Outside the U.S., we are impacted by the privacy and data security requirements at the international, national and regional level, and on an industry specific basis. We serve customers across the globe. Legal requirements in these countries relating to the collection, storage, handling and transfer of personal data and potentially intellectual property continue to evolve with increasingly strict enforcement regimes. More privacy and security laws and regulations are being adopted, and more are being enforced, with potential for significant financial penalties. In the European Union, increasingly stringent data protection and privacy rules that will have substantial impact on the use of patient data across the healthcare industry became effective in May 2018. The new European Union General Data Protection Regulation (GDPR) applies uniformly across the European Union and includes, among other things, a requirement for prompt notice of data breaches to data subjects and supervisory authorities in certain circumstances and significant fines for non-compliance. The GDPR also requires companies processing personal data of individuals residing in the European Union to comply with European Union privacy and data protection rules.

Failure to maintain the confidentiality of sensitive personal information in accordance with the applicable regulatory requirements, or to abide by electronic health data transmission standards, could expose us to breach of contract claims, fines and penalties, costs for remediation and harm to our reputation.

We are subject to the risk of product liability claims relating to our products.

Our business involves the risk of product liability and other claims inherent to the medical device business. If even one of our products is found to have caused or contributed to injuries or deaths, we could be held liable for substantial damages. We maintain product liability insurance subject to deductibles and exclusions. There is a risk that the insurance coverage will not be sufficient to protect us from product and other liability claims, or that product liability insurance will not be available to us at a reasonable cost, if at all. An under-insured or uninsured claim could harm our business and prospects. In addition, claims could adversely affect the reputation of the related product, which could damage that product's competitive position in the market.

The sale and use of our diagnostic products could also lead to the filing of product liability claims if someone were to allege that one of our products contained a design or manufacturing defect that resulted in inaccurate test results or the failure to detect a disorder for which it was being used to screen, or caused injuries to a patient. Any product liability claim brought against us, with or without merit, could result in an increase in our product liability insurance rates or the inability to secure additional coverage in the future. Also, even a meritless or unsuccessful product liability claim could be time consuming and expensive to defend, which could result in a diversion of management's attention from our business and could adversely affect the perceived safety and efficacy of our products, and could harm our business and prospects.

Because we do not require training for users of our non-invasive Medical Aesthetics products, and we sell these products to non-physicians, there exists an increased potential for misuse of these products, which could harm our reputation and our business.

Federal regulations allow us to sell our Medical Aesthetics products to or on the order of practitioners licensed by law to use or order the use of a prescription device. The definition of "licensed practitioners" varies from state to state. As a result, our products may be purchased or operated by physicians with varying levels of training and, in many states, by non-physicians, including nurse practitioners, chiropractors and technicians. Outside the U.S., many jurisdictions do not require specific qualifications or training for purchasers or operators of our products. We do not supervise the procedures performed with our products, nor can we require that direct medical supervision occur. We and our distributors offer product training sessions, but neither we nor our distributors require purchasers or operators of our non-invasive products to attend training sessions. The lack of required training and the purchase and use of our non-invasive products by non-physicians may result in product misuse and adverse treatment outcomes, which could harm our reputation and expose us to costly product liability litigation.

Regulations related to "conflict minerals" may cause us to incur additional expenses and could limit the supply and increase the cost of certain metals used in manufacturing our products.

In August 2012, the SEC adopted a rule requiring disclosures of specified minerals, known as conflict minerals, that are necessary to the functionality or production of products manufactured or contracted to be manufactured by public companies. The conflict minerals rule requires companies annually to diligence, disclose and report whether or not such minerals originate from the Democratic Republic of Congo and other specified countries. The rule could affect sourcing at competitive prices and availability in sufficient quantities of certain minerals used in the manufacture of our products, including tantalum, tin, gold and tungsten. The number of suppliers who provide conflict-free minerals may be limited. In addition, there may be material costs associated with complying with the disclosure requirements, such as costs related to determining the source of certain minerals used in our products, as well as costs of possible changes to products, processes, or sources of supply as a consequence of such verification activities. Since our supply chain is complex, we may not be able to sufficiently verify the origins of the relevant minerals used in our products through the due diligence procedures that we implement, which may harm our reputation. In addition, we may encounter challenges to satisfy those customers who require that all of the components of our products be certified as conflict-free, which could place us at a competitive disadvantage if we are unable to do so.

We are subject to environmental, health and safety laws and regulations, including related to our use and recycling of hazardous materials and the composition of our products.

Our research and development and manufacturing processes involve the controlled use of hazardous materials, such as toxic and carcinogenic chemicals and various radioactive compounds, and the risk of contamination or injury from these materials cannot be eliminated. In such event, we could be held liable for any resulting damages, and any such liability could be extensive. From time to time new regulations are enacted, and it is difficult to anticipate how such regulations will be implemented and enforced. We continue to evaluate the necessary steps for compliance with regulations as they are enacted. These regulations include, for example, regulations enacted in the European Union such as the Registration, Evaluation, Authorization and Restriction of Chemical Substances, or REACH, which requires the registration of and regulates use of certain chemicals, the Restriction on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Directive, or RoHS, which regulates the use of certain hazardous substances in certain products we manufacture, and the Waste Electrical and Electronic Equipment Directive, or WEEE, which requires the collection, reuse and recycling of waste from certain products we manufacture. These and similar legislation that has been or is in the process of being enacted in Japan, China and various states of the U.S. may require us to re-design our products to ensure compliance with the applicable

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standards, for example by requiring the use of different types of materials. These redesigns or the use of alternative materials may detrimentally impact the performance of our products, add greater testing lead-times for product introductions, result in additional costs or have other similar effects. We are also subject to other substantial regulation relating to environmental, health and safety matters, including occupational health and safety, environmental protection, hazardous substance control, and waste management and disposal. The failure to comply with such regulations could subject us to, among other things, fines and criminal liability. We may also be required to incur significant costs to comply with these and future regulations, which may result in a material adverse effect upon our business, financial condition and results of operation.

An adverse change in the projected cash flows from our business units or the business climate in which they operate, including the continuation of the current financial and economic uncertainty, could require us to record an impairment charge, which could have an adverse impact on our operating results.

At least annually, we review the carrying value of our goodwill, and for other long-lived assets when indicators of impairment are present, to determine if any adverse conditions exist or a change in circumstances has occurred that would indicate impairment of the value of these assets. Conditions that could indicate impairment and necessitate an evaluation of these assets include, but are not limited to, a significant adverse change in the business climate or the legal or regulatory environment within which we operate. In addition, the deterioration of a company's market capitalization significantly below its net book value is an indicator of impairment. We assess goodwill for impairment at the reporting unit level and in evaluating the potential impairment of goodwill, we make assumptions regarding the amount and timing of future cash flows, terminal value growth rates and appropriate discount rates.

During the second quarter of fiscal 2018, we determined that indicators of impairment existed for our Medical Aesthetics reporting unit, which is solely comprised of our Cynosure business. We performed an interim Step 1 impairment test and the carrying value of the reporting unit exceeding its fair value, which was determined using a discounted cash flow analysis. As a result, we recorded an impairment charge of \$685.7 million in the second quarter of fiscal 2018. This reporting unit has zero goodwill as of September 28, 2018. In addition, we performed an impairment test of this reporting unit's long-lived assets. This impairment evaluation was based on expectations of future undiscounted cash flows compared to the carrying value of the long-lived assets. Our cash flow estimates were consistent with those used in the goodwill impairment test discussed above. Based on this analysis, the undiscounted cash flows of the Medical Aesthetics long-lived assets were in excess of their carrying value and thus deemed to not be impaired.

Although we believe that we use reasonable methodologies for developing assumptions and estimates underlying the fair value calculations used in our impairment tests, these estimates are uncertain by nature and can vary from actual results. Any significant adverse change regarding the amount and timing of future cash flows, terminal value growth rates and discount rates used in valuing our reporting units could require us to record an impairment charge, which could have an adverse effect on our operating results. It is possible that the continuation of the current global financial and economic uncertainty could negatively affect our anticipated future cash flows, or the discount rates used to value the cash flows for each of our reporting units to such an extent that we could be required to perform an interim impairment test during fiscal 2019.

Changes in tax laws or exposures to additional tax liabilities could negatively impact the Company's operating results.

We are subject to income taxes, as well as non-income based taxes, in both the U.S. and various foreign jurisdictions. We are also subject to ongoing tax audits in various jurisdictions, and tax authorities may disagree with certain positions we have taken and assess additional taxes. The Company's future effective tax rate could be unfavorably affected by numerous factors including a change in, or the interpretation of, tax rules and regulations in the jurisdictions in which the Company operates, a change in our geographic earnings mix, or a change in the measurement of our deferred taxes.

On December 22, 2017, the U.S. enacted comprehensive tax legislation, commonly referred to as the Tax Cuts and Jobs Act (the "Act") which resulted in significant changes to the U.S. corporate income tax system. The U.S. Treasury has issued guidance with respect to certain provisions of the Act. Accounting for the Act's income tax effects requires significant judgments to be made in interpreting its provisions. We made reasonable estimates of the Act's effect and recorded provisional amounts in the financial statements for fiscal year 2018. Additional guidance, as well as future changes to these rules, may result in adjustments to these estimates that could affect our financial results. See Note 7 - Income Taxes in the accompanying Notes to the consolidated financial statements for more information regarding the Act's impact.

Risks Relating to our Indebtedness

We have a significant amount of indebtedness outstanding, which limits our operating flexibility, and could adversely affect our operations and financial results and prevent us from fulfilling our obligations.

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As of September 29, 2018, we had approximately \$3.34 billion aggregate principal of indebtedness outstanding. We also have other contractual obligations. This significant level of indebtedness and our other obligations may:

- make it more difficult for us to satisfy our obligations with respect to our outstanding indebtedness;
- increase our vulnerability to general adverse economic and industry conditions, including increases in interest rates;
- require us to dedicate a substantial portion of our cash flow from operations to interest and principal payments on our indebtedness, which would reduce the availability of our cash flow to fund working capital, capital expenditures, expansion efforts, strategic transactions and other general corporate purposes;
- limit our flexibility in planning for, or reacting to, changes in our business and the markets in which we participate;
- place us at a competitive disadvantage compared to our competitors that have less debt; and
- limit our ability to borrow additional funds for working capital, capital expenditures, expansion efforts, strategic transactions or other general corporate purposes.

In addition, the terms of our financing obligations contain certain covenants that restrict our ability, and that of our subsidiaries, to engage in certain transactions and may impair our ability to respond to changing business and economic conditions, including, among other things, limitations on our ability to:

- incur indebtedness or issue certain preferred equity;
- pay dividends, repurchase our common stock, repurchase our convertible notes or make other distributions or restricted payments;
- make certain investments;
- agree to payment restrictions affecting the restricted subsidiaries;
- sell or otherwise transfer or dispose of assets, including equity interests of our subsidiaries;
- enter into transactions with our affiliates;
- create liens;
- designate our subsidiaries as unrestricted subsidiaries;
- consolidate, merge or sell substantially all of our assets; and
- use the proceeds of permitted sales of our assets.

Our amended and restated credit facilities also require us to satisfy certain financial covenants. Our ability to comply with these provisions may be affected by general economic conditions, political decisions, industry conditions and other events beyond our control. Our failure to comply with the covenants contained in our amended and restated credit facilities, including financial covenants, could result in an event of default, which could materially and adversely affect our results of operations and financial condition.

If there were an event of default under one of our debt instruments or a change of control, the holders of the defaulted debt could cause all amounts outstanding with respect to that debt to be due and payable immediately and may be cross-defaulted to other debt, including our 2025 and 2028 notes. Our assets or cash flow may not be sufficient to fully repay borrowings under our outstanding debt instruments if accelerated upon an event of default or a change of control, and there is no guarantee that we would be able to repay, refinance or restructure the payments on such debt. See “Management’s Discussion and Analysis of Financial Condition and Results of Operations-Liquidity and Capital Resources.”

We may not be able to generate sufficient cash flow to service all of our indebtedness and other obligations.

Our ability to make payments on and to refinance our indebtedness and to fund planned capital expenditures, strategic transactions and expansion efforts will depend on our ability to generate cash in the future. This, to a certain extent, is subject to general economic, financial, competitive, legislative, regulatory and other factors that are beyond our control.

Our business may not be able to generate sufficient cash flow from operations, and we can give no assurance that future borrowings will be available to us in amounts sufficient to enable us to pay our indebtedness as such indebtedness matures and to fund our other liquidity needs. If this occurs, we will need to refinance all or a portion of our indebtedness on or before maturity, and there can be no assurance that we will be able to refinance any of our indebtedness on commercially reasonable terms, or at all. We may need to adopt one or more alternatives, such as reducing or delaying planned expenses and capital expenditures, selling assets, restructuring debt, or obtaining additional equity or debt financing. These alternative strategies may not be affected on satisfactory terms, if at all. Our ability to refinance our indebtedness or obtain additional financing, or to do so on commercially reasonable terms, will depend on, among other things, our financial condition at the time, restrictions in agreements governing our indebtedness, and other factors, including the condition of the financial markets and the markets in which we compete.

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If we do not generate sufficient cash flow from operations, and additional borrowings, refinancings or proceeds from asset sales are not available to us, we may not have sufficient cash to enable us to meet all of our obligations.

A significant portion of our indebtedness is subject to floating interest rates, which may expose us to higher interest payments.

A significant portion of our indebtedness is subject to floating interest rates, which makes us more vulnerable in the event of adverse economic conditions, increases in prevailing interest rates, or a downturn in our business. As of September 29, 2018, approximately \$1.99 billion aggregate principal of our indebtedness, which represented the outstanding principal under our Term Loan and Revolver under our Amended and Restated Credit Agreement and amounts outstanding under our Accounts Receivable Securitization Program, was subject to floating interest rates. We currently have certain hedging arrangements in the form of interest rate cap agreements in place to mitigate the impact of higher interest rates. The interest rate cap agreements hedge \$1.0 billion of principal under our Amended and Restated Credit Agreement and have a December 2019 termination date.

Risks Relating to our Common Stock

Future issuances of common stock may depress the trading price of our common stock.

Any future issuance of equity securities could dilute the interests of our existing stockholders and could substantially decrease the trading price of our common stock. We may issue equity securities in the future for a number of reasons, including to finance our operations and business strategy (including in connection with acquisitions, strategic collaborations or other transactions), to adjust our ratio of debt to equity or for other reasons.

Provisions in our charter, bylaws, and indebtedness may have the effect of discouraging advantageous offers for our business or common stock and limit the price that investors might be willing to pay in the future for shares of our common stock.

Our charter, bylaws, and the provisions of the Delaware General Corporation Law include provisions that may have the effect of discouraging or preventing a change of control. Our indebtedness also contains provisions which either accelerate or require us to offer to repurchase the indebtedness at a premium upon a change of control. These provisions could limit the price that our stockholders might receive in the future for shares of our common stock.

Our stock price is volatile.

The market price of our common stock has been, and may continue to be, highly volatile. We believe that a variety of factors could cause the price of our common stock to fluctuate, perhaps substantially, including:

- new, or changes in, recommendations, guidelines or studies that could affect the use of our products;
- announcements and rumors of developments related to our business, including changes in reimbursement rates or regulatory requirements, proposed and completed acquisitions, or the industry in which we compete;
- published studies and reports relating to the comparative efficacy of products and markets in which we participate;
- quarterly fluctuations in our actual or anticipated operating results and order levels;
- general conditions in the U.S. or worldwide economy;
- our stock repurchase program;
- announcements of technological innovations;
- new products or product enhancements by us or our competitors;
- developments in patents or other intellectual property rights and litigation;
- developments in relationships with our customers and suppliers;
- the implementation of healthcare reform legislation and the adoption of additional reform legislation in the future; and
- the success or lack of success of integrating our acquisitions.

In addition, the stock market in general and the markets for shares of “high-tech” and life sciences companies, have historically experienced extreme price fluctuations which have often been unrelated to the operating performance of affected companies. Any such fluctuations in the future could adversely affect the market price of our common stock, and the market price of our common stock may decline.

Item 1B. Unresolved Staff Comments

None.

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Item 2. Properties

We own and lease the real property identified below. We believe that we have adequate space for our anticipated needs and that suitable additional space will be available at commercially reasonable prices as needed.

<u>Principal Properties Owned:</u>	<u>Primary Use</u>	<u>Floor Space</u>
Newark, DE (a)	DirectRay digital detector research and development and plate manufacturing operations	164,000 sq. ft.
Warstein, Germany	Hitec-Imaging's manufacturing operations, research and development and administrative functions	201,000 sq. ft.
Livingston, UK	Manufacturing operations and research and development	18,500 sq. ft.
Manchester, UK	Administrative and supply chain operations	22,166 sq. ft.
Londonderry, NH	Manufacturing operations	47,000 sq. ft.
San Diego, CA	Diagnostics headquarters, including administrative and manufacturing operations	262,000 sq. ft.
San Diego, CA (b)	Diagnostics research and development, administrative and manufacturing operations	290,000 sq. ft.

<u>Principal Properties Leased:</u>	<u>Primary Use</u>	<u>Floor Space</u>	<u>Lease Expiration (fiscal year)</u>	<u>Renewals</u>
Bedford, MA (c)	Administrative, research and development, and manufacturing operations	207,000 sq. ft.	2022	4, five-yr. periods
Brussels, Belgium	Administrative and customer support operations	46,510 sq. ft.	2024	None
Danbury, CT	Manufacturing facility	62,000 sq. ft.	2022	4, five-yr. periods
Danbury, CT	Manufacturing operations and research and development	60,000 sq. ft.	2021	1, five-yr. period
Kerpen, Germany	Administrative and customer support operations	12,841 sq. ft.	2021	1, one-yr. period
Madrid, Spain	Administrative and customer support operations	9,547 sq. ft.	2021	One-yr. periods
Marlborough, MA	Headquarters, including research and development, manufacturing and distribution operations	216,000 sq. ft.	2025	2, five-yr. periods
Marlborough, MA	Manufacturing operations	146,000 sq. ft.	2024	1, five-yr. period
Methuen, MA	Main Distribution facility	38,000 sq. ft.	2023	1, five-yr. period
Alajuela, Costa Rica	Manufacturing facility	164,000 sq. ft.	2018	2, five-yr. periods
Manchester, England	Manufacturing operations and research and development	66,000 sq. ft.	2035	None
Santa Clara, CA	Administrative, research and development	14,010 sq. ft.	2022	1, three-yr. period
Santa Clara, CA	Manufacturing facility	18,248 sq. ft.	2020	2, five-yr. periods
Santa Clara, CA	Distribution and customer support operations	13,223 sq. ft.	2019	None
Westford, MA	Administrative, research and development, and manufacturing operations	150,000 sq. ft.	2028	None
Westford, MA	Manufacturing operations	19,000 sq. ft.	2024	1, five-yr. period
Hicksville, NY	Manufacturing operations	44,000 sq. ft.	2020	4, five-yr. periods
Wiesbaden, Germany	Administrative and customer support operations	16,393 sq. ft.	2019	1, five-yr. period

- (a) We currently occupy approximately 59,000 square feet of this building, which houses our plate manufacturing facility, including both a Class 1 and a Class 2 clean room. We lease approximately 105,000 square feet of the facility to Siemens under a lease, which expires in April 2020.
- (b) We currently occupy approximately 221,000 square feet of this building, with the remaining space available to accommodate future growth.
- (c) During fiscal 2015, we decided to shut down our Bedford, Massachusetts facility and outsource the manufacturing of certain of our Skeletal Health

products to a third party and transfer certain other manufacturing operations for our Breast Health segment to our Danbury, Connecticut and Marlborough, Massachusetts facilities. In addition, research and development, sales and service support and administrative functions were moved to Danbury and Marlborough. This transition is primarily completed. We are actively attempting to sublease this space.

We lease other facilities utilized for office space and distribution operations across the U.S. and a number of countries worldwide.

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Item 3. Legal Proceedings

For a discussion of legal matters as of September 29, 2018 , please see Note 12 to our consolidated financial statements entitled “Litigation and Related Matters,” which is incorporated by reference into this item.

Item 4. Mine Safety Disclosures

Not Applicable.

PART II

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

Market Information . Our common stock is traded on the Nasdaq Global Select Market under the symbol "HOLX."

Number of Holders . As of November 15, 2018 , there were approximately 1,031 holders of record of our common stock, including multiple beneficial holders at depositories, banks and brokers listed as a single holder in the street name of each respective depository, bank or broker.

Dividend Policy . We have never declared or paid cash dividends on our capital stock, and we currently have no plans to do so. Our current policy is to retain all of our earnings to finance future growth, pay down our existing indebtedness and repurchase our common stock. The existing covenants under certain of our debt instruments also place limits on our ability to issue dividends and repurchase stock.

Recent Sales of Unregistered Securities. We did not sell unregistered equity securities during the fourth quarter of fiscal 2018 .

Issuer's Purchases of Equity Securities

Period of Repurchase	Total Number of Shares Purchased (#) (1)	Average Price Paid Per Share (\$) (1)	Total Number of Shares Purchased As Part of Publicly Announced Plans or Programs (#) (2)	Average Price Paid Per Share As Part of Publicly Announced Plans or Programs (\$) (2)	Maximum Number (or Approximate Dollar Value) of Shares That May Yet Be Purchased Under Our Programs (in millions) (\$) (2)
July 1 – July 28, 2018	1,606	\$ 39.97	—	\$ —	\$ 112.8
July 29, 2018– August 25, 2018	10,217	41.97	745,232	38.58	471.3
August 26, 2018 – September 29, 2018	2,771	39.76	1,529,037	39.09	411.5
Total	<u>14,594</u>	\$ 41.33	<u>2,274,269</u>	\$ 38.92	<u>\$ 411.5</u>

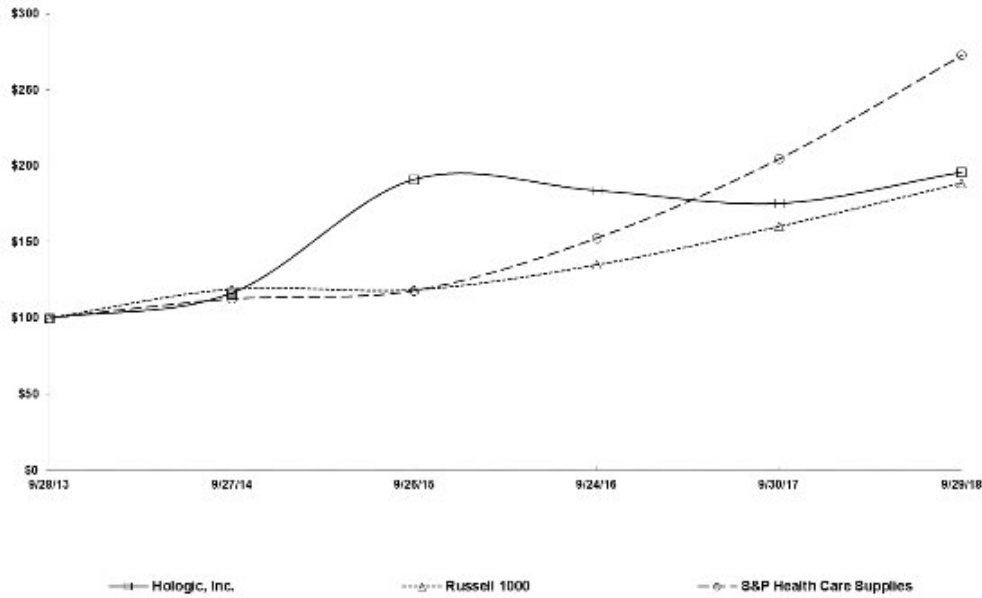
- (1) For the majority of restricted stock units granted, the number of shares issued on the date that the restricted stock units vest is net of the minimum statutory tax withholding requirements that we pay in cash to the appropriate tax authorities on behalf of our employees. These repurchases of our common stock were to cover employee income tax withholding obligations in connection with the vesting of restricted stock units under our equity incentive plans.
- (2) On June 21, 2016, the Board of Directors authorized the repurchase of up to \$500.0 million of our outstanding common stock over a five-year period. On June 13, 2018, the Company's Board of Directors authorized another share repurchase plan to repurchase up to \$500.0 million of our outstanding common stock. This share repurchase plan, which replaced the prior plan, was effective August 1, 2018 and expires on June 13, 2023.

Stock Performance Graph

The following information shall not be deemed to be "filed" with the SEC nor shall the information be incorporated by reference into any future filings under the Securities Act of 1934, as amended, except to the extent that we specifically incorporate it by reference into a document filed under the Securities Act of 1933 or the Securities Exchange Act of 1934.

The following graph compares cumulative total shareholder return on our common stock since September 28, 2013 with the cumulative total return of the Russell 1000 Index and the Standard & Poor's Health Care Supplies Index. This graph assumes the investment of \$100 on September 28, 2013 in our common stock, the Russell 1000 Index and the S&P Health Care Supplies Index. Measurement points are the last trading day of each respective fiscal year.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN*
Among Hologic, Inc., the Russell 1000 Index,
and S&P Health Care Supplies



*\$100 invested on 9/28/13 in stock or index, including reinvestment of dividends
Fiscal year ending September 30.

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[Table of Contents](#)**Item 6. Selected Financial Data**

The following selected financial data should be read in conjunction with our consolidated financial statements and related notes appearing elsewhere in this Annual Report on Form 10-K, beginning on page F-1. In the second quarter of fiscal 2017, we acquired Cynosure, and in the third quarter of fiscal 2017 we acquired Medicor. In the first and fourth quarters of fiscal 2018, we acquired Emsor and Faxitron, respectively. Results of operations for these businesses are included in our consolidated financial statements from the date of acquisition.

	Fiscal Years Ended				
	September 30, 2018 (5)	September 24, 2017 (4)	September 26, 2016 (3)	September 27, 2015 (2)	September 28, 2014 (1)
(In millions, except per share data)					
Consolidated Statement of Operations Data					
Total revenues	\$ 3,217.9	\$ 3,058.8	\$ 2,832.7	\$ 2,705.0	\$ 2,530.7
Total operating costs and expenses	\$ 3,455.8	\$ 1,688.6	\$ 2,284.1	\$ 2,249.9	\$ 2,251.0
Net (loss) income	\$ (111.3)	\$ 755.5	\$ 330.8	\$ 131.6	\$ 17.3
Basic net (loss) income per common share	\$ (0.40)	\$ 2.70	\$ 1.18	\$ 0.47	\$ 0.06
Diluted net (loss) income per common share	\$ (0.40)	\$ 2.64	\$ 1.16	\$ 0.45	\$ 0.06
Consolidated Balance Sheet Data					
Working capital	\$ 320.6	\$ (386.9)	\$ 424.7	\$ 322.4	\$ 946.2
Total assets	\$ 7,230.9	\$ 7,979.6	\$ 7,317.0	\$ 7,642.5	\$ 8,368.7
Long-term debt obligations, less current portion (6)	\$ 2,736.1	\$ 2,198.9	\$ 3,058.7	\$ 3,227.3	\$ 4,117.7
Total stockholders' equity	\$ 2,428.8	\$ 2,784.7	\$ 2,142.7	\$ 2,079.2	\$ 2,063.0

- (1) Fiscal 2014 total operating costs and expenses include restructuring and divestiture charges of \$51.7 million and intangible asset impairment charges of \$32.2 million.
- (2) Fiscal 2015 total operating costs and expenses include restructuring and divestiture charges of \$28.5 million. Included in net income was a debt extinguishment loss of \$62.7 million and related transaction costs of \$9.3 million.
- (3) Fiscal 2016 total operating costs and expenses include restructuring and divestiture charges of \$10.5 million. Included in net income was a gain on the sale of a marketable security of \$25.1 million partially offset by a debt extinguishment loss of \$5.3 million.
- (4) Fiscal 2017 total operating costs and expenses include a gain on sale of the blood screening business of \$899.7 million (reduces operating costs and expenses), inventory step-up costs of \$39.7 million, transaction expenses for acquisitions of \$23.2 million, and restructuring charges of \$13.3 million.
- (5) Fiscal 2018 total operating costs and expenses include a goodwill impairment charge of \$685.7 million, an intangible asset impairment charge of \$46.0 million, a legal settlement charge of \$34.8 million and restructuring charges of \$14.2 million. Included in net loss was a debt extinguishment loss of \$45.9 million and related transaction costs of \$4.3 million.
- (6) Long-term obligations are net of unamortized debt discounts and deferred issuance costs aggregating \$32.9 million, \$27.9 million, \$62.9 million, \$95.7 million and \$166.2 million for fiscal years 2018, 2017, 2016, 2015, and 2014, respectively.

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

The following discussion and analysis should be read in conjunction with the Consolidated Financial Statements, the information described under the caption "Risk Factors" in Part I, Item 1A of this report and our Special Note Regarding Forward-Looking Statements at the outset of this report.

OVERVIEW

We are a developer, manufacturer and supplier of premium diagnostics products, medical imaging systems, surgical products and light-based aesthetic and medical treatment systems with an emphasis on women's health. We operate in five segments: Diagnostics, Breast Health, Medical Aesthetics, GYN Surgical and Skeletal Health. We sell and service our products through a combination of direct sales and service personnel and a network of independent distributors and sales representatives.

We offer a wide range of diagnostic products which are used primarily to aid in the diagnosis of human diseases and through January 31, 2017, we offered products that screened donated human blood and plasma. Our primary diagnostics products include our Aptima family of molecular diagnostic assays, which run on our advanced instrumentation systems (Panther and Tigris), our ThinPrep cytology system, and the Rapid Fetal Fibronectin Test. The Aptima family of molecular diagnostic assays is used to detect, among other things, the infectious microorganisms that cause common sexually transmitted diseases, or STDs, chlamydia and gonorrhea, certain high-risk strains of human papillomavirus, or HPV, and *Trichomonas vaginalis*, the parasite that causes trichomoniasis. In addition, in 2017 and 2018 we introduced the Aptima quantitative viral load tests for HIV, Hepatitis C and Hepatitis B. The Aptima portfolio also includes diagnostic tests for a range of acute respiratory ailments that are run on the Panther Fusion system, a field upgradeable instrument addition to Panther. The ThinPrep System is primarily used in cytology applications, such as cervical cancer screening, and the Rapid Fetal Fibronectin Test assists physicians in assessing the risk of pre-term birth.

Our Breast Health products include a broad portfolio of solutions for breast cancer care for radiology, pathology and surgery. These solutions include breast imaging and analytics, such as our 2D and 3D mammography systems and reading workstations, minimally invasive breast biopsy guidance systems and devices, breast biopsy site markers and localization, specimen radiology, ultrasound and connectivity solutions. Our most advanced breast imaging platforms, Selenia Dimensions and 3Dimensions, utilizes a technology called tomosynthesis to produce 3D images that show multiple contiguous slice images of the breast, which we refer to as the Genius 3D Mammography exam, as well as conventional 2D full field digital mammography images. Our clinical results for FDA approval demonstrated that conventional 2D digital mammography with the addition of 3D tomosynthesis is superior to 2D digital mammography alone for both screening and diagnostics for women of all ages and breast densities.

Our Medical Aesthetics segment offers a portfolio of aesthetic treatment systems, including SculpSure, PicoSure and MonaLisa Touch that enable plastic surgeons, dermatologists and other medical practitioners to perform non-invasive and minimally invasive procedures to remove hair, treat vascular and benign pigmented lesions, remove multi-colored tattoos, revitalize the skin, reduce fat through laser lipolysis, reduce cellulite, clear nails infected by toe fungus, ablate sweat glands and improve gynecologic health. This segment also markets TempSure a radio frequency, or RF, energy sourced platform that offers both non-surgical and surgical aesthetic treatments and procedures.

Our GYN Surgical products include our NovaSure Endometrial Ablation System, or NovaSure, and our MyoSure Hysteroscopic Tissue Removal System, or MyoSure, as well as our Fluent Fluid Management system, or Fluent. The NovaSure portfolio is comprised of the NovaSure CLASSIC and NovaSure ADVANCED devices and involves a trans-cervical procedure for the treatment of abnormal uterine bleeding. The MyoSure suit of devices offers four options to provide incision-less removal of fibroids, polyps, and other pathology within the uterus. The Fluent system is a fluid management system that provides liquid distention during diagnostic and operative hysteroscopic procedures.

Our Skeletal Health segment's products includes the Horizon DXA, a dual energy x-ray system, which evaluates bone density and performs body composition assessments, and the Fluoroscanner Insight FD mini C-arm, which assists in performing minimally invasive orthopedic surgical procedures on a patient's extremities, such as the hand, wrist, knee, foot, and ankle.

Unless the context otherwise requires, references to we, us, Hologic or our company refer to Hologic, Inc. and its consolidated subsidiaries.

Acquisitions and Dispositions

Cynosure, Inc.

On March 22, 2017, we completed the acquisition of Cynosure pursuant to which we acquired all of the outstanding shares of Cynosure. The acquisition was funded through available cash, and the total purchase price was \$1.66 billion.

The allocation of the purchase price was based on estimates of the fair value of assets acquired and liabilities assumed as of March 22, 2017. As part of the purchase price allocation, we determined the identifiable intangible assets were developed technology of \$736.0 million, in-process research and development of \$107.0 million, trade names of \$74.0 million, a distribution agreement of \$42.0 million and customer relationships of \$35.0 million. The fair value of the intangible assets were estimated using the income approach, specifically the excess earning method and relief from royalty method, and the cash flow projections were discounted using rates ranging from 11% to 12%. The cash flows were based on estimates used to price the transaction, and the discount rates applied were benchmarked with reference to the implied rate of return from the transaction model and the weighted average cost of capital.

The developed technology assets comprise know-how, patents and technologies embedded in Cynosure's products and relate to currently marketed products. In-process research and development projects relate to in-process projects that have not reached technological feasibility as of the acquisition date and have no alternative future use. The primary basis for determining technological feasibility of these projects is obtaining regulatory approval to market the underlying product or expected commercial release depending on the project. We recorded \$107.0 million of in-process research and development assets related to three projects, which were expected to be completed during fiscal 2018 and 2019 with a preliminary cost to complete of approximately \$18.0 million. All of the in-process research and development assets were valued using the multiple-period excess earnings method approach using discount rates ranging from 14% to 22%.

During the fourth quarter of fiscal 2017, we obtained regulatory approval for two projects with an aggregate fair value of \$61.0 million and these assets were reclassified to developed technology. The remaining project, which had an initial fair value of \$46.0 million, was abandoned in the second quarter of fiscal 2018 due to unsuccessful clinical results. As a result, the Company recorded a \$46.0 million impairment charge in the second quarter of fiscal 2018.

The calculation of the excess of the purchase price over the estimated fair value of the tangible net assets and intangible assets acquired was recorded to goodwill. The factors contributing to the recognition of the amount of goodwill were based on several strategic and synergistic benefits that were expected to be realized from the Cynosure acquisition. These benefits included the expectation that the Company's entry into the aesthetics market would significantly broaden our offering in women's health. The combined company was expected to benefit from a broader global presence, synergistic utilization of Hologic's direct sales force, primarily its GYN Surgical sales force, with certain Cynosure products and entry into an adjacent, cash-pay segment. During the second quarter of fiscal 2018, we identified indicators of impairment and performed an interim goodwill impairment test. This analysis resulted in us recording a goodwill impairment charge of \$685.7 million in the second quarter of fiscal 2018. For additional information, please refer to Note 3 to our consolidated financial statements contained in Item 15 of this Annual Report.

Medicor Medical Supply

On April 7, 2017, we completed the acquisition of MMS Medicor Medical Supplies GmbH, or Medicor, for a purchase price of \$19.0 million. Medicor was a long-standing distributor of our Breast and Skeletal Health products in Germany, Austria and Switzerland. Based on the valuation, we allocated \$5.4 million of the purchase price to the value of intangible assets and \$8.9 million to goodwill.

Emsor, S.A.

On December 11, 2017, we completed the acquisition of Emsor S.A., or Emsor, for a purchase price of \$16.3 million, which includes contingent consideration which we estimated at \$4.9 million. The contingent consideration is payable upon Emsor achieving predefined amounts of cumulative revenue over a two year period from the date of acquisition. Emsor was a distributor of our Breast and Skeletal Health products in Spain and Portugal. Based on our preliminary valuation, we have allocated \$4.6 million of the purchase price to the preliminary value of intangible assets and \$5.7 million to goodwill. The allocation of the purchase price is preliminary as we continue to gather information supporting the acquired assets and liabilities.

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Faxitron

On July 31, 2018, we completed the acquisition of Faxitron Bioptics, LLC or Faxitron, for a purchase price of \$89.0 million, which include hold-backs of \$11.7 million that are payable up to one year from the date of acquisition, and contingent consideration which we estimated at \$2.9 million. The contingent consideration is payable upon meeting certain revenue growth metrics. Faxitron, headquartered in Tucson, Arizona, develops, manufactures, and markets digital radiography systems. Faxitron's results of operations are reported in our Breast Health reportable segment from the date of acquisition. Based on our preliminary valuation, we have allocated \$53.4 million of the purchase price to the preliminary value of intangible assets and \$41.6 million to goodwill. The allocation of the purchase price is preliminary as we continue to gather information supporting the acquired assets and liabilities.

Focal Therapeutics (Subsequent Event)

On October 1, 2018, we completed the acquisition of Focal Therapeutics, Inc., or Focal, for an initial purchase price of approximately \$125.0 million. Focal, headquartered in California, has commercialized its BioZorb marker, which is an implantable three-dimensional marker that helps clinicians overcome challenges in breast conserving surgery, or lumpectomy.

Blood Screening Business Disposition

In the first quarter of fiscal 2017, we entered into a definitive agreement to sell our blood screening business to Grifols for a sales price of \$1.85 billion in cash, subject to adjustment based on the closing amount of inventory. The transaction closed on January 31, 2017 and we received \$1.865 billion. The sale resulted in a gain of \$899.7 million recorded in the second quarter of fiscal 2017. As a result of this disposition and proceeds received, we recorded a tax obligation of \$649.5 million, which was paid in fiscal 2017. Upon the closing of the transaction, our existing collaboration agreement with Grifols terminated, and a new collaboration agreement was executed as part of this transaction for us to provide certain research and development services to Grifols. In addition, we agreed to provide transition services to Grifols over a two to three year period depending on the nature of the respective service, including the manufacture of inventory, and we are in effect serving as a contract manufacturer of assays for Grifols for a two to three year period from the disposal date. We also agreed to sell Panther instrumentation and certain supplies to Grifols as part of a long term supply agreement. Following the closing of this disposition, we no longer operate our blood screening business, except to the limited extent we have agreed to support Grifols. Under the long term supply agreement, transition services agreement to manufacture assays, and research and development services, we recognized revenues of \$55.4 million for the year ended September 29, 2018. For the disposed blood screening business, in fiscal 2017, revenue was \$96.5 million, gross profit was \$64.8 million and operating income was \$45.8 million. For the disposed blood screening business, in fiscal 2016, revenue was \$235.4 million, gross profit was \$163.3 million and operating income was \$99.1 million. Revenue, gross profit and operating income of the disposed business represents the financial impact of the business as it was operated prior to the date of disposition. The operating expenses include only those that were incurred directly by and were retained by the disposed business and are now incurred by Grifols. See Note 13 to our consolidated financial statements included herein.

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RESULTS OF OPERATIONS

The following table sets forth, for the periods indicated, the percentage of total revenues represented by items as shown in our Consolidated Statements of Operations. All dollar amounts in tables are presented in millions.

	Fiscal Years Ended		
	September 29, 2018	September 30, 2017	September 24, 2016
Revenues:			
Product	82.2 %	83.0 %	84.0 %
Service and other	17.8 %	17.0 %	16.0 %
	100.0 %	100.0 %	100.0 %
Costs of revenues:			
Product	27.6 %	28.8 %	26.7 %
Amortization of intangible assets	9.9 %	9.7 %	10.4 %
Service and other	9.8 %	8.5 %	7.7 %
Gross Profit	52.7 %	53.0 %	55.2 %
Operating expenses:			
Research and development	6.8 %	7.6 %	8.2 %
Selling and marketing	16.9 %	16.3 %	14.7 %
General and administrative	11.4 %	11.2 %	9.4 %
Amortization of intangible assets	1.8 %	2.0 %	3.2 %
Impairment of intangible assets	1.4 %	— %	— %
Impairment of goodwill	21.3 %	— %	— %
Gain on sale of business	— %	(29.4)%	— %
Restructuring charges	0.4 %	0.4 %	0.4 %
	60.1 %	8.1 %	35.9 %
(Loss) income from operations	(7.4)%	44.8 %	19.4 %
Interest income	0.2 %	0.1 %	— %
Interest expense	(4.6)%	(5.0)%	(5.5)%
Debt extinguishment losses	(1.4)%	(0.1)%	(0.2)%
Other income, net	0.2 %	0.4 %	0.9 %
(Loss) income before income taxes	(13.0)%	40.2 %	14.7 %
(Benefit) provision for income taxes	(9.5)%	15.5 %	3.0 %
Net (loss) income	(3.5)%	24.7 %	11.7 %

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Fiscal Year Ended September 29, 2018 Compared to Fiscal Year Ended September 30, 2017

Product Revenues.

	Years Ended					
	September 29, 2018		September 30, 2017		Change	
	Amount	% of Total Revenue	Amount	% of Total Revenue	Amount	%
<i>Product Revenues</i>						
Diagnostics	\$ 1,123.6	34.9%	\$ 1,165.1	38.1%	\$ (41.5)	(3.6)%
Breast Health	758.5	23.6%	708.1	23.2%	50.4	7.1 %
Medical Aesthetics	278.4	8.7%	178.3	5.8%	100.1	56.1 %
GYN Surgical	421.1	13.1%	426.1	13.9%	(5.0)	(1.2)%
Skeletal Health	62.3	1.9%	60.4	2.0%	1.9	3.1 %
	<u>\$ 2,643.9</u>	<u>82.2%</u>	<u>\$ 2,538.0</u>	<u>83.0%</u>	<u>\$ 105.9</u>	<u>4.2 %</u>

We generated a 4.2% increase in product revenues in fiscal 2018 compared to fiscal 2017 primarily due to our acquisition of Cynosure on March 22, 2017 and an increase in Breast Health sales. Cynosure's results (after the date of the acquisition) are reported in our new Medical Aesthetics segment. Cynosure is the sole business in this segment. Partially offsetting the increase, our Diagnostics business product revenues declined as a result of the sale of our blood screening business effective January 31, 2017, and we had lower revenues in GYN Surgical. Excluding blood screening, Diagnostics revenues increased \$46.6 million in fiscal 2018 compared to fiscal 2017. In addition, fiscal 2018 was a 52-week year compared to a 53-week year in fiscal 2017.

Diagnostics product revenues decreased 3.6% in fiscal 2018 compared to fiscal 2017 primarily due to the decrease in blood screening revenues of \$88.2 million in the current year as a result of the divestiture of the business during the second quarter of FY17. In connection with the divestiture agreement, we have committed to providing Grifols manufacturing support through the defined transition services period and long term access to Panther instrumentation and certain supplies. As such, we will continue to generate a level of revenues, but much lower than historical trends. Product revenue under the new long term supply agreement and transition services agreement to manufacture assays for Grifols was \$45.4 million and \$37.1 million for fiscal 2018 and fiscal 2017, respectively. Excluding the divestiture of the blood screening business, diagnostic product revenues grew driven by increases in Molecular Diagnostics of \$43.6 million in the current year, respectively, while Cytology & Perinatal revenues were slightly higher by \$3.0 million year over year primarily due to higher international sales volume.

Molecular Diagnostics product revenue was \$601.2 million in fiscal 2018 compared to \$557.6 million in fiscal 2017. The increase was primarily attributable to sales of our Aptima family of assays on a worldwide basis due to our increased installed base of Panther instruments, which is driving higher volumes of assay testing. In addition, we had an increase in the number of our virology products, as we have recently received additional international regulatory approvals. These increases were partially offset by a slight decline in average selling prices, lower instrument sales and the loss of one week in fiscal 2018 compared to fiscal 2017. Cytology & Perinatal product revenue increased due to higher international ThinPrep volumes, partially offset by lower domestic ThinPrep test volumes, which we primarily attribute to screening internal expansion, as well as slight decline in average selling prices on a worldwide basis.

Breast Health product revenues increased 7.1% in fiscal 2018 compared to fiscal 2017 primarily due to increased unit volumes of our newest 3Dimensions, which also have higher average selling prices, and 3D Performance systems, both of which complement our older 3D systems, increased sales volume of our Affirm Prone table and Brevera breast biopsy system, which was recently commercially released in the U.S., an increase in Eviva and ATEC volumes internationally, and the positive foreign currency exchange impact of the weakening U.S. dollar against a number of currencies. In addition, the acquisition of Medicor and Emsor, former distributors of our products, resulted in higher mammography system revenues, primarily attributable to higher direct sales prices in their respective territories. These increases were partially offset by lower sales volume of our 2D Dimensions systems on a worldwide basis and lower 3D upgrades primarily as a result of a shift to 3D systems.

Our Medical Aesthetics business commenced in fiscal 2017 as a result of the acquisition of Cynosure effective March 22, 2017. Product revenue increased 56.1% in fiscal 2018 compared to fiscal 2017 primarily due to year over year increases in Body Contouring, Skin, Women's Health and Other product revenues as fiscal 2018 was a full year period compared to slightly more than six months of activity in fiscal 2017. The fourth quarter and annual period were affected by our decision to voluntarily recall the TempSure Vitalia system in response to a letter we received from the FDA expressing concerns regarding "vaginal rejuvenation" procedures using energy-based devices, which specifically mentioned our MonaLisa Touch laser. We believe our MonaLisa Touch laser has the appropriate FDA approvals. However, in considering the FDA's broader concerns we elected to

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suspend marketing and distribution of our TempSure Vitalia handpieces and single-use probes until we have assessed the implications of recent FDA considerations for devices in this category. As a result, we requested our customers to return any Vitalia handpieces and unused probes they purchased and we recorded a \$6.8 million reserve to revenue for issuing refunds and rebates. At this time we do not know if or when this issue will be resolved and if or when our commercialization of the TempSure Vitalia system will recommence.

GYN Surgical product revenues decreased 1.2% in fiscal 2018 compared to fiscal 2017 primarily due to lower NovaSure system sales of \$25.0 million from lower U.S. volumes partially offset by an increase in MyoSure system sales on a worldwide basis of \$14.6 million. We attribute the decrease in NovaSure sales primarily to increased competition and a stagnant market for endometrial ablation, partially offset by a slight increase in average selling prices from a mix shift to the higher priced NovaSure ADVANCED device. In addition, fiscal 2018 was a 52-week year compared to a 53-week year in fiscal 2017. Offsetting these decreases is the positive effect of foreign currency exchange rates from a weaker U.S. dollar.

Skeletal Health product revenues increased 3.1% in fiscal 2018 compared to fiscal 2017 primarily due to higher sales volume of our Horizon osteoporosis assessment product revenues in the U.S., which was partially offset by a decrease in our mini C-arm sales, which we attribute primarily to competitive pressures.

In fiscal 2018, 74.2% of product revenues were generated in the United States, 12.0% in Europe, 9.0% in Asia-Pacific, and 4.8% in other international markets. In fiscal 2017, 76.7% of product revenues were generated in the United States, 10.3% in Europe, 8.5% in Asia-Pacific, and 4.5% in other international markets. The slight decrease in the percentage of U.S. revenues was primarily due higher revenues in other international markets as a result of our Cynosure, Medicor, and Emsor acquisitions, and increased international sales volume of 3Dimensions systems, ThinPrep Pap tests and Aptima products in Europe and Asia-Pacific.

Service and Other Revenues.

	Years Ended					
	September 29, 2018		September 30, 2017		Change	
	Amount	% of Total Revenue	Amount	% of Total Revenue	Amount	%
<i>Service and Other Revenues</i>	\$ 574.0	17.8%	\$ 520.8	17.0%	\$ 53.2	10.2%

Service and other revenues are primarily comprised of revenue generated from our field service organization to provide ongoing service, installation and repair of our products. The majority of these revenues are generated within our Breast Health segment, and to a lesser extent, our Medical Aesthetics business. The Breast Health business continues to convert a high percentage of our installed base of digital mammography systems to service contracts upon expiration of the warranty period. Our Medical Aesthetics business represented 10.6% and 5.6% of service and other revenues in fiscal 2018 and fiscal 2017, respectively. Service and other revenues increased 10.2% in fiscal 2018 compared to fiscal 2017 primarily due to higher service contract conversion and renewal rates, higher spare parts sales, and the Cynosure acquisition contributing an additional \$31.5 million of revenue due to a full year of operations in fiscal 2018 compared to slightly more than six months of activity in fiscal 2017. Partially offsetting these increases was the prior year included \$9.5 million of non-recurring royalty revenue recorded in the fourth quarter of fiscal 2017.

Cost of Product Revenues.

	Years Ended					
	September 29, 2018		September 30, 2017		Change	
	Amount	% of Product Sales	Amount	% of Product Sales	Amount	%
<i>Cost of Product Revenues</i>	\$ 886.6	33.5%	\$ 881.8	34.7%	\$ 4.8	0.5%
<i>Amortization of Intangible Assets</i>	319.4	12.1%	297.1	11.7%	22.3	7.5%
	\$ 1,206.0	45.6%	\$ 1,178.9	46.4%	\$ 27.1	2.3%

Product gross margin increased to 54.4% in fiscal 2018 compared to 53.6% in fiscal 2017.

Cost of Product Revenues. The cost of product revenues as a percentage of product revenues was 33.5% in the current year, compared to 34.7% in the prior year. Cost of product revenues as a percentage of product revenues in fiscal 2018 was lower than fiscal 2017 primarily due to the acquisition of Cynosure in the prior year and the related impact of stepping-up the acquired inventory to fair value in purchase accounting, resulting in additional costs of \$39.3 million in fiscal 2017.

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Diagnostics' product costs as a percentage of revenue decreased slightly in fiscal 2018 compared to fiscal 2017 primarily due to increased Aptima assay volumes and higher volumes of our newer virology products, partially offset by an increase in international sales which have lower average selling prices and the divestiture of the higher margin blood screening business that occurred during the second quarter of fiscal 2017. The products that we supply to Grifols under the supply and collaboration agreements are at significantly lower gross margins than we earned in the disposed business.

Breast Health's product costs as a percentage of revenue increased slightly in fiscal 2018 compared to fiscal 2017 primarily due to decrease in 3D upgrades and C-View software sales, which have higher gross margins than capital equipment sales, lower average sales prices of 3D Dimensions systems in the U.S. from a mix shift to our lower margin 3D Performance system and increase in the sales volume of digital mammography systems internationally, which have lower average selling prices. The decreases were partially offset by higher sales volume of the new 3Dimensions system, Affirm Prone table and the Brevera breast biopsy system, higher average selling prices for Eviva and ATEC devices.

Medical Aesthetics product costs as a percentage of revenue decreased in fiscal 2018 compared to fiscal 2017 primarily due to the impact of the step-up in inventory recorded in fiscal 2017 from the application of purchase accounting. Partially offsetting this impact, in the current year we recorded a revenue reserve for the TempSure Vitalia recall of \$6.8 million and additional inventory charges.

GYN Surgical's product costs as a percentage of revenue increased slightly in fiscal 2018 compared to fiscal 2017 primarily due to lower NovaSure volumes and continued mix shift to MyoSure products comprising a higher percentage of GYN Surgical product sales. MyoSure devices have a lower gross margin than NovaSure devices. In addition, we had higher international sales which have lower average selling prices.

Skeletal Health's product costs as a percentage of revenue increased in fiscal 2018 compared to fiscal 2017 primarily due to unfavorable manufacturing variances and to a lesser extent pricing pressures on our Horizon system.

Amortization of Intangible Assets. Amortization of intangible assets relates to acquired developed technology. These intangible assets are generally amortized over their estimated useful lives of between 8 and 15 years using a straight-line method or, if reliably determinable, based on the pattern in which the economic benefits of the assets are expected to be consumed. Amortization expense increased in fiscal 2018 compared to fiscal 2017 primarily due to an increase of \$36.2 million related to intangible assets acquired in the Cynosure acquisition, partially offset by a decrease in amortization expense related to the divestiture of the blood screening business of \$5.4 million, lower amortization expense related to the Cytac acquisition intangibles, which are being amortized based on the pattern of economic benefits, and having one less week of expense in fiscal 2018 compared to fiscal 2017.

Cost of Service and Other Revenues.

	Years Ended					
	September 29, 2018		September 30, 2017		Change	
	Amount	% of Service and Other Revenues	Amount	% of Service and Other Revenues	Amount	%
<i>Cost of Service and Other Revenues</i>	\$ 315.2	54.9%	\$ 258.9	49.7%	\$ 56.3	21.7%

Service and other revenues gross margin was 45.1% in fiscal 2018 compared to 50.3% in fiscal 2017. The decrease in gross margin is primarily related to the lower margin Cynosure service business being a higher percentage of the overall service business in fiscal 2018 from a full year of operations, the prior year included \$9.5 million of non-recurring royalty revenue that had no corresponding costs, and to a lesser extent an increase in costs to repair older digital mammography systems under service contracts in our Breast Health business. The decrease was partially offset by the Breast Health business continued strength to convert a high percentage of our installed base of digital mammography systems to service contracts upon expiration of the warranty period leveraging our service infrastructure.

Operating Expenses.

	Years Ended					
	September 29, 2018		September 30, 2017		Change	
	Amount	% of Total Revenue	Amount	% of Total Revenue	Amount	%
<i>Operating Expenses</i>						
Research and development	\$ 218.7	6.8%	\$ 232.8	7.6 %	\$ (14.1)	(6.1)%
Selling and marketing	544.6	16.9%	498.6	16.3 %	46.0	9.2 %
General and administrative	366.1	11.4%	343.3	11.2 %	22.8	6.6 %
Amortization of intangible assets	59.3	1.8%	62.5	2.0 %	(3.2)	(5.1)%
Impairment of intangible assets	46.0	1.4%	—	— %	46.0	100.0 %
Impairment of goodwill	685.7	21.3%	—	— %	685.7	100.0 %
Gain on sale of business	—	—%	(899.7)	(29.4)%	899.7	(100.0)%
Restructuring charges	14.2	0.4%	13.3	0.4 %	0.9	6.8 %
	<u>\$ 1,934.6</u>	<u>60.0%</u>	<u>\$ 250.8</u>	<u>8.1 %</u>	<u>\$ 1,683.8</u>	<u>**</u>

** Percentage not meaningful

Research and Development Expenses. Research and development expenses decreased 6.1% in fiscal 2018 compared to fiscal 2017 primarily due to lower project spend, including development materials and clinical spending, a reduction of outside consulting spend across the divisions and a reduction in headcount primarily in Diagnostics, Breast Health and Medical Aesthetics. Expenses were also lower in fiscal 2018 primarily due to the divestiture of the blood screening business and one less week of expenses partially offset by an increase of Cynosure research and development expenses of \$9.0 million due to a full year in fiscal 2018 compared to slightly more than six months of activity in the prior year. At any point in time, we have a number of different research projects and clinical trials being conducted and the timing of these projects and related costs can vary from period to period.

Selling and Marketing Expenses. Selling and marketing expenses increased 9.2% in fiscal 2018 compared to fiscal 2017 primarily due to the inclusion of Cynosure, which increased \$49.9 million in fiscal 2018 representing a full year of activity; however headcount was lower compared to the prior year as this business's expenses were aligned to reflect its operating results. Excluding Cynosure, selling and marketing expenses related to Hologic's legacy business decreased \$5.0 million in fiscal 2018 compared to fiscal 2017 primarily due to lower marketing initiatives and consulting expenses, lower spend on travel, a decline in sales personnel headcount in Diagnostics and one less week of expenses, partially offset by higher salary compensation from increased headcount in Breast Health and to a lesser extent GYN Surgical, and an increase in commissions and third-party commissions primarily in Breast Health.

General and Administrative Expenses. General and administrative expenses increased 6.6% in fiscal 2018 compared to fiscal 2017 primarily due to the inclusion of Cynosure, which increased \$22.1 million in fiscal 2018 representing a full year of activity; however headcount has been reduced as this business is integrated into our corporate structure. Excluding the impact of Cynosure, expenses related to Hologic's legacy business increased slightly in fiscal 2018 compared to fiscal 2017 primarily due to increased legal fees including settling the Smith & Nephew patent infringement lawsuit related to the MyoSure system for \$34.8 million, fees incurred in the Fuji and Minerva lawsuits, increased international infrastructure costs, increased bad debt expense primarily from international and Cynosure customers, higher tax consulting and accounting fees and increased information systems infrastructure and project costs. These increases were partially offset by lower costs in fiscal 2018 as fiscal 2017 expenses included a \$23.2 million net charge for non-income tax related matters, which was net of the benefit from the Medical Device Excise tax refunds, acquisition and divestiture transaction expenses of \$23.2 million, higher integration and consolidation charges primarily related to the Cynosure acquisition, and the prior year period included an additional week of expenses.

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Amortization of Intangible Assets. Amortization of intangible assets results from customer relationships, trade names, distributor relationships and business licenses related to our acquisitions. These intangible assets are generally amortized over their estimated useful lives of between 2 and 30 years using a straight-line method or, if reliably determinable, based on the pattern in which the economic benefits of the assets are expected to be consumed utilizing expected undiscounted future cash flows. Amortization expense decreased 5.1% in fiscal 2018 compared to fiscal 2017 primarily due to lower amortization from intangible assets related to the blood screening business of \$10.4 million that was disposed of in the second quarter of fiscal 2017 and one less week of expenses. This decrease was partially offset by an increase of \$8.9 million of amortization expense related to Cynosure intangible assets, and increases from the Medicor and Emsor acquisitions.

Impairment of Intangible Asset. In the second quarter of fiscal 2018, we decided to cancel and abandon an in-process research and development project that was recorded as an intangible asset in the Cynosure acquisition purchase accounting. The project was abandoned due to unsuccessful clinical results. As a result, we recorded a \$46.0 million impairment charge to write-off the full value of the asset.

Impairment of Goodwill. During the second quarter of fiscal 2018, in connection with commencing our company-wide annual budgeting and strategic planning process, evaluating the current operating performance of our Medical Aesthetics reporting unit, and abandoning an in-process research and development project, we reduced the short term and long term revenue and operating income forecasts and determined that indicators of impairment existed in our Medical Aesthetics reporting unit. The Medical Aesthetics reporting unit is solely comprised of the Cynosure business, which we acquired on March 22, 2017. The updated forecast reflected significantly reduced volume and market penetration projections resulting in lower short-term and long-term profitability than expected at the time of the Cynosure acquisition. As a result of these current events and circumstances, we determined that it was more likely than not that this change would reduce the fair value of the reporting unit below its carrying amount. To estimate the fair value of the reporting unit, we utilized the income approach. The income approach is based on a discounted cash flow (DCF) analysis and calculates the fair value by estimating the after-tax cash flows attributable to the reporting unit and then discounting the after-tax cash flows to present value using a risk-adjusted discount rate. Assumptions used in the DCF require significant judgment, including judgment about appropriate discount rates and terminal values, growth rates, and the amount and timing of expected future cash flows. The forecasted cash flows were based on our most recent budget and strategic plan and for the period beyond the strategic plan period, our estimates were based on assumed growth rates expected as of the measurement date. We believe our assumptions are consistent with the plans and estimates used to manage the underlying business. The discount rate used was intended to reflect the risks inherent in future cash flow projections and was based on an estimate of the weighted average cost of capital (WACC) of market participants relative to the reporting unit. The basis of fair value for Medical Aesthetics assumed the reporting unit would be purchased or sold in a non-taxable transaction, and the discount rate of 12.0% applied to the after-tax cash flows was consistent with that used in the purchase accounting performed in fiscal 2017. For additional information pertaining to impairment of goodwill, please refer to Note 2 to our consolidated financial statements contained in Item 15 of this Annual Report.

Gain on Sale of Business. In the second quarter of fiscal 2017, we completed the sale of our blood screening business to Grifols and recorded a gain of \$899.7 million.

Restructuring Charges. In fiscal 2016, we implemented organizational changes to our international operations. In fiscal 2017, in connection with our acquisition of Cynosure, we implemented certain organizational changes, and we also eliminated certain research and development positions in Breast Health and manufacturing positions primarily in our Diagnostics division. In fiscal 2018, we finalized our decision to consolidate legacy international accounting and customer service organizations into our Manchester, UK location and will be eliminating positions in Belgium, France, Italy, Spain and Germany. This transition is expected to be completed in the first quarter of fiscal 2019. We also eliminated certain sales and marketing personnel in our Diagnostics and Medical Aesthetics divisions. Additionally, we decided to close our Hicksville, New York facility which manufactures certain Cynosure products and the employees were notified of termination and related benefits in the third quarter of fiscal 2018. Pursuant to U.S. generally accepted accounting principles, the related severance and benefit charges are recognized either ratably over the respective required employee service periods or up-front for contractual benefits. In fiscal 2018 and 2017, we recorded aggregate charges of \$ 14.2 million and \$13.3 million, respectively, from these actions, primarily for severance and benefits and to a lesser extent lease obligation charges for facility closure costs. For additional information, please refer to Note 4 to our consolidated financial statements contained in Item 15 of this Annual Report.

Interest Expense.

	Years Ended			
	September 29, 2018	September 30, 2017	Change	
	Amount	Amount	Amount	%
<i>Interest Expense</i>	\$ (148.7)	\$ (153.2)	\$ 4.5	(2.9)%

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Interest expense in fiscal 2018 and 2017 consists primarily of the cash interest costs and the related amortization of the debt discount and deferred issuance costs on our outstanding debt. Interest expense in fiscal 2018 decreased compared to fiscal 2017 primarily due to refinancing our 2022 Senior Notes with our 2025 and 2028 Senior Notes that carry lower rates, extinguishing our Convertible Notes in fiscal 2017 and 2018, receiving interest payments under our interest rate cap agreements, and fiscal 2017 included an additional week of expense. These decreases were partially offset by issuance costs expensed from the refinancing of our credit facilities in the first quarter of fiscal 2018, issuance costs expensed from the issuance of the 2025 Senior Notes and 2028 Senior Notes in the second quarter of fiscal 2018, and an increase in the LIBOR rate under our Amended and Restated Credit Agreement.

Debt Extinguishment Losses.

	Years Ended			
	September 29, 2018	September 30, 2017	Change	
	Amount	Amount	Amount	%
<i>Debt Extinguishment Losses</i>	\$ (45.9)	\$ (3.2)	\$ (42.7)	1,334.4%

In the first quarter of fiscal 2018, we entered into an Amended and Restated Credit Agreement with Bank of America, N.A. The proceeds under the Amended and Restated Credit Agreement of \$1.8 billion were used, among other things, to pay off the Term Loan and Revolver outstanding under the Prior Credit Agreement. In connection with this transaction, we recorded a debt extinguishment loss of \$1.0 million in the first quarter of fiscal 2018. In the first and second quarters of fiscal 2018, we completed private placement of \$1.0 billion aggregate principal amount of senior notes allocated between the 2025 Senior Notes and 2028 Senior Notes. The proceeds under the 2025 Senior Notes and 2028 Senior Notes offering and our available cash were used to redeem the 2022 Senior Notes in the same principal amount. In connection with this transaction, we recorded a debt extinguishment loss of \$44.9 million in the second quarter of fiscal 2018.

On various dates during the third and fourth quarters of fiscal 2017, we entered into privately negotiated repurchase transactions and extinguished \$117.9 million and \$168.0 million principal amount of our 2012 and 2013 Notes, respectively, for an aggregate payment of \$375.1 million, which includes a premium conversion resulting from our stock price on the date of the transactions being in excess of the conversion prices. In connection with these transactions, we recorded a debt extinguishment loss of \$0.9 million and \$2.3 million on the 2012 and 2013 Notes, respectively, related to the difference between the fair value of their respective liability components and carrying values at the repurchase dates. The remaining cash payments were allocated to the reacquisition of the equity component and recorded within additional paid-in capital, a component of stockholders' equity.

Other Income, net.

	Years Ended			
	September 29, 2018	September 30, 2017	Change	
	Amount	Amount	Amount	%
<i>Other Income, net</i>	\$ 7.6	\$ 12.9	\$ (5.3)	(41.1)%

In fiscal 2018, this account primarily consisted of net foreign currency exchange gains of \$5.9 million primarily due to hedging activities, a gain of \$3.2 million on the cash surrender value of life insurance contracts related to our deferred compensation plan, partially offset by a realized loss of \$0.6 million on the sale of a marketable security.

In fiscal 2017, this account primarily consisted of a gain of \$4.9 million on the cash surrender value of life insurance contracts related to our deferred compensation plan, \$2.3 million in net foreign currency exchange gains partially due to hedging activities and \$5.6 million of net realized gains on the sale of investments.

(Benefit) Provision for Income Taxes.

	Years Ended			
	September 29, 2018	September 30, 2017	Change	
	Amount	Amount	Amount	%
<i>(Benefit) Provision for Income Taxes</i>	\$ (307.3)	\$ 475.0	\$ (782.3)	(164.7)%

Our effective tax rate for fiscal 2018 was 73.4% compared to 38.6% in fiscal 2017. Our effective tax rate in fiscal 2018, applied to an overall pre-tax loss, resulting in a benefit, was higher than the statutory rate primarily due to the favorable impact of the Tax Cuts and Jobs Act (the "Act"), which required us to remeasure our U.S. net deferred tax liabilities at a lower rate, partially offset by the unfavorable impact of the Medical Aesthetics goodwill impairment charge, substantially all of which is

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non-deductible. The net result of implementing the Act was a benefit of \$346.2 million representing our best estimate based on our interpretation of the Act. We are still accumulating data to finalize the underlying calculations, and the U.S. Treasury is expected to issue further guidance on the application of certain provisions of the Act.

Our effective tax rate in fiscal 2017 was higher than the statutory rate primarily due to non-deductible goodwill related to the sale of the Blood Screening business, partially offset by the release of valuation allowances for capital losses utilized against the capital gain generated on the sale of the Blood Screening business, earnings in jurisdictions subject to lower tax rates, the domestic production activities deduction benefit, the release of reserves for uncertain tax positions due to statutes of limitations expirations and audit settlements, stock compensation benefits, and federal and state tax credits.

Segment Results of Operations

We report our business as five segments: Diagnostics, Breast Health, Medical Aesthetics, GYN Surgical and Skeletal Health. The accounting policies of the segments are the same as those described in the footnotes to the accompanying consolidated financial statements contained in Item 15 of this Annual Report. We measure segment performance based on total revenues and operating income. Revenues from product sales of each of these segments are described in further detail above. The discussion that follows is a summary analysis of total revenues and the primary changes in operating income or loss by segment.

Diagnostics.

	Years Ended			
	September 29, 2018	September 30, 2017	Change	
	Amount	Amount	Amount	%
Total Revenues	\$ 1,147.4	\$ 1,197.1	\$ (49.7)	(4.2)%
Operating Income	\$ 145.5	\$ 1,054.2	\$ (908.7)	(86.2)%
Operating Income as a % of Segment Revenue	12.7%	88.1%		

Diagnostics revenues decreased in fiscal 2018 compared to fiscal 2017 primarily due to the decrease in product revenues discussed above. The primary driver of the reduction in revenues was the divestiture of the blood screening business in the second quarter of fiscal 2017.

Operating income for this business segment decreased in fiscal 2018 compared to fiscal 2017 primarily due to fiscal 2017 including a one-time gain on the disposition of the blood screening business of \$899.7 million in the second quarter of fiscal 2017 and a decrease in gross profit in fiscal 2018 primarily due to the blood screening divestiture. Excluding the impact of the gain from this divestiture, operating income decreased \$9.0 million in the current year compared to the prior year primarily due to the blood screening divestiture, partially offset by the improvements in sales of our Aptima assays. Gross margin was 47.1% in the current year compared with 47.8% in the prior year. The decrease in gross margin was primarily due to lower revenues as a result of the disposition of the higher-margin blood screening business and lower margins generated under the new supply and collaboration arrangement with Grifols. This gross margin decrease was partially offset by the impact of the increase in Aptima assay volumes, and lower amortization expense.

Exclusive of the impact of the gain on the sale of the blood screening business, operating expenses decreased in fiscal 2018 compared to fiscal 2017 primarily due to lower amortization expense primarily as a result of the blood screening divestiture, lower research and development expenses related to a reduction in project spending as well as the divestiture of the blood screening business, lower headcount in research and development and sales, no disposition transaction fees in the current fiscal year, and one less week of expenses in the current fiscal year, partially offset by restructuring charges for the current year. In addition, fiscal 2017 included a \$5.5 million credit related to a refund received from amending our Medical Device Excise tax filings.

[Table of Contents](#)*Breast Health.*

	Years Ended			
	September 29, 2018	September 30, 2017	Change	
	Amount	Amount	Amount	%
Total Revenues	\$ 1,218.2	\$ 1,138.3	\$ 79.9	7.0%
Operating Income	\$ 399.7	\$ 373.4	\$ 26.3	7.0%
Operating Income as a % of Segment Revenue	32.8%	32.8%		

Breast Health revenues increased in fiscal 2018 compared to fiscal 2017 primarily due to an increase of \$50.4 million in product revenue discussed above and \$29.5 million in service revenue.

Operating income for this business segment increased in fiscal 2018 compared to fiscal 2017 primarily due to an increase in gross profit from higher revenue partially offset by an increase in operating expenses in the current year. The overall gross margin decreased slightly to 60.2% in the current year compared to 60.9% in the prior year primarily due to the increase in service revenue which has lower margins, decrease in C-View software and 3D upgrades, which have higher gross margins than capital equipment sales, and an increase in international sales, which have lower average selling prices. The gross margin decreases were partially offset by higher gross margins from sales volume increases in the Affirm Prone table and the Brevera breast biopsy system, and higher average selling prices of Eviva and ATEC devices, and sales volume increase in the 3Dimensions and 3D Performance systems.

Operating expenses increased in fiscal 2018 compared to fiscal 2017 primarily due to an increase in salary compensation from increased headcount in the Breast Health sales organization as well as higher commissions and third-party commissions as a result of sales growth, an increase in legal expenses for the Fuji litigation, increased expenses from the Faxitron, Medicor and Emsor acquisitions, higher restructuring expenses and the fiscal 2017 included a credit of \$4.5 million from amending the our Medical Device Excise tax filings partially offset by a reduction in marketing initiatives. These increases in operating expenses were partially offset by one less week of expenses in fiscal 2018 and the fiscal 2017 included charges for non-income tax related matters of \$5.8 million.

Medical Aesthetics.

	Years Ended			
	September 29, 2018	September 30, 2017	Change	
	Amount	Amount	Amount	%
Total Revenues	\$ 339.1	\$ 207.5	\$ 131.6	63.4%
Operating Loss	\$ (844.7)	\$ (115.9)	\$ (728.8)	**
Operating Loss as a % of Segment Revenue	(249.1)%	(55.9)%		

** Percentage not meaningful

Medical Aesthetics revenue increased in fiscal 2018 compared to fiscal 2017 primarily due an increase of \$100.1 million in product revenue discussed above and \$31.5 million in service revenue. We had Cynosure for the full year period in fiscal 2018 compared to slightly more than six months of activity in fiscal 2017.

The operating loss in fiscal 2018 includes impairment charges for goodwill of \$685.7 million and an in-process research and development intangible asset of \$46.0 million recorded in the second quarter of fiscal 2018, intangible asset amortization expense of \$88.8 million and restructuring and integration charges of \$9.5 million. These expenses combined with functional operating expenses are partially offset by gross profit, which increased due to a full year of operating activity and the prior year period included a \$39.3 million charge from the step-up to fair value for inventory from the application of purchase accounting.

The operating loss in fiscal 2017 was primarily due to acquisition expenses of \$18.8 million, amortization of intangible assets of \$43.7 million, step-up to fair value of inventory sold of \$39.3 million, restructuring and retention costs and integration expenses, including legal and professional consulting fees and accelerated depreciation expense, aggregating \$25.7 million partially offset by gross profit from revenues.

[Table of Contents](#)*GYN Surgical.*

	Years Ended			
	September 29, 2018	September 30, 2017	Change	
	Amount	Amount	Amount	%
Total Revenues	\$ 422.0	\$ 427.1	\$ (5.1)	(1.2)%
Operating Income	\$ 58.3	\$ 65.0	\$ (6.7)	(10.3)%
Operating Income as a % of Segment Revenue	13.8%	15.2%		

GYN Surgical revenues decreased in fiscal 2018 compared to fiscal 2017 due to the decrease in product revenues discussed above.

Operating income for this business segment decreased in fiscal 2018 compared to fiscal 2017 primarily due to increase in operating expense related to a legal settlement charge of \$34.8 million recorded in the fourth quarter of 2018. Fiscal 2017 also included a charge recorded for non-income tax matters of \$26.1 million. Excluding the impact of the legal settlement and non-income tax matter, operating income in fiscal 2018 compared to fiscal 2017 would have increased \$2.1 million due to a decrease in operating expenses primarily due to lower compensation from a decrease in sales personnel headcount, lower product development spend, and one less week of expenses in fiscal 2018. Gross margin was relatively consistent at 63.1% in fiscal 2018 compared to 63.6% in fiscal 2017. The decline is driven by lower Novasure sales, which carry higher gross margins than Myosure system sales, partially offset by lower amortization expense.

Skeletal Health.

	Years Ended			
	September 29, 2018	September 30, 2017	Change	
	Amount	Amount	Amount	%
Total Revenues	\$ 91.2	\$ 88.8	\$ 2.4	2.7%
Operating Income	\$ 3.3	\$ (6.5)	\$ 9.8	(150.8)%
Operating Income as a % of Segment Revenue	3.6%	(7.3)%		

Skeletal Health revenues increased in fiscal 2018 compared to fiscal 2017 primarily due to the increase in product revenues discussed above.

Operating income increased in fiscal 2018 compared to the prior year primarily due to lower operating expenses. Gross margin rate was 39.7% in fiscal 2018 compared to 42.2% in fiscal 2017 as we have experience pricing pressures and negative manufacturing variances. This business also had lower operating expenses from lower research and development project spend, one less week of expenses, and the prior year included facility closure costs incurred for the Bedford facility of \$4.8 million.

Fiscal Year Ended September 30, 2017 Compared to Fiscal Year Ended September 24, 2016

Product Revenues.

	Years Ended					
	September 30, 2017		September 24, 2016		Change	
	Amount	% of Total Revenue	Amount	% of Total Revenue	Amount	%
<i>Product Revenues</i>						
Diagnostics	\$ 1,165.1	38.1%	\$ 1,204.7	42.5%	\$ (39.6)	(3.3)%
Breast Health	708.1	23.2%	719.7	25.4%	(11.6)	(1.6)%
Medical Aesthetics	178.3	5.8%	—	—%	178.3	—%
GYN Surgical	426.1	13.9%	392.0	13.9%	34.1	8.7%
Skeletal Health	60.4	2.0%	62.6	2.2%	(2.2)	(3.5)%
	<u>\$ 2,538.0</u>	<u>83.0%</u>	<u>\$ 2,379.0</u>	<u>84.0%</u>	<u>\$ 159.0</u>	<u>6.7%</u>

We generated a 6.7% increase in product revenues in fiscal 2017 compared to fiscal 2016 primarily due to our acquisition of Cynosure on March 22, 2017 and an increase in GYN Surgical sales. We had decreases in our Diagnostics business as a result of the sale of our blood screening business effective January 31, 2017. We also experienced decreases in our Breast Health and Skeletal Health segments. Our Diagnostics revenues, excluding blood screening, increased in the current year. The increase in overall product revenues was reduced partially by the negative foreign currency exchange impact of the strengthening U.S. dollar against a number of currencies, most notably the Euro and UK Pound. Fiscal 2017 included an extra week as it was a 53-week fiscal year.

Diagnostics product revenues decreased 3.3% in fiscal 2017 compared to fiscal 2016 primarily due to the decrease in blood screening revenues of \$94.6 million in the current year as a result of the divestiture of the business during the second quarter of FY17. In connection with the divestiture agreement, we committed to providing Grifols manufacturing support through the defined transition services period and long term access to Panther instrumentation and certain supplies. As such, we will continue to generate a level of revenues, but much lower than historical trends. In fiscal 2017, product revenue under the new long term supply agreement and transition services agreement to manufacture assays for Grifols was \$37.1 million. Excluding the divestiture of the blood screening business, diagnostic product revenues grew driven by increases in Molecular Diagnostics of \$57.5 million in the current year, respectively, while Cytology and Perinatal revenues were slightly lower by \$2.4 million year over year primarily due to lower Perinatal sales volume.

The increase in Molecular Diagnostics product revenues was primarily due to our increased installed base of Panther instruments, which drove higher volumes of assay testing, in particular our Aptima family of assays, an increase in the number of our virology products, as we had received regulatory approval for certain of these products, and an additional week in the current year compared to prior year. These increases were partially offset by a slight decline in average selling prices, a reduction in Cervista HPV revenues as our larger customers transitioned to our Panther system, a reduction in Cystic Fibrosis revenues as we discontinued the product at the end of the second quarter of fiscal 2016, and the negative foreign currency exchange impact of the strengthening U.S. dollar on our sales denominated in foreign currencies.

Breast Health product revenues decreased 1.6% in fiscal 2017 compared to fiscal 2016 primarily due to lower sales volume of our 3D Dimensions systems and related components in the U.S., partially offset by an increase in international sales volume and 3D upgrades. The increase in international sales was partially due to our acquisition of Medicor in the third quarter of fiscal 2017. In addition, the lower revenue reflected a decline in 2D systems primarily due to discontinuing the Selenia system in fiscal 2016. These decreases were partially offset by the sales volume increase in our recently launched Affirm Prone table, an increase in C-view sales and higher volumes of our Eviva and ATEC products, partially offset by slightly lower average selling prices for ATEC.

Our Medical Aesthetics business was formed in fiscal 2017 by the acquisition of Cynosure effective March 22, 2017. Accordingly, we did not have any Medical Aesthetics revenues in fiscal 2016.

GYN Surgical product revenues increased 8.7% in fiscal 2017 compared to fiscal 2016 primarily due to increases in MyoSure system sales of \$33.0 million as MyoSure continues to gain strong market acceptance with new devices being released, such as the MyoSure REACH, partially offset by a slight decrease in average selling prices primarily due to product mix. NovaSure revenues were lower by \$2.9 million in fiscal 2017 compared to fiscal 2016 primarily due to slight decrease in average selling prices. Our GYN Surgical revenues were also adversely affected by the negative foreign currency exchange impact of the strengthening U.S. dollar on our sales denominated in foreign currencies.

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Skeletal Health product revenues decreased 3.5% in fiscal 2017 compared to fiscal 2016 primarily due to a decrease in our mini C-arm sales in the U.S. due to competitive pressures, which was partially offset by increases in Horizon osteoporosis assessment product revenues primarily attributable to higher sales volume on a worldwide basis.

In fiscal 2017, 76.7% of product revenues were generated in the United States, 10.3% in Europe, 8.5% in Asia-Pacific, and 4.5% in other international markets. In fiscal 2016, 77.8% of product revenues were generated in the United States, 10.6% in Europe, 8.3% in Asia-Pacific, and 3.3% in other international markets. The slight decrease in the percentage of U.S. revenues was primarily due to lower sales volumes of 3D Dimensions systems and related components in the U.S. and higher revenues in other international markets as a result of our Cynosure acquisition.

Service and Other Revenues.

	Years Ended					
	September 30, 2017		September 24, 2016		Change	
	Amount	% of Total Revenue	Amount	% of Total Revenue	Amount	%
<i>Service and Other Revenues</i>	\$ 520.8	17.0%	\$ 453.7	16.0%	\$ 67.1	14.8%

Service and other revenues are primarily comprised of revenue generated from our field service organization to provide ongoing service, installation and repair of our products. The majority of these revenues are generated within our Breast Health segment. Service and other revenues increased 14.8% in fiscal 2017 compared to fiscal 2016 primarily due to higher service contract conversion and renewal rates, an additional week in the current year, higher spare parts sales, and the Cynosure acquisition, which contributed \$29.2 million in fiscal 2017.

Cost of Product Revenues.

	Years Ended					
	September 30, 2017		September 24, 2016		Change	
	Amount	% of Product Revenue	Amount	% of Product Revenue	Amount	%
<i>Cost of Product Revenues</i>	\$ 881.8	34.7%	\$ 756.8	31.8%	\$ 125.0	16.5%
<i>Amortization of Intangible Assets</i>	297.1	11.7%	293.4	12.3%	3.7	1.3%
	\$ 1,178.9	46.4%	\$ 1,050.2	44.1%	\$ 128.7	12.3%

Product gross margin decreased to 53.6% in fiscal 2017 compared to 55.9% in fiscal 2016.

Cost of Product Revenues. The cost of product revenues as a percentage of product revenues was 34.7% in fiscal 2017, compared to 31.8% in fiscal 2016. Cost of product revenues as a percentage of product revenues in fiscal 2017 were higher in Diagnostics and Skeletal Health, relatively consistent in GYN Surgical, and decreased in Breast Health compared to fiscal 2016, resulting in the decrease in overall product margins. In addition, the cost of product revenues was higher due the inclusion of Cynosure results partially due to the impact of the step-up in inventory from purchase accounting, which was \$39.3 million in fiscal 2017, and the Cynosure products having a lower gross margin than our legacy products.

Diagnostics' product costs as a percentage of revenue increased in fiscal 2017 compared to fiscal 2016 primarily due to the divestiture of the higher margin blood screening business that occurred during the second quarter of fiscal 2017. The products that we supply to Grifols under the supply and collaboration agreements are at significantly lower gross margins than we earned in the disposed business. The cost as a percentage of revenue also increased due to a shift in sales to lower margin international molecular diagnostic products, a slight decline in Aptima average selling prices, lower Perinatal sales and the negative impact of the strengthening U.S. dollar on our sales denominated in foreign currencies, partially offset by the increase in Aptima assay volumes.

Breast Health's product costs as a percentage of revenue decreased in fiscal 2017 compared to fiscal 2016 primarily due to higher software revenues for our C-View product and 3D upgrades, which have higher gross margins than capital equipment sales, as well as manufacturing efficiencies, increase in average sales prices for breast biopsy systems due to increased volume in our Affirm Prone table, and an increase in Eviva and ATEC volumes. These decreases in product costs as a percentage of revenue were partially offset by the volume impact of the decreases in 3D Dimensions systems and related component revenue.

GYN Surgical's product costs as a percentage of revenue were relatively consistent in fiscal 2017 compared to fiscal 2016.

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Skeletal Health's product costs as a percentage of revenue increased in fiscal 2017 compared to fiscal 2016 primarily due to lower volumes and an increase in obsolescence charges.

Amortization of Intangible Assets. Amortization of intangible assets relates to acquired developed technology. These intangible assets are generally amortized over their estimated useful lives of between 8 and 15 years using a straight-line method or, if reliably determinable, based on the pattern in which the economic benefits of the assets are expected to be consumed. The decrease in amortization expense as a percentage of revenue in fiscal 2017 compared to fiscal 2016 was primarily due to the divestiture of the blood screening business resulting in lower amortization expense of \$17.9 million, and the \$6.2 million acceleration of the discontinued Cystic Fibrosis developed technology asset in the prior year. The decrease was also driven, to a lesser extent, from lower amortization expense related to the Cytac acquisition intangibles, which are being amortized based on the pattern of economic benefits. These decreases were partially offset by amortization expense of \$33.5 million from intangible assets acquired from Cynosure.

Cost of Service and Other Revenues.

	Years Ended					
	September 30, 2017		September 24, 2016		Change	
	Amount	% of Service and Other Revenues	Amount	% of Service and Other Revenues	Amount	%
<i>Cost of Service and Other Revenues</i>	\$ 258.9	49.7%	\$ 219.2	48.3%	\$ 39.7	18.1%

Service and other revenues gross margin was 50.3% in fiscal 2017 compared to 51.7% in fiscal 2016. Slight decrease in gross margin is related to lower margin Cynosure service business offset by the strength of the Breast Health service margins. In fiscal 2017, the Breast Health business continued to convert a high percentage of our installed base of digital mammography systems to service contracts upon expiration of the warranty period leveraging our service infrastructure.

Operating Expenses.

	Years Ended					
	September 30, 2017		September 24, 2016		Change	
	Amount	% of Total Revenue	Amount	% of Total Revenue	Amount	%
<i>Operating Expenses</i>						
Research and development	\$ 232.8	7.6 %	\$ 232.1	8.2%	\$ 0.7	0.3 %
Selling and marketing	498.6	16.3 %	415.1	14.7%	83.5	20.1 %
General and administrative	343.3	11.2 %	267.3	9.4%	76.0	28.4 %
Amortization of intangible assets	62.5	2.0 %	89.7	3.2%	(27.2)	(30.3)%
Gain on sale of business	(899.7)	(29.4)%	—	—%	(899.7)	(100.0)%
Restructuring charges	13.3	0.4 %	10.5	0.4%	2.8	26.7 %
	\$ 250.8	8.1 %	\$ 1,014.7	35.9%	\$ (763.9)	(75.3)%

Research and Development Expenses. Research and development expenses increased 0.3% in fiscal 2017 compared to fiscal 2016 primarily due to the inclusion of Cynosure research and development expenses of \$15.3 million and increased consulting expenses, partially offset by the divestiture of the blood screening business, lower project spend, and a reduction in headcount primarily in Diagnostics. In addition, for fiscal 2017 there was an additional week of expenses. At any point in time, we have a number of different research projects and clinical trials being conducted and the timing of these projects and related costs can vary from period to period.

Selling and Marketing Expenses. Selling and marketing expenses increased 20.1% in fiscal 2017 compared to fiscal 2016 primarily due to the inclusion of Cynosure, which contributed \$81.0 million. Excluding the impact of Cynosure, expenses related to Hologic's legacy business increased in the current year compared to the prior year primarily due to increased headcount in GYN Surgical and Breast Health, increased training, meeting and consulting expenses and higher spend internationally as we invest to expand our presence in targeted geographic markets, partially offset by lower commissions, trade shows and marketing initiatives. In addition, there was an extra week of spend in fiscal 2017.

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General and Administrative Expenses. General and administrative expenses increased 28.4% in fiscal 2017 compared to fiscal 2016 primarily due to the inclusion of Cynosure, which contributed \$30.4 million, which includes retention and integration related expenses including legal and consulting professional fees. Excluding the impact of Cynosure, expenses related to Hologic's legacy business increased in fiscal 2017 compared to fiscal 2016 primarily due to acquisition and divestiture transaction fees of \$23.2 million, charges of \$35.6 million for non-income tax matters, increased compensation and benefits partially due to higher stock compensation, increased information systems infrastructure and project costs, integration and consolidation charges, and an additional week of expenses. These increases were partially offset by \$12.4 million refund received in fiscal 2017 related to amended medical device excise tax filings, overall lower legal fees as the prior year period included a \$6.0 million charge to settle a legal fee dispute, lower consulting and tax fees related to organizational structure changes and improvements and decrease in facilities costs.

Amortization of Intangible Assets. Amortization of intangible assets results from customer relationships, trade names, distributor relationships and business licenses related to our acquisitions. These intangible assets are generally amortized over their estimated useful lives of between 2 and 30 years using a straight-line method or, if reliably determinable, based on the pattern in which the economic benefits of the assets are expected to be consumed utilizing expected undiscounted future cash flows. Amortization expense decreased 30.3% in fiscal 2017 compared to fiscal 2016 primarily due to lower amortization expense from intangible assets related to the blood screening business of \$34.5 million that was disposed of during the second quarter of fiscal 2017. This decrease was partially offset by intangible asset amortization expense of \$10.1 million as a result of the Cynosure acquisition and an additional week of expense in fiscal 2017.

Gain on Sale of Business. In the second quarter of fiscal 2017, we completed the sale of our blood screening business to Grifols and recorded a gain of \$899.7 million.

Restructuring Charges. In fiscal 2015, we decided to shut down our Bedford, Massachusetts facility and transfer production of our Skeletal Health products to a third-party contract manufacturer and other activities to our Marlborough, Massachusetts and Danbury, Connecticut facilities. We also implemented additional organizational changes to our international operations in fiscal 2016. In fiscal 2017, in connection with our acquisition of Cynosure, we have and will implement certain organizational changes, and we also eliminated certain research and development positions in Breast Health and manufacturing positions primarily in our Diagnostics division. Pursuant to U.S. generally accepted accounting principles, the related severance and benefit charges are recognized either ratably over the respective required employee service periods or up-front for contractual benefits, and other charges are being recognized as incurred. In fiscal 2017 and 2016, we recorded aggregate charges of \$13.3 million and \$10.5 million, respectively, from these actions, primarily for severance and benefits and to a lesser extent facility closure costs. The current year charges are for severance benefits primarily related to the termination of Cynosure executives and employees and lease obligation charges for a vacated section of our Bedford facility. For additional information, please refer to Note 3 to our consolidated financial statements contained in Item 15 of this Annual Report.

Interest Expense.

	Years Ended			
	September 30, 2017	September 24, 2016	Change	
	Amount	Amount	Amount	%
<i>Interest Expense</i>	\$ (153.2)	\$ (155.3)	\$ 2.1	(1.4)%

Interest expense in fiscal 2016 and 2017 consisted primarily of the cash interest costs and the related amortization of the debt discount and deferred issuance costs on our Convertible Notes, 2022 Senior Notes, and amounts borrowed under our Prior Credit Agreement, and Accounts Receivable Securitization Program. Interest expense in fiscal 2017 compared to fiscal 2016 was relatively consistent but had offsetting factors. While we lowered outstanding debt balances as a result of scheduled principal payments, and Convertible Note repurchases in fiscal 2017, this effect on interest was offset by an additional week in the current year, higher expense from interest rate cap agreements and an increase in the LIBOR rate compared to the prior year period.

Debt Extinguishment Losses.

	Years Ended			
	September 30, 2017	September 24, 2016	Change	
	Amount	Amount	Amount	%
<i>Debt Extinguishment Losses</i>	\$ (3.2)	\$ (5.3)	\$ 2.1	(39.6)%

On various dates during the third and fourth quarters of fiscal 2017, we entered into privately negotiated repurchase transactions and extinguished \$117.9 million and \$168.0 million principal amount of our 2012 and 2013 Notes, respectively, for an aggregate payment of \$375.1 million, which includes a premium conversion resulting from our stock price on the date of the transactions being in excess of the conversion prices. In connection with these transactions, we recorded a debt extinguishment loss of \$0.9 million and \$2.3 million on the 2012 and 2013 Notes, respectively, related to the difference between the fair value of their respective liability components and carrying values at the repurchase dates. The remaining cash payments were allocated to the reacquisition of the equity component and recorded within additional paid-in capital, a component of stockholders' equity.

On various dates during the second and fourth quarters of fiscal 2016, we entered into privately negotiated repurchase transactions and extinguished \$137.6 million and \$136.6 million principal amount of our 2010 and 2012 Notes, respectively, for an aggregate payment of \$392.8 million, which includes a premium conversion resulting from our stock price on the date of the transactions being in excess of the conversion prices. In connection with these transactions, we recorded a debt extinguishment loss of \$4.6 million and \$0.7 million on the 2010 Notes and 2012 Notes, respectively, related to the difference between the fair value of their respective liability components and carrying values at the repurchase dates. The remaining cash payments were allocated to the reacquisition of the equity component and recorded within additional paid-in capital, a component of stockholders' equity.

Other Income, net.

	Years Ended			
	September 30, 2017	September 24, 2016	Change	
	Amount	Amount	Amount	%
<i>Other Income, net</i>	\$ 12.9	\$ 26.6	\$ (13.7)	(51.5)%

In fiscal 2017, this account primarily consisted of a gain of \$4.9 million on the cash surrender value of life insurance contracts related to our deferred compensation plan, \$2.3 million in net foreign currency exchange gains partially due to hedging activities and \$5.6 million of net realized gains on the sale of investments.

In fiscal 2016, this account was primarily comprised of a \$25.1 million realized gain on the sale of a marketable security, and a gain of \$3.3 million on the cash surrender value of life insurance contracts related to our deferred compensation plan. These gains were partially offset by an other-than-temporary impairment charge of \$1.1 million on a marketable security and net foreign currency exchange losses of \$1.0 million.

Provision for Income Taxes.

	Years Ended			
	September 30, 2017	September 24, 2016	Change	
	Amount	Amount	Amount	%
<i>Provision for Income Taxes</i>	\$ 475.0	\$ 84.5	\$ 390.5	462.1%

Our effective tax rate for fiscal 2017 was 38.6% compared to 20.3% in fiscal 2016. Our effective tax rate in fiscal 2017 was higher than the statutory rate primarily due to non-deductible goodwill related to the sale of the Blood Screening business, partially offset by the release of valuation allowances for capital losses utilized against the capital gain generated on the sale of the Blood Screening business, earnings in jurisdictions subject to lower tax rates, the domestic production activities deduction benefit, the release of reserves for uncertain tax positions due to statutes of limitations expirations and audit settlements, stock compensation benefits, and federal and state tax credits.

For fiscal 2016, the effective tax rate was lower than the statutory tax rate primarily due to earnings in jurisdictions subject to lower tax rates, the domestic production activities deduction benefit, and a change in the valuation allowance related to the sale of a marketable security with a higher tax than book basis.

Segment Results of Operations

Diagnostics.

	Years Ended			
	September 30, 2017	September 24, 2016	Change	
	Amount	Amount	Amount	%
Total Revenues	\$ 1,197.1	\$ 1,236.9	\$ (39.8)	(3.2)%
Operating Income	\$ 1,054.2	\$ 126.0	\$ 928.2	736.7 %
Operating Income as a % of Segment Revenue	88.1%	10.2%		

Diagnostics revenues decreased in fiscal 2017 compared to fiscal 2016 primarily due to the decrease in product revenues discussed above. The primary driver of the reduction in revenues was the divestiture of the blood screening business in the second quarter of fiscal 2017.

Operating income for this business segment increased in fiscal 2017 compared to fiscal 2016 primarily due to the gain on the disposition of the blood screening business of \$899.7 million partially offset by a decrease in gross profit primarily due to the blood screening divestiture. Excluding the impact of the gain, operating income increased \$28.7 million in the current year compared to the prior year. Gross margin was 47.8% in fiscal 2017 compared with 49.5% in fiscal 2016. The decrease in gross margin was primarily due to lower revenues as a result of the disposition of the higher-margin blood screening business and the lower margins generated under the new supply and collaboration arrangement, the slight decline in Aptima average selling prices, a shift in sales to lower margin international molecular diagnostic products and the negative impact of the strengthening U.S. dollar on our sales denominated in foreign currencies, partially offset by the increase in Aptima assay volumes and lower amortization expense primarily attributable to the divestiture of the blood screening business.

Exclusive of the impact of the gain on the sale of the blood screening business, operating expenses decreased in fiscal 2017 compared to fiscal 2016 primarily due to lower amortization expense primarily as a result of the blood screening divestiture, lower research and development expenses related to a reduction in project spending as well as the divestiture of blood screening, and the refund received related to amended medical device excise tax filings, \$5.5 million of which related to Diagnostics. In addition, fiscal 2017 expenses were lower primarily due to a reduction of legal fees and charges as fiscal 2016 included a \$6.0 million settlement of a legal fee dispute, and fiscal 2016 included \$2.8 million for the medical device excise tax. These decreases in operating expenses were partially offset by an increase in non-income taxes of \$3.7 million recorded in fiscal 2017 and increased compensation from higher sales and marketing headcount.

Breast Health.

	Years Ended			
	September 30, 2017	September 24, 2016	Change	
	Amount	Amount	Amount	%
Total Revenues	\$ 1,138.3	\$ 1,112.8	\$ 25.5	2.3%
Operating Income	\$ 373.4	\$ 350.5	\$ 22.9	6.5%
Operating Income as a % of Segment Revenue	32.8%	31.5%		

Breast Health revenues increased in fiscal 2017 compared to fiscal 2016 primarily due to an increase of \$37.2 million in service revenue, partially offset by a \$11.7 million decrease in product revenue discussed above.

Operating income for this business segment increased in fiscal 2017 compared to fiscal 2016 primarily due to an increase in gross profit from higher revenue partially offset by an increase in operating expenses in the current year. The overall gross margin increased to 60.9% in the current year compared to 59.9% in the prior year primarily due to the increase in service revenue and software product sales, which have higher gross margins than capital equipment sales. The gross margin increases were partially offset by the volume impact of the decreases in 3D Dimensions systems and related component revenue in the US.

Operating expenses increased in fiscal 2017 compared to fiscal 2016. We experienced an increase in non-income tax charges of \$5.8 million recorded in fiscal 2017, an increase in compensation and commissions from increased head count, higher marketing expenditures internationally, increased legal fees, and operating expenses from Medicor. These increases were partially offset by lower marketing initiatives and program spend on Genius 3D, lower meeting and related expenses, lower

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restructuring costs, and a \$4.5 million refund received in the third quarter of fiscal 2017 relating to this business segment from amending the Company's medical device excise tax filings. In addition, the prior year period included medical device excise taxes of \$2.5 million.

Medical Aesthetics.

	Years Ended			
	September 30, 2017	September 24, 2016	Change	
	Amount	Amount	Amount	%
Total Revenues	\$ 207.5	\$ —	\$ 207.5	100.0%
Operating Loss	\$ (115.9)	\$ —	\$ (115.9)	100.0%
Operating Loss as a % of Segment Revenue	(55.9)%	—%		

Medical Aesthetics revenues increased in fiscal 2017 related to the acquisition of Cynosure on March 22, 2017.

The operating loss of \$115.9 million in the fiscal 2017 was primarily due to acquisition transaction fees of \$18.8 million, amortization of intangible assets of \$43.7 million, the step-up to fair value of inventory sold of \$39.3 million, and restructuring, retention and integration expenses, including legal and professional consulting fees and accelerated depreciation expense, aggregating \$25.7 million partially offset by gross profit.

GYN Surgical.

	Years Ended			
	September 30, 2017	September 24, 2016	Change	
	Amount	Amount	Amount	%
Total Revenues	\$ 427.1	\$ 393.1	\$ 34.0	8.6 %
Operating Income	\$ 65.0	\$ 69.1	\$ (4.1)	(5.9)%
Operating Income as a % of Segment Revenue	15.2%	17.6%		

GYN Surgical revenues increased in fiscal 2017 compared to fiscal 2016 due to the increase in product revenues discussed above.

Operating income for this business segment decreased in fiscal 2017 compared to fiscal 2016 primarily due to increase in operating expense related to charges recorded for non-income tax matters of \$26.1 million. Excluding the impact of the non-income tax matter, operating income in fiscal 2017 compared to fiscal 2016 would have increased due to an increase in gross profit as a result of higher revenues. Gross margin increased to 63.6% in fiscal 2017 period from 62.0% in fiscal 2016 primarily due to higher revenues with improved manufacturing efficiencies, a decrease in amortization expense, and the inclusion in the prior year period of a write-off of inventory that would not be utilized.

Operating expenses increased in fiscal 2017 primarily due to charges recorded for non-income tax matters of \$26.1 million, increases in compensation from additional headcount, higher commissions due to increased sales, increased spend on marketing initiatives and increased product development spend, partially offset by lower amortization expenses.

Skeletal Health.

	Years Ended			
	September 30, 2017		September 24, 2016	
	Amount	Amount	Amount	%
Total Revenues	\$ 88.8	\$ 89.9	\$ (1.1)	(1.2)%
Operating (Loss) Income	\$ (6.5)	\$ 3.0	\$ (9.5)	(316.7)%
Operating (Loss) Income as a % of Segment Revenue	(7.3)%	3.3%		

Skeletal Health revenues decreased in fiscal 2017 compared to fiscal 2016 primarily due to the decrease in product revenues discussed above.

Operating income decreased in fiscal 2017 compared to the prior year primarily due to a decrease in gross profit from lower revenues and increased obsolescence charges. Gross margin rate was 42.2% in fiscal 2017 compared to 46.3% in fiscal 2016. This business also had higher operating expenses in fiscal 2017 primarily related to the facility closure costs incurred for the Bedford facility of \$4.8 million.

LIQUIDITY AND CAPITAL RESOURCES

At September 29, 2018, we had a positive \$320.6 million of working capital, and our cash and cash equivalents totaled \$666.7 million. Our cash and cash equivalents balance increased by \$126.1 million during fiscal 2018 principally due to cash generated through operating activities, partially offset by acquisition payments for Faxitron and Emsor, capital expenditures, payments to extinguish our Convertible Notes and repurchase of our common stock.

In fiscal 2018, our operating activities provided us with \$732.9 million of cash. We incurred a net loss of \$111.3 million which was offset by a non-cash goodwill and intangible asset impairment charges aggregating \$731.7 million, non-cash charges for depreciation and amortization aggregating \$480.3 million, stock-based compensation expense of \$65.0 million, debt extinguishment losses of \$45.9 million, and non-cash interest expense of \$15.0 million related to our outstanding debt. These adjustments to net loss were partially offset by a decrease in net deferred tax liabilities of \$477.3 million primarily from the change in tax rate due to tax reform, and to a lesser extent, the amortization of intangible assets. Cash provided by operations included a net cash outflow of \$26.2 million from changes in our operating assets and liabilities. Changes in our operating assets and liabilities were driven primarily by an increase in inventory of \$50.6 million primarily to meet anticipated demand, launch newer products, and build up safety stock, and an increase in accounts receivable of \$38.2 million primarily due to a higher portion of revenues occurring in the last month of fiscal 2018 compared to fiscal 2017 resulting in an increase in days sales outstanding. Partially offsetting these cash outflows was an increase in accrued expenses of \$53.8 million related to increase in accrued legal expenses from the Smith & Nephew litigation settlement, higher accrued commissions and accrued interest due to the timing of payments, and an increase in accounts payable of \$23.9 million primarily due to the timing of payments.

In fiscal 2018, our investing activities used cash of \$195.2 million primarily related to \$105.6 million for capital expenditures, which consisted of the placement of equipment under customer usage agreements and purchases of manufacturing equipment and computer hardware, and \$76.5 million in net cash used to acquire Faxitron and Emsor.

In fiscal 2018, our financing activities used cash of \$404.8 million, primarily for payments of \$1.35 billion to pay off the Term Loan outstanding under the Prior Credit Agreement, \$1.0 billion to pay off the 2022 Senior Notes, \$546.2 million to repurchase and cash settle the conversion of our 2042 and 2043 Convertible Notes, \$45.0 million of net repayments on amounts borrowed under our revolving credit line, \$275.8 million for repurchases of our common stock, \$23.5 million of payments for debt issuance costs related to our multiple refinancings during the year, and payments of \$16.7 million for employee-related taxes withheld for the net share settlement of vested restricted stock units. Partially offsetting these uses of cash were proceeds of \$1.5 billion from the Amended and Restated Credit Agreement, proceeds of \$1.35 billion from issuance of the 2025 and 2028 Senior Notes, net borrowings of \$25.0 million from the accounts receivable securitization and \$33.2 million from our equity plans, primarily from the exercise of stock options.

Debt

We had total recorded debt outstanding of \$3.3 billion at September 29, 2018, which was comprised of amounts outstanding under our Amended and Restated Credit Agreement and Amended Revolver of \$ 1.75 billion (principal \$1.76 billion), our 2025 Senior Notes of \$935.2 million (principal of \$950.0 million), our 2028 Senior Notes of \$393.1 million (principal of \$400.0 million), and amounts outstanding under the accounts receivable securitization program of \$225.0 million.

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Amended and Restated Credit Agreement

On October 3, 2017, we entered into an Amended and Restated Credit and Guaranty Agreement (the "Amended and Restated Credit Agreement") with Bank of America, N.A. in its capacity as Administrative Agent, Swing Line Lender and L/C Issuer, and certain other lenders from time to time party thereto. The Amended and Restated Credit Agreement amended and restated the Company's prior credit and guaranty agreement, originally dated as of May 29, 2015 (the "Prior Credit Agreement"). Borrowings under the Amended and Restated Credit Agreement are secured by first-priority liens on, and a first-priority security interest in, substantially all of the assets of the Company's U.S. subsidiaries, with certain exceptions. For example, borrowings under the Amended and Restated Credit Agreement are not secured by those accounts receivable that are transferred to the special purpose entity under the Company's Accounts Receivable Securitization program.

As of September 29, 2018, the credit facilities under the Amended and Restated Credit Agreement consisted of:

- A \$1.5 billion secured term loan to the Company ("Amended Term Loan") with a maturity date of October 3, 2022, of which \$1.45 billion was outstanding at September 29, 2018; and
- A secured revolving credit facility (the "Amended Revolver") under which we may borrow up to \$1.5 billion, subject to certain sublimits, with a maturity date of October 3, 2022, of which \$300.0 million was outstanding at September 29, 2018. Subsequent to September 29, 2018, the Company borrowed an additional \$50.0 million.

As of September 29, 2018, the interest rate under the Amended Term Loan and Amended Revolver was 3.74% on the outstanding amounts, which was reflective of the Eurocurrency Rate (i.e., *Libor*) plus the applicable margin of 1.50% per annum as set forth in the Amended and Restated Credit Agreement. The applicable margin was subject to specified changes depending on the total net leverage ratio as defined in the Amended and Restated Credit Agreement.

We are required to make scheduled principal payments under the Amended Term Loan in increasing amounts ranging from \$9.375 million per three-month period commencing with the three-month period ending on December 29, 2017 to \$37.5 million per three-month period commencing with the three-month period ending on December 23, 2021. The remaining balance of the Amended Term Loan was due at maturity. Any amounts outstanding under the Amended Revolver are due at maturity. In addition, subject to the terms and conditions set forth in the Amended and Restated Credit Agreement, in certain circumstances we are required to make certain mandatory prepayments from the net proceeds of specified types of asset sales (subject to certain reinvestment rights), debt issuances and insurance recoveries (subject to certain reinvestment rights) ("Mandatory Prepayments"). These Mandatory Prepayments are required to be applied by us, first, to the Amended Term Loan, second, to any outstanding amount under any Swing Line Loans (as defined in the Amended and Restated Credit Agreement), third, to the Amended Revolver, fourth to prepay any outstanding reimbursement obligations with respect to Letters of Credit (as defined in the Amended and Restated Credit Agreement) and fifth, to cash collateralize any Letters of Credit. Subject to certain limitations, we may voluntarily prepay any of the Amended and Restated Credit Facilities without premium or penalty.

The Amended and Restated Credit Agreement contains affirmative and negative covenants customarily applicable to senior secured credit facilities, including covenants restricting our ability, subject to negotiated exceptions, to incur additional indebtedness and additional liens on our assets, engage in mergers or acquisitions or dispose of assets, enter into sale-leaseback transactions, pay dividends or make other distributions, voluntarily prepay other indebtedness, enter into transactions with affiliated persons, make investments, and change the nature of our businesses. In addition, the Amended and Restated Credit Agreement required us to maintain certain financial ratios. The Amended and Restated Credit Agreement also contained customary representations and warranties and events of default, including payment defaults, breach of representations and warranties, covenant defaults, cross defaults and an event of default upon a change of control of the company.

The Amended and Restated Credit Agreement contained two financial covenants (a total net leverage ratio and an interest coverage ratio) measured as of the last day of each fiscal quarter and an excess cash flow prepayment requirement measured as of the end of each fiscal year. As of September 29, 2018, we were in compliance with these covenants, and no Mandatory Prepayments were required as of September 29, 2018.

2025 Senior Notes

On October 10, 2017, we completed a private placement of \$350 million aggregate principal amount of our 4.375% Senior Notes due 2025 (the "2025 Senior Notes") at an offering price of 100% of the aggregate principal amount of the 2025 Senior Notes. On January 19, 2018, the Company completed a private placement and allocated an additional \$600 million in aggregate principal amount to its 2025 Senior Notes pursuant to a supplement to the indenture governing the Company's existing 2025 Senior Notes at an offering price of 100% of the aggregate principal amount. As a result, the total aggregate principal balance of 2025 Senior Notes is \$950 million. The 2025 Senior Notes are our general senior unsecured obligations and are guaranteed on a senior unsecured basis by certain of our domestic subsidiaries. The 2025 Senior Notes mature on

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October 15, 2025 and bear interest at the rate of 4.375% per year, payable semi-annually on April 15 and October 15 of each year, commencing on April 15, 2018.

We may redeem the 2025 Senior Notes at any time prior to October 15, 2020 at a price equal to 100% of the aggregate principal amount so redeemed, plus accrued and unpaid interest, if any, to the redemption date and a make-whole premium set forth in the indenture. We may also redeem up to 35% of the aggregate principal amount of the 2025 Senior Notes with the net cash proceeds of certain equity offerings at any time and from time to time before October 15, 2020, at a redemption price equal to 104.375% of the aggregate principal amount so redeemed, plus accrued and unpaid interest, if any, to the redemption date. We also have the option to redeem the 2025 Senior Notes on or after: October 15, 2020 through October 14, 2021 at 102.188% of par; October 15, 2021 through October 14, 2022 at 101.094% of par; and October 15, 2022 and thereafter at 100% of par. In addition, if we undergo a change of control coupled with a decline in ratings, as provided in the indenture, we will be required to make an offer to purchase each holder's 2025 Senior Notes at a price equal to 101% of their principal amount, plus accrued and unpaid interest, if any, to the repurchase date.

2028 Senior Notes

On January 19, 2018, we completed a private placement of \$1.0 billion aggregate principal amount of senior notes and allocated \$400 million aggregate principal amounts to our 4.625% Senior Notes due 2028 (the "2028 Senior Notes") at an offering price of 100% of the aggregate principal amount of the 2028 Senior Notes. The remaining proceeds were allocated to the purchase of the 2025 Senior Notes as described above. The 2028 Senior Notes are our general senior unsecured obligations and are guaranteed on a senior unsecured basis by certain of our domestic subsidiaries. The 2028 Senior Notes mature on February 1, 2028 and bear interest at the rate of 4.625% per year, payable semi-annually on February 1 and August 1 of each year, commencing on August 1, 2018.

We may redeem the 2028 Senior Notes at any time prior to February 1, 2023 at a price equal to 100% of the aggregate principal amount so redeemed, plus accrued and unpaid interest, if any, to the redemption date and a make-whole premium set forth in the indenture. We may also redeem up to 35% of the aggregate principal amount of the 2028 Senior Notes with the net cash proceeds of certain equity offerings at any time and from time to time before February 1, 2021, at a redemption price equal to 104.625% of the aggregate principal amount so redeemed, plus accrued and unpaid interest, if any, to the redemption date. We also have the option to redeem the 2028 Senior Notes on or after: February 1, 2023 through February 1, 2024 at 102.312% of par; February 1, 2024 through February 1, 2025 at 101.541% of par; February 1, 2025 through February 1, 2026 at 100.770% of par; and February 1, 2026 and thereafter at 100% of par. In addition, if we undergo a change of control coupled with a decline in ratings, as provided in the indenture, we will be required to make an offer to purchase each holder's 2028 Senior Notes at a price equal to 101% of their principal amount, plus accrued and unpaid interest, if any, to the repurchase date.

Accounts Receivable Securitization Program

On April 25, 2016, we entered into a one-year \$200.0 million accounts receivable securitization program (the "Securitization Program") with several of our wholly owned subsidiaries and certain financial institutions. Under the terms of the Securitization Program, we and certain of our wholly-owned subsidiaries sell our customer receivables to a bankruptcy remote special purpose entity, which is wholly-owned by us. In addition, we also contributed a portion of our customer receivables to the special purpose entity in connection with its establishment. We retain servicing responsibility. The special purpose entity, as borrower, and we, as servicer, have entered into a Credit and Security Agreement with several lenders pursuant to which the special purpose entity may borrow from the lenders up to the maximum borrowing amount allowed, with the loans secured by the receivables. The amount that the special purpose entity may borrow at a given point in time is determined based on the amount of qualifying receivables that are present in the special purpose entity at such point in time. The assets of the special purpose entity secure the amounts borrowed and cannot be used to pay our other debts or liabilities.

We extended the program for an additional year in April 2017 and again in April 2018. The maximum borrowing amount was increased from \$200.0 million to \$225.0 million. The entire amount available of \$225.0 million is outstanding at September 29, 2018. Borrowings outstanding under the Securitization Program bear interest at LIBOR plus the applicable margin of 0.7% and are included as a component of current liabilities in our consolidated balance sheet, while the accounts receivable securing these obligations remain as a component of net receivables in our consolidated balance sheet. As of September 29, 2018, the interest rate under the Securitization Program was 2.24% on the outstanding amounts. We and the special purpose entity are operated and maintained as separate legal entities. The assets of the special purpose entity secure the amounts borrowed and cannot be used to pay our other debts or liabilities. The special purpose entity was not a guarantor under our Credit Agreement and is not a guarantor under our Amended and Restated Credit Agreement or of our 2022 and 2025 Senior Notes.

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The Credit and Security Agreement contains customary representations and warranties and events of default, including payment defaults, breach of representations and warranties, covenant defaults, and an event of default upon a change of control. In addition, it contains financial covenants consistent with that of the Credit Agreement. As of September 29, 2018, the Company was in compliance with the Credit and Security Agreement covenants.

Subsequent Events

Focal Therapeutics

On October 1, 2018, we completed the acquisition of Focal Therapeutics for an initial purchase price of approximately \$125.0 million and paid \$108.0 million in initial consideration, which is less certain holdbacks. The final purchase price is subject to a working capital adjustment.

Stock Repurchase Program

On June 21, 2016, the Board of Directors authorized the repurchase of up to \$500.0 million of our outstanding common stock over the next five years. Under this authorization, we repurchased 10.3 million shares for total consideration of \$387.4 million.

On June 13, 2018, the Board of Directors authorized another share repurchase plan to repurchase up to \$500.0 million of our outstanding common stock. This share repurchase plan, which replaced the prior plan, was effective August 1, 2018 and expires on June 13, 2023. Under this authorization, during the fourth quarter of 2018 we repurchased 2.3 million shares of our common stock for a total consideration of \$88.5 million. As of September 29, 2018, \$411.5 million was available under this authorization. Subsequent to September 29, 2018, we repurchased 1.5 million shares of its common stock for total consideration of \$60.6 million.

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Contractual Obligations

The following table summarizes our contractual obligations and commitments as of September 29, 2018 :

Contractual Obligations	Payments Due by Period				
	Less than 1 year	1-3 years	3-5 years	More than 5 years	Total
Long-Term Debt Obligations (1)	\$ 600.0	\$ 187.5	\$ 1,200.0	\$ 1,350.0	\$ 3,337.5
Interest on Long-Term Debt Obligations	129.2	214.6	163.1	165.3	672.2
Operating Leases	21.0	30.8	17.9	17.9	87.6
Capital Leases (2)	2.8	5.6	6.0	14.4	28.8
Finance Leases (3)	2.9	6.0	6.3	10.6	25.8
Purchase Obligations (4)	341.7	4.0	—	—	345.7
Pension Obligations (5)	0.4	0.8	0.8	7.9	9.9
Total Contractual Obligations	\$ 1,098.0	\$ 449.3	\$ 1,394.1	\$ 1,566.1	\$ 4,507.5

- (1) Included within long-term debt obligations are the Amended Term Loan, Amended Revolver, borrowings under the Securitization Program, and the 2025 and 2028 Senior Notes.
- (2) As a result of the Cynosure acquisition, we have capital leases for the buildings at its primary U.S. operating facility and certain equipment and vehicles.
- (3) The financing leases represent two leases for two separate manufacturing facilities, which were required to be recorded on our balance sheet under U.S. GAAP. See Note 11 to our consolidated financial statements contained in Item 15 of this Annual Report.
- (4) Purchase obligations primarily represent minimum purchase commitments for inventory and instruments and, to a lesser extent, other operating expense commitments.
- (5) Pension obligations do not include our obligation under our deferred compensation plans of \$49.8 million at September 29, 2018, which is recorded as a current liability. Deferred compensation plan benefits are generally paid out at retirement or termination of employment.

The above table does not reflect our long-term liabilities associated with reserves for uncertain tax positions recorded under FIN 48 (codified primarily in ASC 740, *Income Taxes*) totaling \$89.5 million. Due to the complexity associated with tax uncertainties, we cannot reasonably make a reliable estimate of the period in which we expect to settle these non-current liabilities. See Note 7 to our consolidated financial statements contained in Item 15 of this Annual Report for more information on our unrecognized tax benefits.

Future Liquidity Considerations

We expect to continue to review and evaluate potential strategic transactions and alliances that we believe will complement our current or future business. Subject to the Risk Factors set forth in Part I, Item 1A of this Annual Report and the general disclaimers set forth in our Special Note Regarding Forward-Looking Statements at the outset of this Annual Report, we believe that our cash and cash equivalents, cash flows from operations, the cash available under our Amended Revolver and our Securitization Program will provide us with sufficient funds in order to fund our expected normal operations and debt payments over the next twelve months. Our longer-term liquidity is contingent upon future operating performance. We may also require additional capital in the future to fund capital expenditures, repayment of debt, acquisitions, strategic transactions or other investments. As described above, we have significant indebtedness outstanding under our Amended and Restated Credit Agreement, 2025 Senior Notes, 2028 Senior Notes and the Securitization Program. These capital requirements could be substantial. Our operating performance may also be affected by matters discussed under the above-referenced Risk Factors set forth elsewhere in this report. These risks, trends and uncertainties may also adversely affect our long-term liquidity.

Legal Contingencies

We are currently involved in certain legal proceedings and claims. In connection with these legal proceedings and claims, management periodically reviews estimates of potential costs to be incurred by us in connection with the adjudication or settlement, if any, of these proceedings. These estimates are based on an analysis of potential litigation outcomes and settlement strategies. In accordance with ASC 450, *Contingencies*, loss contingencies are accrued if, in the opinion of management, an adverse outcome is probable and such outcome can be reasonably estimated. It is possible that future results for any particular

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quarter or annual period may be materially affected by changes in our assumptions or the effectiveness of our strategies relating to these proceedings.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

The discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles. The preparation of these consolidated financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an on-going basis, we evaluate our estimates, including those related to revenue recognition for multiple element arrangements, allowance for doubtful accounts, reserves for excess and obsolete inventories, valuations, purchase price allocations and contingent consideration related to business combinations, expected future cash flows including growth rates, discount rates, terminal values and other assumptions used to evaluate the recoverability of long-lived assets and goodwill, estimated fair values of intangible assets and goodwill, amortization methods and periods, warranty reserves, certain accrued expenses, restructuring and other related charges, stock-based compensation, contingent liabilities, tax reserves and recoverability of our net deferred tax assets and related valuation allowances. We base our estimates on historical experience and various other assumptions that are believed to be reasonable under the circumstances. Actual results could differ from these estimates if past experience or other assumptions do not turn out to be substantially accurate. Any differences may have a material impact on our financial condition and results of operations.

The following is a discussion of what we believe to be the more significant critical accounting policies and estimates used in the preparation of our consolidated financial statements.

Inventory

Our inventories include material, labor and overhead, and are stated at the lower of cost (first-in, first-out) or market. As a developer and manufacturer of high technology medical equipment and diagnostic test kits, we may be exposed to a number of economic and industry factors that could result in portions of our inventory becoming either obsolete or in excess of anticipated usage. Our policy is to establish inventory reserves when conditions exist that suggest that our inventory may be in excess of anticipated demand or is obsolete based upon our assumptions about future demand for our products and market conditions. Although considerable effort is made to ensure the accuracy of our forecasts of future product demand, any significant unanticipated changes in demand or expected usage could have a significant negative impact on the value of our inventory and our operating results.

Business Combinations

We record tangible and intangible assets acquired and liabilities assumed in business combinations under the purchase method of accounting. Amounts paid for each acquisition are allocated to the assets acquired and liabilities assumed based on their fair values at the dates of acquisition. Contingent consideration, which is not deemed to be linked to continuing employment, is recorded at fair value as measured on the date of acquisition. The value recorded is based on estimates of future financial projections under various potential scenarios, which are generally probability weighted as to the outcome of each scenario. These cash flow projections are discounted with a risk adjusted rate. Quarterly until such contingent amounts are earned, the fair value of the liability is reassessed at each reporting period and adjusted as a component of operating expenses based on changes to the underlying assumptions. The estimates used to determine the fair value of the contingent consideration liability are subject to significant judgment and actual results are likely to differ from the amounts originally recorded.

The fair value of identifiable intangible assets is based on detailed valuations that use information and assumptions provided by management, which consider management's best estimate of inputs and assumptions that a market participant would use. We allocate any excess purchase price over the fair value of the net tangible and intangible assets acquired and liabilities assumed to goodwill.

We generally use the income approach in which cash flow projections on an after-tax basis are discounted using a risk adjusted rate to determine the estimated fair value of certain identifiable intangible assets including developed technology, in-process research and development projects, customer relationships, and trade names.

With respect to property, plant and equipment, we estimate the fair value of these assets using a combination of the cost and market approaches, depending on the component. Generally, we apply the cost or income approach as the primary methods in estimating the fair value of land and buildings as the market approach is less reliable based on potential significant differences between the property being valued and the potentially comparable sales of similar properties.

Goodwill

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We test goodwill at the reporting unit level for impairment on an annual basis and between annual tests if events and circumstances indicate it is more likely than not that the fair value of a reporting unit is less than its carrying value. Events that could indicate impairment and trigger an interim impairment assessment include, but are not limited to current economic and market conditions, including a decline in market capitalization, a significant adverse change in legal factors, business climate, operational performance of the business or key personnel, and an adverse action or assessment by a regulator. Our annual impairment test date is the first day of our fiscal fourth quarter.

In performing the test, we utilize the two-step approach prescribed under ASC 350. The first step requires a comparison of the reporting unit's carrying value to its fair value. We consider a number of factors to determine the fair value of a reporting unit, including an independent valuation to conduct this test. The valuation is based upon expected future discounted operating cash flows of the reporting unit as well as analysis of recent sales and ratio comparisons of similar companies. We base the discount rate on the weighted average cost of capital, or WACC, of market participants. If the carrying value of a reporting unit exceeds its estimated fair value, we apply the single step approach under ASU 2017-04. As a result of this simplified approach the goodwill impairment is calculated as the amount by which the carrying value of the reporting unit exceeds its fair value to the extent of the goodwill balance. We adopted this ASU in fiscal 2018.

We conducted our fiscal 2018 annual impairment test on the first day of the fourth quarter. We utilized discounted cash flows, or DCF, and market approaches to estimate the fair value of our reporting units as of July 1, 2018 and ultimately used the fair value determined by the DCF in making our impairment test conclusions. We believe we used reasonable estimates and assumptions about future revenue, cost projections, cash flows, market multiples and discount rates as of the measurement date. As a result of completing Step 1, all of our reporting units had fair values exceeding their carrying values, and as such, Step 2 of the impairment test was not required for those reporting units. For illustrative purposes, had the fair value of each of our reporting units been lower by 10%, all of our reporting units would still have passed Step 1 of the goodwill impairment test.

At September 29, 2018, we believe that our reporting units, with goodwill aggregating \$2.50 billion, were not at risk of failing Step 1 of the goodwill impairment test based on the current forecasts.

Since the fair value of our reporting units was determined by use of the DCF, and the key assumptions that drive the fair value in this model are the WACC, terminal values, growth rates, and the amount and timing of expected future cash flows, significant judgment is applied in determining fair value. If the current economic environment were to deteriorate, this would likely result in a higher WACC because market participants would require a higher rate of return. In the DCF as the WACC increases, the fair value decreases. The other significant factor in the DCF is our projected financial information (i.e., amount and timing of expected future cash flows and growth rates) and if these assumptions were to be adversely impacted, this could result in a reduction of the fair value of a reporting unit.

Revenue Recognition

We generate revenue from the sale of our products, primarily medical imaging systems, aesthetic treatment systems and diagnostic and surgical disposable products, and related services, which are primarily support and maintenance services on its medical imaging systems.

We recognize product revenue upon shipment provided that there is persuasive evidence of an arrangement, there are no uncertainties regarding acceptance, the sales price is fixed or determinable, and collection of the resulting receivable is reasonably assured. Generally, our product arrangements for capital equipment sales, primarily in its Breast Health, Medical Aesthetics and Skeletal Health reporting segments, are multiple-element arrangements, including services, such as installation, training and support and maintenance, and multiple products. Based on the terms and conditions of the product arrangements, we believe that these services and undelivered products can be accounted for separately from the delivered product element as the delivered products have value to our customers on a stand-alone basis. Accordingly, revenue for services not yet performed at the time of product delivery are deferred and recognized as such services are performed. The relative selling price of any undelivered products is also deferred at the time of shipment and recognized as revenue when these products are delivered. There is no customer right of return in the Company's sales agreements for its capital equipment.

Service revenues primarily consist of amounts recorded under service and maintenance contracts and repairs not covered under warranty, installation and training, and shipping and handling costs billed to customers. Service and maintenance contract revenues are recognized ratably over the term of the contract. Other service revenues are recognized as the services are performed. Service and other revenue also includes royalties which are recognized in the period the payments are due to the Company.

For revenue arrangements with multiple deliverables, we record revenue as separate units of accounting if the delivered items have value to the customer on a stand-alone basis, and if the arrangement includes a general right of return relative to the delivered items, the delivery or performance of the undelivered items is considered probable and substantially within the

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Company's control. Some of our products have both software and non-software components that function together to deliver the product's essential functionality. We determined that except for our computer-aided detection ("CAD") products and C-View and Intelligent 2D products, the software element in its other products is not within the scope of the software revenue recognition rules, ASC 985-605, *Software—Revenue Recognition*. We determined that given the significance of the software component's functionality to its CAD, C-View and Intelligent 2D components, which are sold by its Breast Health segment, these products are within the scope of the software revenue recognition rules. We evaluated the appropriate revenue recognition treatment of its hardware products, including its Dimensions digital mammography systems, which have both software and non-software components that function together to deliver the products' essential functionality (i.e., it is a tangible product), and determined they are not within the scope of ASC 985-605.

We are required to allocate revenue to its multiple element arrangements based on the relative fair value of each element's selling price. We typically determine the selling price of our products based on our best estimate of selling prices ("ESP") and services based on vendor-specific objective evidence of selling price ("VSOE"). We determine VSOE based on our normal pricing and discounting practices for the specific product or service when sold on a stand-alone basis. In determining VSOE, our policy requires a substantial majority of selling prices for a product or service to be within a reasonably narrow range. We also consider the class of customer, method of distribution, and the geographies into which its products and services are sold when determining VSOE. If VSOE cannot be established, which may occur in instances when a product or service has not been sold separately, stand-alone sales are too infrequent, or product pricing is not within a relatively narrow range, we will generally establish the selling price using ESP to allocate arrangement consideration. The objective of ESP is to determine the price at which we would typically transact a stand-alone sale of the product or service. ESP is determined by considering a number of factors including our pricing policies, internal costs and gross margin objectives, method of distribution, information gathered from experience in customer negotiations, market research and information, recent technological trends, competitive landscape and geographies.

For those arrangements accounted for under the software revenue recognition rules, ASC 985-605 generally requires revenue earned on software arrangements involving multiple elements to be allocated to each element based on their relative VSOE of fair value. If VSOE does not exist for a delivered element, the residual method is applied in which the arrangement consideration is allocated to the undelivered elements based on their VSOE with the remaining consideration recognized as revenue for the delivered elements. For multiple-element software arrangements where VSOE of fair value of Post-Contract Customer Support ("PCS") has been established, we recognize revenue using the residual method at the time all other revenue recognition criteria have been met.

While the majority of our instruments are placed at customer sites, in certain instances we sell instruments to our clinical diagnostics customers and records sales of these instruments upon shipment or delivery, depending on the terms of the arrangement.

Within our Diagnostics business, and to a lesser extent, its GYN Surgical business, we provide our instrumentation (for example, the ThinPrep Processor, ThinPrep Imaging System, and the Panther and Tigris systems) and certain other hardware to customers without requiring them to purchase the equipment or enter into a lease. We install the instrumentation or equipment at the customer's site and recover the cost of providing the instrumentation or equipment in the amount we charge for its diagnostic tests, assays and other disposables. Customers enter into a customer usage agreement and typically commit to purchasing minimum quantities of disposable products at a stated price over a defined contract term, which is typically between three and five years. Revenue is recognized over the term of the customer usage agreement as tests, assays and other disposable products are shipped or delivered, depending on the customer's arrangement.

Income Taxes

We use the asset and liability method for accounting for income taxes in accordance with ASC 740, *Income Taxes*. Under this method, we recognize deferred income taxes for the future tax consequences of differences between the tax and financial accounting bases of assets and liabilities at each reporting period. We measure deferred tax assets and liabilities using enacted tax rates and laws applicable to the period in which we expect the differences to affect taxable income. We establish a valuation allowance when necessary to reduce deferred tax assets to the amounts expected to be realized.

We have recognized \$485.3 million in net deferred tax liabilities at September 29, 2018 and \$964.5 million at September 30, 2017. The significant reduction was primarily due to implementing the Tax Cuts and Jobs Act (the "Act"), which reduced the U.S. federal corporate tax rate to 21% from 35%. We have recorded provisional amounts as of September 29, 2018 representing our best estimate based on interpretations of the Act but we are continuing to accumulate data to finalize the underlying calculations, or in certain cases, the U.S. Treasury is expected to issue further guidance on the application of certain provisions of the Act. The liabilities primarily relate to deferred taxes associated with our acquisitions and debt. The tax assets relate primarily to net operating loss carryforwards, accruals and reserves, stock-based compensation, and research credits. We record a valuation allowance to reduce our deferred tax assets to the amount that is more likely than not to be realized. While

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we have considered future taxable income and the character of such income in assessing the need for the valuation allowance, in the event we determine that we could realize our deferred tax assets in the future in excess of the net recorded amount, an adjustment to the deferred tax assets would increase income in the period such determination is made. Likewise, should we determine that we would not be able to realize all or part of our net deferred tax assets in the future, an adjustment to the deferred tax assets would be charged to income in the period such determination is made.

At September 29, 2018, we had \$89.5 million in gross unrecognized tax benefits excluding interest, of which \$79.0 million, if recognized, would reduce our effective tax rate. At September 30, 2017, we had \$90.3 million in gross unrecognized tax benefits excluding interest, of which \$70.3 million, if recognized, would have reduced the Company's effective tax rate. The gross unrecognized tax benefits decreased by \$0.8 million from fiscal 2017, of which \$10.4 million was the reversal in fiscal 2018 of reserves for uncertain tax positions related to the convertible debt exchange that occurred in fiscal 2013 and \$9.6 million was the net expense recorded to the income tax provision primarily from current year tax positions partially offset by audit settlements and expiring statutes of limitations. In the next twelve months it is reasonably possible that the Company will reduce its gross unrecognized tax benefits by up to \$4.8 million due to expiring statutes of limitations.

In the ordinary course of business, there are many transactions and calculations where the ultimate tax outcome is uncertain. Judgment is required in determining our worldwide income tax provision. In our opinion, we have made adequate provisions for income taxes for all years subject to audit. While we consider our estimates reasonable, no assurance can be given that the final tax outcome will not be different than amounts reflected in our historical income tax provisions and accruals. If our assumptions are incorrect, the differences could have a material impact on our income tax provision and operating results in the period in which such determination is made.

Recent Accounting Pronouncements

See Note 2 to our consolidated financial statements contained in Item 15 of this Annual Report

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Financial Instruments, Other Financial Instruments, and Derivative Commodity Instruments. Financial instruments consist of cash and cash equivalents, accounts receivable, cost-method equity investments, forward foreign exchange contracts, interest rate cap agreements, insurance contracts and accounts payable and debt obligations. Except for our outstanding 2025 and 2028 Senior Notes, the fair value of these financial instruments approximate their carrying amount. The fair value of our 2025 and 2028 Senior Notes was approximately \$909.6 million and \$377.0 million, respectively. Amounts outstanding under our Amended Credit Agreement and Securitization Program of \$1.76 billion and \$225.0 million aggregate principal, respectively, as of September 29, 2018 are subject to variable rates of interest based on current market rates, and as such, we believe the carrying amount of these obligations approximates fair value.

Primary Market Risk Exposures. Our primary market risk exposure is in the areas of interest rate risk and foreign currency exchange rate risk. We incur interest expense on borrowings outstanding under our 2025 and 2028 Senior Notes and Amended and Restated Credit Agreement, as well as under our accounts receivable securitization program. The 2025 and 2028 Senior Notes have fixed interest rates. Borrowings under our Amended and Restated Credit Agreement currently bear interest at the Eurocurrency Rate (i.e., Libor) plus the applicable margin of 1.50% per annum. Borrowings under our accounts receivable securitization program currently bear interest at Libor plus the applicable margin of 0.7%.

As of September 29, 2018, there was \$1.76 billion of aggregate principal outstanding under the Credit Agreement, including the Revolver, and \$225.0 million aggregate principal outstanding under the securitization program. Since these debt obligations are variable rate instruments, our interest expense associated with these instruments is subject to change. A 10% adverse movement (increase in LIBOR rate) would increase annual interest expense by approximately \$3.3 million. We entered into multiple interest rate cap agreements to help mitigate the interest rate volatility associated with the variable rate interest on the amounts outstanding. The critical terms of the interest rate caps were designed to mirror the terms of our LIBOR-based borrowings under the Amended and Restated Credit Agreement, and therefore the interest rate caps are highly effective at offsetting the cash flows being hedged. We designated these derivatives as cash flow hedges of the variability of the Libor-based interest payments on \$1.0 billion of principal. The contracts expire on December 28, 2018 and December 27, 2019, respectively.

The return from cash and cash equivalents will vary as short-term interest rates change. A hypothetical 10% increase or decrease in interest rates, however, would not have a material adverse effect on our financial condition.

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Foreign Currency Exchange Risk. Our international business is subject to risks, including, but not limited to: unique economic conditions, changes in political climate, differing tax structures, other regulations and restrictions, and foreign exchange rate volatility. Accordingly, our future results could be materially adversely impacted by changes in these or other factors.

We conduct business worldwide and maintain sales and service offices outside the United States as well as manufacturing facilities in Costa Rica and the United Kingdom. Our international sales are denominated in a number of currencies, primarily the Euro, U.S. dollar, UK Pound and Renminbi. The majority of our foreign subsidiaries functional currency is the local currency, although certain foreign subsidiaries functional currency is the U.S. dollar based on the nature of their operations or functions. Fluctuations in the foreign currency rates could affect our sales, cost of goods and operating margins and could result in exchange losses. In addition, currency devaluations can result in a loss if we hold deposits of that currency. We have executed forward foreign currency contracts to hedge a portion of results denominated in the Euro, UK Pound, Australian dollar, Japanese Yen, Canadian dollar and Chinese Renminbi. These contracts do not qualify for hedge accounting. As a result, we may experience volatility in our Consolidated Statements of Operations due to (i) the impact of unrealized gains and losses reported in other income, net on the mark-to-market of outstanding contracts and (ii) realized gains and losses recognized in other income, net, whereas the offsetting economic gains and losses are reported in the line item of the underlying cash flow, for example, revenue.

We believe that the operating expenses of our international subsidiaries that are incurred in local currencies will not have a material adverse effect on our business, results of operations or financial condition. Our operating results and certain assets and liabilities that are denominated in foreign currencies are affected by changes in the relative strength of the U.S. dollar against those currencies. Our expenses, denominated in foreign currencies, are positively affected when the U.S. dollar strengthens against those currencies and adversely affected when the U.S. dollar weakens. However, we believe that the foreign currency exchange risk is not significant. We believe a hypothetical 10% increase or decrease in foreign currencies that we transact in would not have a material adverse impact on our financial condition or results of operations. During fiscal 2018, 2017 and 2016, we incurred net foreign exchange gains (losses) of \$5.9 million, \$2.3 million, and \$(1.0) million, respectively.

Item 8. Financial Statements and Supplementary Data

Our Consolidated Financial Statements and Supplementary Data are listed under Part IV, Item 15, in this report.

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

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our Securities Exchange Act reports is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, as ours are designed to do, and management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

As of September 29, 2018, we carried out an evaluation, under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934. Based upon that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures are effective.

Report of Management on Internal Control over Financial Reporting

We are responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rule 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934, as amended, as a process designed by, or under the supervision of our principal executive and principal financial officers and effected by our board of directors, management and other personnel 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 and includes those policies and procedures that:

- pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and disposition of our assets;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorization of our management and directors; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

Our internal control system was designed to provide reasonable assurance to our management and board of directors regarding the preparation and fair presentation of published financial statements. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risks 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 assessed the effectiveness of our internal control over financial reporting as of September 29, 2018. In making this assessment, we used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (COSO) in Internal Control-Integrated Framework.

Management has excluded from its assessment of and conclusion on the effectiveness of internal control over financial reporting the internal controls of Emsor S.A. acquired on December 11, 2017 and Faxitron Bioptics, LLC acquired on July 31, 2018, both of which are included in the consolidated financial statements of Hologic, Inc. as of and for the year ended September 29, 2018 aggregating \$143.2 million and \$95.5 million of total assets and net assets, respectively, and \$28.9 million and \$8.7 million of revenues and pre-tax losses, respectively, for the year then ended.

Subject to the foregoing, based on management's assessment, we believe that, as of September 29, 2018, our internal control over financial reporting is effective at a reasonable assurance level based on these criteria.

Ernst & Young LLP, an independent registered public accounting firm, has issued an attestation report on the effectiveness of our internal control over financial reporting. This report in which they expressed an unqualified opinion is included below.

Report of Independent Registered Public Accounting Firm

The Stockholders and Board of Directors of Hologic, Inc.

Opinion on Internal Control over Financial Reporting

We have audited Hologic, Inc.'s internal control over financial reporting as of September 29, 2018, 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, Hologic, Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of September 29, 2018, based on the COSO criteria.

As indicated in the accompanying Report of Management on Internal Control over Financial Reporting, management's assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of Emsor S.A. and Faxitron Bioptics, LLC, which are included in the 2018 consolidated financial statements of the Company and constituted \$143.2 million and \$95.5 million of total and net assets, respectively, as of September 29, 2018 and \$28.9 million and \$8.7 million of revenues and pre-tax losses, respectively, for the year then ended. Our audit of internal control over financial reporting of the Company also did not include an evaluation of the internal control over financial reporting of Emsor S.A. and Faxitron Bioptics, LLC.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the 2018 consolidated financial statements of the Company and our report dated November 20, 2018 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 Report of Management 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

Boston, Massachusetts

November 20, 2018

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Changes in Internal Control over Financial Reporting

During the quarter ended September 29, 2018 , there have been no changes in our internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

None.

PART III**Item 10. Directors, Executive Officers and Corporate Governance**

Pursuant to Section 406 of the Sarbanes-Oxley Act of 2002, we have adopted a Code of Ethics for Senior Financial Officers that applies to our principal executive officer and principal financial officer, principal accounting officer and controller, and other persons performing similar functions. Our Code of Ethics for Senior Financial Officers is publicly available on our website at investors.hologic.com as Appendix A to our Code of Conduct. We intend to satisfy the disclosure requirement under Item 5.05 of Current Report on Form 8-K regarding an amendment to, or waiver from, a provision of this code by posting such information on our website, at the address specified above.

The additional information required by this item is incorporated by reference to our Definitive Proxy Statement for our annual meeting of stockholders to be filed with the Securities and Exchange Commission within 120 days after the close of our fiscal year.

Item 11. Executive Compensation

The information required by this item is incorporated by reference to our Definitive Proxy Statement for our annual meeting of stockholders to be filed with the Securities and Exchange Commission within 120 days after the close of our fiscal year.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

We maintain a number of equity compensation plans for employees, officers, directors and others whose efforts contribute to our success. The table below sets forth certain information as of the end of our fiscal year ended September 29, 2018 regarding the shares of our common stock available for grant or granted under stock option plans and equity incentives that (i) were approved by our stockholders, and (ii) were not approved by our stockholders.

Equity Compensation Plan Information

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted-average exercise price of outstanding options, warrants and rights (b) (2)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders (1)	9,759,104	\$ 32.13	8,619,628
Equity compensation plans not approved by security holders	—	\$ —	—
Total	9,759,104	\$ 32.13	8,619,628

(1) Includes 3,748,248 shares that are issuable upon restricted stock units (RSUs), performance stock units (PSUs) and market stock units (MSUs) vesting. The remaining balance consists of outstanding stock option grants.

(2) The weighted average exercise price does not take into account the shares issuable upon vesting of outstanding RSUs, PSUs and MSUs, which have no exercise price.

The additional information required by this item is incorporated by reference to our Definitive Proxy Statement for our annual meeting of stockholders to be filed with the Securities and Exchange Commission within 120 days after the close of our fiscal year.

Item 13. Certain Relationships and Related Transactions and Director Independence

The information required by this item is incorporated by reference to our Definitive Proxy Statement for our annual meeting of stockholders to be filed with the Securities and Exchange Commission within 120 days after the close of our fiscal year.

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Item 14. Principal Accounting Fees and Services

The information required by this item is incorporated by reference to our Definitive Proxy Statement for our annual meeting of stockholders to be filed with the Securities and Exchange Commission within 120 days after the close of our fiscal year.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a) The following documents are filed as part of this report:

(1) Financial Statements

Report of Independent Registered Public Accounting Firm on Consolidated Financial Statements

Consolidated Statements of Operations for the years ended September 29, 2018 , September 30, 2017 and September 24, 2016

Consolidated Statements of Comprehensive Income (Loss) for the years ended September 29, 2018 , September 30, 2017 and September 24, 2016

Consolidated Balance Sheets as of September 29, 2018 and September 30, 2017

Consolidated Statements of Stockholders' Equity for the years ended September 29, 2018 , September 30, 2017 and September 24, 2016

Consolidated Statements of Cash Flows for the years ended September 29, 2018 , September 30, 2017 and September 24, 2016

Notes to Consolidated Financial Statements

(2) Financial Statement Schedules

All schedules have been omitted because they are not required or because the required information is given in the Consolidated Financial Statements or Notes thereto.

(b) Listing of Exhibits

Exhibit Number	Exhibit Description	Incorporated by Reference	
		Form	Filing Date/ Period End Date
2.1	Asset Purchase Agreement, dated December 14, 2016, by and among Hologic, Inc., Grifols Diagnostic Solutions Inc. and Grifols, S.A.	8-K	12/15/2016
	Agreement and Plan of Merger, dated February 14, 2017, by and among Hologic, Inc., Cynosure, Inc. and Minuteman Merger Sub, Inc.	8-K	02/14/2017
2.2			
3.1	Certificate of Incorporation of Hologic, with amendments	10-K	09/30/2017
3.2	Sixth Amended and Restated Bylaws of Hologic, Inc.	8-K	03/09/2017
4.1	Specimen Certificate for Shares of Hologic's Common Stock (filed in paper format)	8-A	01/31/1990
4.2	Description of Capital Stock (Contained in Hologic's Certificate of Incorporation, as amended, filed as Exhibit 3.1 hereto).	10-K	09/30/2017
4.3	Indenture, dated October 10, 2017, by and among Hologic, the Guarantors party thereto and Wells Fargo Bank, National Association, as Trustee.	8-K	10/10/2017
4.4	Form of 4.375% Senior Note due 2025 (included in Exhibit 4.3)	8-K	10/10/2017
4.5	Indenture dated January 19, 2018, by and among Hologic, the Guarantors party thereto and Wells Fargo Bank, National Association, as Trustee	8-K	01/19/2018
4.6	First Supplemental Indenture dated January, 19, 2018, by and among Hologic, the Guarantors party thereto and Wells Fargo Bank, National Association, as Trustee	8-K	01/19/2018
4.7	Form of 4.625% Senior Note due 2028 (included in Exhibit 4.5)	8-K	01/19/2018

Exhibit Number	Exhibit Description	Incorporated by Reference	
		Form	Filing Date/ Period End Date
10.1*	Second Amended and Restated 1999 Equity Incentive Plan.	10-Q	03/25/2006
10.2*	Amendment No. 1 to Second Amended and Restated 1999 Equity Incentive Plan.	S-8	10/23/2007
10.3*	Amendment No. 2 to Second Amended and Restated 1999 Equity Incentive Plan.	8-K	10/22/2007
10.4*	Amendment No. 3 to Second Amended and Restated 1999 Equity Incentive Plan.	8-K	12/12/2008
10.5*	The 2003 Incentive Award Plan of Gen-Probe Incorporated as amended and restated.	S-8	08/02/2012
10.6*	Hologic Amended and Restated 2008 Equity Incentive Plan.	8-K	03/15/2018
10.7*	Form of Stock Option Award Agreement Under 2008 Equity Incentive Plan (adopted fiscal 2014).	8-K	11/12/2013
10.8*	Form of Stock Option Award Agreement Under 2008 Equity Incentive Plan (adopted fiscal 2015).	8-K	11/05/2014
10.9*	Form of Stock Option Award Agreement Under 2008 Equity Incentive Plan (adopted fiscal 2016).	8-K	10/14/2015
10.10*	Form of Stock Option Award Agreement Under 2008 Equity Incentive Plan (adopted fiscal 2017).	8-K	11/09/2016
10.11*	Form of Restricted Stock Unit Award Agreement Under 2008 Equity Incentive Plan (adopted fiscal 2014).	8-K	11/12/2013
10.12*	Form of Restricted Stock Unit Award Agreement Under 2008 Equity Incentive Plan (adopted fiscal 2016).	8-K	10/14/2015
10.13*	Form of Restricted Stock Unit Award Agreement Under 2008 Equity Incentive Plan (adopted fiscal 2017).	8-K	11/09/2016
10.14*	Form of Performance Stock Unit Award Agreement Under 2008 Equity Incentive Plan (adopted fiscal 2015).	8-K	11/05/2014
10.15*	Form of Performance Stock Unit Award Agreement Under 2008 Equity Incentive Plan (adopted fiscal 2016).	8-K	11/06/2015
10.16*	Form of Performance Stock Unit Award Agreement Under 2008 Equity Incentive Plan (ROIC) (adopted fiscal 2017).	8-K	11/09/2016
10.17*	Form of Performance Stock Unit Award Agreement Under 2008 Equity Incentive Plan (relative TSR) (adopted fiscal 2017).	8-K	11/09/2016
10.18*	Form of Performance Stock Unit Award Agreement Under 2008 Equity Incentive Plan (ROIC) (adopted fiscal 2018).	8-K	11/09/2017
10.19*	Form of Performance Stock Unit Award Agreement Under 2008 Equity Incentive Plan (relative TSR) (adopted fiscal 2018).	8-K	11/09/2017
10.20*	Form of Independent Director Stock Option Award Agreement Under 2008 Equity Incentive Plan (annual grant, adopted fiscal 2014).	10-K	09/28/2013
10.21*	Form of Independent Director Stock Option Award Agreement Under 2008 Equity Incentive Plan (annual grant, adopted fiscal 2015).	10-K	09/27/2014
10.22*	Form of Independent Director Restricted Stock Unit Award Agreement Under 2008 Equity Incentive Plan (annual grant).	10-K	09/28/2013



Exhibit Number	Exhibit Description	Incorporated by Reference	
		Form	Filing Date/ Period End Date
10.23*	Form of Independent Director Stock Option Award Agreement Under 2008 Equity Incentive Plan (initial grant, adopted fiscal 2014).	10-K	09/28/2013
10.24*	Form of Independent Director Stock Option Award Agreement Under 2008 Equity Incentive Plan (initial grant, adopted fiscal 2015).	10-K	09/27/2014
10.25*	Form of Independent Director Restricted Stock Unit Award Agreement Under 2008 Equity Incentive Plan (initial grant).	10-K	09/28/2013
10.26*	Hologic, Inc. 2012 Employee Stock Purchase Plan, as amended	8-K	03/04/2016
10.27*	Hologic Short-Term Incentive Plan, as amended and restated	8-K	11/07/2018
10.28*	Hologic Amended and Restated Deferred Equity Plan	8-K	12/16/2015
10.29*	Rabbi Trust Agreement.	10-K	09/28/2013
10.30*	Form of Indemnification Agreement (as executed with each director of Hologic).	8-K	03/06/2009
10.31*	Form of Senior Vice President Change of Control Agreement. (1)	10-Q	12/29/2012
10.32*	Employment Agreement dated December 6, 2013 by and between Stephen P. MacMillan and Hologic.	8-K	12/09/2013
10.33*	Amended and Restated Employment Agreement by and between the Company and Stephen P. MacMillan, dated September 18, 2015.	8-K	09/21/2015
10.34*	Amendment No. 1 to Amended and Restated Employment Agreement by and between the Company and Stephen P. MacMillan, dated September 24, 2016.	10-K	11/17/2016
10.35*	Form of Matching Restricted Stock Unit Award Agreement	8-K	12/09/2013
10.36*	Change of Control Agreement dated December 6, 2013 by and between Stephen P. MacMillan and Hologic.	8-K	12/09/2013
10.37*	Transition Agreement by and between Eric B. Compton and Hologic, Inc., dated November 30, 2017	8-K	12/01/2017
10.38*	Severance and Change of Control Agreement dated July 31, 2018 by and between Karleen M. Oberton and Hologic, Inc.	8-K	07/31/2018
10.39*	Offer Letter dated May 4, 2014 by and between Peter J. Valenti and Hologic.	10-Q	06/28/2014
10.40*	Senior Vice President Severance Agreement dated May 26, 2014 by and between Peter J. Valenti and Hologic.	10-K	09/27/2014
10.41*	Offer Letter dated August 21, 2014 by and between Thomas A. West and Hologic.	10-K	09/27/2014
10.42*	Senior Vice President Severance Agreement dated October 3, 2014 by and between Thomas A. West and Hologic.	10-K	09/27/2014
10.43*	Severance and Change of Control Agreement dated September 13 2017 by and between Allison Bebo and Hologic.	10-K	09/30/2017
10.44*	Offer Letter dated January 6, 2015 by and between John M. Griffin and Hologic.	10-Q	03/28/2015
10.45*	Severance and Change of Control Agreement dated February 2, 2015 by and between John M. Griffin and Hologic.	10-Q	03/28/2015
10.46	Facility Lease (Danbury) dated December 20, 1995 by and among Melvin J. Powers and Mary P. Powers D/B/A M&N Realty and Lorad (filed in paper format).	Trex Medical Corporation S-1	03/29/1996

Exhibit Number	Exhibit Description	Incorporated by Reference	
		Form	Filing Date/ Period End Date
10.47	Lease Agreement (Danbury and Bedford) by and between BONE (DE) QRS 15-12, INC., and Hologic dated August 28, 2002.	10-K	09/28/2002
10.48	First Amendment to Lease Agreement (Danbury and Bedford) by and between BONE (DE) QRS 15-12, INC., and Hologic dated October 29, 2007.	10-K	09/29/2007
10.49	Office Lease dated December 31, 2003 between Cytyc and Marlborough Campus Limited Partnership.	Cytyc Corporation 10-K	12/31/2003
10.50	First Amendment to that Office Lease dated December 31, 2003 between Cytyc and Marlborough Campus Limited Partnership, entered into August 23, 2017, by and between Hines Global REIT Marlborough Campus LLC and Hologic, Inc. (2)	10-K	09/30/2017
10.51	Lease Agreement by and between Zona Franca Coyol S.A. and Cytyc Surgical Products Costa Rica S.A. dated April 23, 2007.	10-K	09/29/2007
10.52	Addendum No. 3 to Current Lease by and Between BCR Fondo de Inversion Inmobiliario and Hologic Surgical Products Costa Rica S.R.L. (2)	10-Q	12/30/2017
10.53	Lease Agreement by and between 445 Simarano Drive, Marlborough LLC and Cytyc dated July 11, 2006.	10-K	09/29/2007
10.54	Lease Guaranty dated October 18, 2007 between Bel Marlborough I LLC and Hologic, as guarantor thereunder.	8-K	10/22/2007
10.55	Form of Exchange Agreement.	8-K	02/15/2013
10.56	Amended and Restated Credit and Guaranty Agreement, originally dated May 29, 2015, and amended and restated as of October 3, 2017 among Hologic, Hologic GGO 4 Ltd, each Designated Borrower from time to time party thereto, the Guarantors from time to time party thereto, each Lender from time to time party thereto and Bank of America, N.A., as Administrative Agent, Swing Line Lender and L/C Issuer.	8-K	10/04/2017
10.57	Pledge and Security Agreement, dated May 29, 2015, among the grantors party thereto and Bank of America, N.A. as Collateral Agent	10-Q	06/27/2015
10.58	Supply Agreement for Panther Instrument System effective November 22, 2006 between Gen-Probe Incorporated and STRATEC Biomedical Systems AG. (2)	Gen-Probe 10-Q	09/30/2007
10.59	Amendment No. 1 dated June 1, 2011 to Supply Agreement for Panther Instrument System. (2)	10-K	09/24/2016
10.60	Amendment No. 2 dated February 28, 2013 to Supply Agreement for Panther Instrument System. (2)	10-K	09/24/2016
10.61	Intellectual Property License, dated as of January 31, 2017, by and among Hologic, Inc., Gen-Probe Incorporated and Grifols Diagnostics Solutions Inc.	8-K	02/02/2017
21.1	Subsidiaries of Hologic.	Filed herewith	
23.1	Consent of Independent Registered Public Accounting Firm.	Filed herewith	
31.1	Certification of Hologic's CEO pursuant to Item 601(b)(31) of Regulation S-K, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	Filed herewith	
31.2	Certification of Hologic's CFO pursuant to Item 601(b)(31) of Regulation S-K, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	Filed herewith	
32.1	Certification of Hologic's CEO pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.	Furnished herewith	

Exhibit Number	Exhibit Description	Incorporated by Reference	
		Form	Filing Date/ Period End Date
32.2	Certification of Hologic's CFO pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.	Furnished herewith	
101.INS	XBRL Instance Document.	Filed herewith	
101.SCH	XBRL Taxonomy Extension Schema Document.	Filed herewith	
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.	Filed herewith	
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.	Filed herewith	
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.	Filed herewith	
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.	Filed herewith	

* *Indicates management contract or compensatory plan, contract or arrangement.*

(1) *List of executive officers to whom provided filed herewith.*

(2) *Confidential treatment has been requested with respect to certain portions of this exhibit. A complete version of this exhibit has been filed separately with the U.S. Securities and Exchange Commission.*

Item 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

HOLOGIC, INC.

By: /S/ STEPHEN P. MACMILLAN

Stephen P. MacMillan

Chairman, President and Chief Executive Officer

Date: November 20, 2018

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/S/ STEPHEN P. MACMILLAN</u> STEPHEN P. MACMILLAN	Chairman, President and Chief Executive Officer (Principal Executive Officer)	November 20, 2018
<u>/S/ KARLEEN M. OBERTON</u> KARLEEN M. OBERTON	Chief Financial Officer (Principal Financial Officer)	November 20, 2018
<u>/S/ BENJAMIN J. COHN</u> BENJAMIN J. COHN	Vice President, Corporate Controller (Principal Accounting Officer)	November 20, 2018
<u>/S/ SALLY W. CRAWFORD</u> SALLY W. CRAWFORD	Lead Independent Director	November 20, 2018
<u>/S/ CHARLES DOCKENDORFF</u> CHARLES DOCKENDORFF	Director	November 20, 2018
<u>/S/ SCOTT T. GARRETT</u> SCOTT T. GARRETT	Director	November 20, 2018
<u>/S/ NAMAL NAWANA</u> NAMAL NAWANA	Director	November 20, 2018
<u>/S/ CHRISTIANA STAMOULIS</u> CHRISTIANA STAMOULIS	Director	November 20, 2018
<u>/S/ AMY M. WENDELL</u> AMY M. WENDELL	Director	November 20, 2018

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Hologic, Inc.

Consolidated Financial Statements

Years ended September 29, 2018 , September 30, 2017 and September 24, 2016

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Report of Independent Registered Public Accounting Firm

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

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Hologic, Inc. (the Company) as of September 29, 2018 and September 30, 2017, the related consolidated statements of operations, comprehensive income (loss), stockholders' equity and cash flows for each of the three years in the period ended September 29, 2018, 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 September 29, 2018 and September 30, 2017, and the results of its operations and its cash flows for each of the three years in the period ended September 29, 2018, 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 September 29, 2018, 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 November 20, 2018 expressed an unqualified opinion thereon.

Adoption of ASU No. 2017-04

As discussed in Note 2 to the consolidated financial statements, the Company changed its method of accounting for goodwill in 2018 due to the adoption of ASU No. 2017-04, Intangibles-Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment.

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.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2002.

Boston, Massachusetts

November 20, 2018

Hologic, Inc.**Consolidated Statements of Operations***(In millions, except number of shares, which are reflected in thousands, and per share data)*

	Years ended		
	September 29, 2018	September 30, 2017	September 24, 2016
Revenues:			
Product	\$ 2,643.9	\$ 2,538.0	\$ 2,379.0
Service and other	574.0	520.8	453.7
	<u>3,217.9</u>	<u>3,058.8</u>	<u>2,832.7</u>
Costs of revenues:			
Product	886.6	881.8	756.8
Amortization of intangible assets	319.4	297.1	293.4
Service and other	315.2	258.9	219.2
Gross Profit	<u>1,696.7</u>	<u>1,621.0</u>	<u>1,563.3</u>
Operating expenses:			
Research and development	218.7	232.8	232.1
Selling and marketing	544.6	498.6	415.1
General and administrative	366.1	343.3	267.3
Amortization of intangible assets	59.3	62.5	89.7
Impairment of intangible assets	46.0	—	—
Impairment of goodwill	685.7	—	—
Gain on sale of business	—	(899.7)	—
Restructuring charges	14.2	13.3	10.5
	<u>1,934.6</u>	<u>250.8</u>	<u>1,014.7</u>
(Loss) income from operations	(237.9)	1,370.2	548.6
Interest income	6.3	3.8	0.7
Interest expense	(148.7)	(153.2)	(155.3)
Debt extinguishment losses	(45.9)	(3.2)	(5.3)
Other income, net	7.6	12.9	26.6
(Loss) income before income taxes	(418.6)	1,230.5	415.3
(Benefit) provision for income taxes	(307.3)	475.0	84.5
Net (loss) income	<u>\$ (111.3)</u>	<u>\$ 755.5</u>	<u>\$ 330.8</u>
Net (loss) income per common share:			
Basic	<u>\$ (0.40)</u>	<u>\$ 2.70</u>	<u>\$ 1.18</u>
Diluted	<u>\$ (0.40)</u>	<u>\$ 2.64</u>	<u>\$ 1.16</u>
Weighted average number of shares outstanding:			
Basic	<u>275,105</u>	<u>279,811</u>	<u>280,213</u>
Diluted	<u>275,105</u>	<u>285,653</u>	<u>286,156</u>

See accompanying notes.

Hologic, Inc.
Consolidated Statements of Comprehensive Income (Loss)
(In millions)

	Years ended		
	September 29, 2018	September 30, 2017	September 24, 2016
Net (loss) income	\$ (111.3)	\$ 755.5	\$ 330.8
Changes in foreign currency translation adjustment	(8.1)	7.6	(10.4)
Changes in unrealized holding gains and losses on available-for-sale securities, net of tax of \$0.2 in 2018 and \$0.1 in 2017:			
Loss recognized in accumulated other comprehensive (loss) income	—	2.3	(1.1)
Loss (gain) reclassified from accumulated other comprehensive (loss) income to the statement of operations	0.4	(2.4)	(6.1)
Changes in pension plans, net of taxes of (\$0.6) in 2018, \$1.1 in 2017, and \$0.3 in 2016	0.5	0.9	(0.7)
Changes in value of hedged interest rate caps, net of tax of \$(5.0) in 2018, \$0.6 in 2017 and \$2.0 in 2016:			
(Gain) loss recognized in other comprehensive (loss) income, net	(5.7)	0.8	(3.4)
Loss reclassified from accumulated other comprehensive loss to the statement of operations, net	3.6	6.9	3.9
Other comprehensive (loss) income	(9.3)	16.1	(17.8)
Comprehensive (loss) income	\$ (120.6)	\$ 771.6	\$ 313.0

See accompanying notes.

Hologic, Inc.**Consolidated Balance Sheets***(In millions, except number of shares, which are reflected in thousands, and par value)*

	September 29, 2018	September 30, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 666.7	\$ 540.6
Accounts receivable, less reserves of \$16.2 and \$9.8, respectively	579.2	533.5
Inventories	384.1	331.6
Prepaid income taxes	31.7	22.4
Prepaid expenses and other current assets	61.5	50.5
Total current assets	1,723.2	1,478.6
Property, plant and equipment, net	478.2	472.8
Intangible assets, net	2,398.6	2,772.3
Goodwill	2,533.2	3,171.2
Other assets	97.7	84.7
Total assets	\$ 7,230.9	\$ 7,979.6
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Current portion of long-term debt	\$ 599.7	\$ 1,150.8
Accounts payable	192.2	166.6
Accrued expenses	436.1	375.3
Deferred revenue	172.9	171.2
Current portion of capital lease obligations	1.7	1.6
Total current liabilities	1,402.6	1,865.5
Long-term debt, net of current portion	2,704.6	2,172.1
Capital lease obligations, net of current portion	20.9	22.7
Deferred income tax liabilities	498.2	973.6
Deferred revenue	18.2	20.8
Other long-term liabilities	157.6	140.2
Commitments and contingencies (Note 11)		
Stockholders' equity:		
Preferred stock, \$0.01 par value – 1,623 shares authorized; 0 shares issued	—	—
Common stock, \$0.01 par value – 750,000 shares authorized; 289,900 and 287,853 shares issued, respectively	2.9	2.9
Additional paid-in-capital	5,671.3	5,630.8
Accumulated deficit	(2,494.0)	(2,382.7)
Treasury stock, at cost – 19,812 and 12,560 shares, respectively	(725.9)	(450.1)
Accumulated other comprehensive loss	(25.5)	(16.2)
Total stockholders' equity	2,428.8	2,784.7
Total liabilities and stockholders' equity	\$ 7,230.9	\$ 7,979.6

See accompanying notes.

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Hologic, Inc.
Consolidated Statements of Stockholders' Equity
(In millions, except number of shares, which are reflected in thousands)

	Common Stock		Additional Paid-in- Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Treasury Stock		Total Stockholders' Equity
	Number of Shares	Par Value				Number of Shares	Amount	
Balance at September 26, 2015	282,495	2.8	5,559.9	(3,469.0)	(14.5)	—	—	2,079.2
Exercise of stock options	1,233	0.1	24.0	—	—	—	—	24.1
Vesting of restricted stock units, net of shares withheld for employee taxes	820	—	(16.4)	—	—	—	—	(16.4)
Common stock issued under the employee stock purchase plan	467	—	14.4	—	—	—	—	14.4
Stock-based compensation expense	—	—	62.3	—	—	—	—	62.3
Excess tax benefit from equity awards	—	—	10.5	—	—	—	—	10.5
Reacquisition of equity component from convertible notes repurchase, net of taxes	—	—	(94.4)	—	—	—	—	(94.4)
Net income	—	—	—	330.8	—	—	—	330.8
Foreign currency translation adjustment	—	—	—	—	(10.4)	—	—	(10.4)
Adjustment to minimum pension liability, net	—	—	—	—	(0.7)	—	—	(0.7)
Repurchase of common stock	—	—	—	—	—	7,289	(250.0)	(250.0)
Unrealized losses on derivatives, net of taxes	—	—	—	—	(3.4)	—	—	(3.4)
Unrealized losses on marketable securities	—	—	—	—	(1.1)	—	—	(1.1)
Interest cost of interest rate cap reclassified to statement of operations	—	—	—	—	3.9	—	—	3.9
Net realized gains on marketable securities reclassified out of accumulated other comprehensive loss	—	—	—	—	(6.1)	—	—	(6.1)
Balance at September 24, 2016	285,015	2.9	5,560.3	(3,138.2)	(32.3)	7,289	(250.0)	2,142.7
Exercise of stock options	1,427	—	33.1	—	—	—	—	33.1
Vesting of restricted stock units, net of shares withheld for employee taxes	939	—	(19.7)	—	—	—	—	(19.7)
Common stock issued under the employee stock purchase plan	472	—	15.0	—	—	—	—	15.0
Stock-based compensation expense	—	—	68.2	—	—	—	—	68.2
Reclassification of liability award to equity	—	—	7.8	—	—	—	—	7.8
Reacquisition of equity component from convertible notes repurchase, net of taxes	—	—	(33.9)	—	—	—	—	(33.9)
Net income	—	—	—	755.5	—	—	—	755.5
Foreign currency translation adjustment	—	—	—	—	7.6	—	—	7.6
Adjustment to minimum pension liability, net	—	—	—	—	0.9	—	—	0.9
Repurchase of common stock	—	—	—	—	—	5,271	(200.1)	(200.1)
Unrealized losses on derivatives, net of taxes	—	—	—	—	0.8	—	—	0.8
Unrealized losses on marketable securities	—	—	—	—	2.3	—	—	2.3
Interest cost of interest rate cap reclassified to statement of operations	—	—	—	—	6.9	—	—	6.9

Net realized gains on marketable securities reclassified out of accumulated other comprehensive loss	—	—	—	—	(2.4)	—	—	(2.4)
Balance at September 30, 2017	<u>287,853</u>	<u>\$ 2.9</u>	<u>\$ 5,630.8</u>	<u>\$ (2,382.7)</u>	<u>\$ (16.2)</u>	<u>12,560</u>	<u>\$ (450.1)</u>	<u>\$ 2,784.7</u>
Exercise of stock options	795	—	17.3	—	—	—	—	17.3
Vesting of restricted stock units, net of shares withheld for employee taxes	804	—	(16.7)	—	—	—	—	(16.7)
Common stock issued under the employee stock purchase plan	448	—	15.6	—	—	—	—	15.6
Stock-based compensation expense	—	—	65.0	—	—	—	—	65.0
Reacquisition of equity component from convertible notes repurchase, net of taxes	—	—	(40.7)	—	—	—	—	(40.7)
Net income	—	—	—	(111.3)	—	—	—	(111.3)
Foreign currency translation adjustment	—	—	—	—	(8.1)	—	—	(8.1)
Adjustment to minimum pension liability, net	—	—	—	—	0.5	—	—	0.5
Repurchase of common stock	—	—	—	—	—	7,252	(275.8)	(275.8)
Unrealized gains on derivatives, net of taxes	—	—	—	—	(5.7)	—	—	(5.7)
Interest cost of interest rate cap reclassified to statement of income	—	—	—	—	3.6	—	—	3.6
Net realized loss on marketable securities reclassified out of accumulated other comprehensive loss	—	—	—	—	0.4	—	—	0.4
Balance at September 29, 2018	<u>289,900</u>	<u>\$ 2.9</u>	<u>\$ 5,671.3</u>	<u>\$ (2,494.0)</u>	<u>\$ (25.5)</u>	<u>19,812</u>	<u>\$ (725.9)</u>	<u>\$ 2,428.8</u>

See accompanying notes.

Hologic, Inc.
Consolidated Statements of Cash Flows
(In millions)

	Years ended		
	September 29, 2018	September 30, 2017	September 24, 2016
OPERATING ACTIVITIES			
Net (loss) income	\$ (111.3)	\$ 755.5	\$ 330.8
Adjustments to reconcile net (loss) income to net cash provided by operating activities:			
Depreciation	101.6	89.6	82.3
Amortization	378.7	359.6	383.1
Non-cash interest expense	15.0	49.4	52.1
Stock-based compensation expense	65.0	68.2	65.4
Deferred income taxes and other non-cash taxes	(477.3)	(357.2)	(155.8)
Goodwill impairment charge	685.7	—	—
Intangible asset impairment charge	46.0	—	—
Fair value write-up of inventory sold	1.1	39.7	—
Debt extinguishment losses	45.9	3.2	5.3
Gain on sale of business	—	(899.7)	—
Gain on sale of investments	—	(5.6)	(25.1)
Other adjustments and non-cash items	8.7	8.8	3.7
Changes in operating assets and liabilities, excluding the effect of acquisitions and dispositions:			
Accounts receivable	(38.2)	(41.5)	(31.8)
Inventories	(50.6)	(11.6)	7.6
Prepaid income taxes	(9.4)	(8.7)	4.7
Prepaid expenses and other assets	(4.2)	(2.4)	(4.9)
Accounts payable	23.9	(10.6)	40.1
Accrued expenses and other liabilities	53.8	(17.8)	45.6
Deferred revenue	(1.5)	(10.6)	(4.9)
Net cash provided by operating activities	<u>732.9</u>	<u>8.3</u>	<u>798.2</u>
INVESTING ACTIVITIES			
Acquisition of businesses, net of cash acquired	(76.5)	(1,558.1)	—
Proceeds from sale of business	—	1,865.0	—
Purchase of property and equipment	(58.4)	(57.8)	(47.3)
Increase in equipment under customer usage agreements	(47.2)	(49.8)	(47.2)
Proceeds from sale of available-for-sale marketable securities	0.1	87.1	31.1
Purchase of cost-method investment	(6.0)	—	—
Purchases of insurance contracts	—	—	(5.2)
Sales of mutual funds	—	—	5.2
Other activity	(7.2)	(0.6)	(5.0)
Net cash (used in) provided by investing activities	<u>(195.2)</u>	<u>285.8</u>	<u>(68.4)</u>
FINANCING ACTIVITIES			
Proceeds from long-term debt	1,500.0	—	—
Repayment of long-term debt	(1,359.4)	(84.4)	(75.0)
Proceeds from senior notes	1,350.0	—	—
Repayment of senior notes	(1,037.7)	—	—
Payments to extinguish convertible notes	(546.2)	(396.2)	(392.8)
Payment of acquired long-term debt	(3.3)	—	—
Proceeds from amounts borrowed under revolving credit line	1,150.0	345.0	50.0
Repayment of amounts borrowed under revolving credit line	(1,195.0)	—	(225.0)
Proceeds from accounts receivable securitization program	34.0	48.0	200.0
Repayments under accounts receivable securitization program	(9.0)	(48.0)	—
Repurchase of common stock	(275.8)	(200.1)	(250.0)
Payment of debt issuance costs	(23.5)	—	—

Purchase of interest rate caps	(3.7)	(1.9)	—
Net proceeds from issuance of common stock under employee stock plans	33.2	49.0	38.5
Payments under capital lease obligations	(1.7)	(0.9)	—
Payment of minimum tax withholdings on net share settlements of equity awards	(16.7)	(19.7)	(16.4)
Net cash used in financing activities	(404.8)	(309.2)	(670.7)
Effect of exchange rate changes on cash and cash equivalents	(6.8)	7.3	(2.0)
Net increase (decrease) in cash and cash equivalents	126.1	(7.8)	57.1
Cash and cash equivalents, beginning of period	540.6	548.4	491.3
Cash and cash equivalents, end of period	\$ 666.7	\$ 540.6	\$ 548.4

See accompanying notes.

Hologic, Inc.

Notes to Consolidated Financial Statements

(all tabular amounts in millions, except number of shares which are reflected in thousands)

1. Operations

Hologic, Inc. (the “Company” or “Hologic”) develops, manufactures and supplies premium diagnostics products, medical imaging systems, surgical products and light-based aesthetic and medical treatment systems with an emphasis on women's health. The Company operates in five segments: Diagnostics, Breast Health, Medical Aesthetics, GYN Surgical and Skeletal Health.

2. Summary of Significant Accounting Policies

Principles of Consolidation

The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. All intercompany transactions and balances have been eliminated in consolidation. The Company's fiscal year ends on the last Saturday in September. Fiscal 2018, 2017 and 2016 ended on September 29, 2018, September 30, 2017 and September 24, 2016, respectively. Fiscal 2017 is a 53-week year and fiscal 2018 and 2016 were 52-week years.

Subsequent Events Consideration

The Company considers events or transactions that occur after the balance sheet date but prior to the issuance of the financial statements to provide additional evidence for certain estimates or to identify matters that may require additional disclosure. Subsequent events have been evaluated as required. There were no material recognized or unrecognized subsequent events recorded in the consolidated financial statements as of and for the year ended September 29, 2018, except for the settlement of patent infringement litigation with Smith & Nephew, Inc. for \$34.8 million (refer to Note 12 for additional information), which was a subsequent event recognized as of September 29, 2018. In addition, the Company completed the acquisition of Focal Therapeutics, Inc. on October 1, 2018 for approximately \$125.0 million (refer to Note 3 for additional information).

Management's Estimates and Uncertainties

The preparation of financial statements in conformity with U.S. generally accepted accounting principles ("GAAP") requires management to make significant estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting periods. Significant estimates and assumptions by management affect the Company's revenue recognition for multiple element arrangements, estimated fair value of cost-method equity investments, valuations, purchase price allocations and contingent consideration related to business combinations, expected future cash flows including growth rates, discount rates, terminal values and other assumptions and estimates used to evaluate the recoverability of long-lived assets and goodwill, estimated fair values of intangible assets and goodwill, amortization methods and periods, warranty reserves, certain accrued expenses, restructuring and other related charges, contingent liabilities, tax reserves, deferred tax rates and recoverability of the Company's net deferred tax assets and related valuation allowances.

Although the Company regularly assesses these estimates, actual results could differ materially from these estimates. Changes in estimates are recorded in the period in which they become known. The Company bases its estimates on historical experience and various other assumptions that it believes to be reasonable under the circumstances.

The Company is subject to a number of risks similar to those of other companies of similar size in its industry, including dependence on third-party reimbursements to support the markets of the Company's products, early stage of development of certain products, rapid technological changes, recoverability of long-lived assets (including intangible assets and goodwill), competition, stability of world financial markets, ability to obtain regulatory approvals, changes in the regulatory environment, limited number of suppliers, customer concentration, integration of acquisitions, substantial indebtedness, government regulations, management of international activities, protection of proprietary rights, patent and other litigation, dependence on contract manufacturers and dependence on key individuals.

Cash Equivalents

Cash equivalents are highly liquid investments with insignificant interest rate risk and maturities of three months or less at the time of acquisition.

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Marketable Securities

In the first quarter of fiscal 2018, the Company sold its remaining marketable security, which was an investment in the stock of a publicly traded company, for a realized loss of \$0.6 million. The Company had classified its equity securities as available-for-sale and were recorded at fair value with the unrealized gains or losses, net of tax, recorded within accumulated other comprehensive loss. The Company's various investments were liquidated over the last few years. In connection with the acquisition of Cynosure, Inc. in fiscal 2017, the Company assumed \$82.9 million of short and long-term marketable securities, which were classified as available-for-sale and primarily comprised of state and municipal bonds and U.S. treasury notes. During fiscal 2017, the Company liquidated these investments. In the first quarter of fiscal 2016, the Company sold all of its shares in one of its marketable securities and recorded a realized gain of \$25.1 million in other income (expense), net. No material impairment charges were recorded in 2018, 2017, or 2016.

Concentrations of Credit Risk

Financial instruments that subject the Company to credit risk primarily consist of cash and cash equivalents, cost-method equity investments, and trade accounts receivable. The Company invests its cash and cash equivalents with high credit quality financial institutions.

The Company's customers are principally located in the United States, Europe and Asia. The Company performs ongoing credit evaluations of the financial condition of its customers and generally does not require collateral. Although the Company is directly affected by the overall financial condition of the healthcare industry, as well as global economic conditions, management does not believe significant credit risk exists as of September 29, 2018. The Company generally has not experienced any material losses related to receivables from individual customers or groups of customers in the healthcare industry. The Company maintains an allowance for doubtful accounts based on accounts past due and historical collection experience.

There were no customers with balances greater than 10% of accounts receivable as of September 29, 2018 and September 30, 2017, or any customers that represented greater than 10% of consolidated revenues for fiscal years 2018, 2017 and 2016.

Supplemental Cash Flow Statement Information

	Years ended		
	September 29, 2018	September 30, 2017	September 24, 2016
Cash paid during the period for income taxes	\$ 178.2	\$ 867.8	\$ 184.8
Cash paid during the period for interest	\$ 122.1	\$ 102.4	\$ 104.0

Inventories

Inventories are valued at the lower of cost or market on a first in, first out basis. Work-in-process and finished goods inventories consist of materials, labor and manufacturing overhead. The valuation of inventory requires management to estimate excess and obsolete inventory. The Company employs a variety of methodologies to determine the net realizable value of its inventory. Provisions for excess and obsolete inventory are primarily based on management's estimates of forecasted sales, usage levels and expiration dates, as applicable for disposable products. A significant change in the timing or level of demand for the Company's products compared to forecasted amounts may result in recording additional charges for excess and obsolete inventory in the future. The Company records charges for excess and obsolete inventory within cost of product revenues.

Inventories consisted of the following:

	September 29, 2018	September 30, 2017
Raw materials	\$ 134.9	\$ 95.7
Work-in-process	52.1	45.0
Finished goods	197.1	190.9
	<u>\$ 384.1</u>	<u>\$ 331.6</u>

Property, Plant and Equipment

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Property, plant and equipment is recorded at cost less allowances for depreciation. The straight-line method of depreciation is used for all property and equipment.

Property, plant and equipment consisted of the following:

	September 29, 2018	September 30, 2017
Equipment	\$ 391.9	\$ 357.9
Equipment under customer usage agreements	399.6	368.7
Buildings and improvements	175.1	172.0
Leasehold improvements	63.0	60.6
Land	46.3	46.3
Furniture and fixtures	18.4	20.8
	1,094.3	1,026.3
Less - accumulated depreciation and amortization	(616.1)	(553.5)
	\$ 478.2	\$ 472.8

Property, plant and equipment are depreciated over the following estimated useful lives:

Asset Classification	Estimated Useful Life
Building and improvements	20–35 years
Equipment	3–10 years
Equipment under customer usage agreements	3–8 years
Furniture and fixtures	5–7 years
Leasehold improvements	Shorter of the Original Term of Lease or Estimated Useful Life

Equipment under customer usage agreements primarily consists of diagnostic instrumentation and imaging equipment located at customer sites but owned by the Company. Generally, the customer has the right to use the equipment for a period of time provided they meet certain agreed to conditions. The Company recovers the cost of providing the equipment from the sale of disposables. The depreciation costs associated with equipment under customer usage agreements are charged to cost of product revenues over the estimated useful life of the equipment. The costs to maintain the equipment in the field are charged to cost of product revenue as incurred.

Long-Lived Assets

The Company reviews its long-lived assets, which includes property, plant and equipment and identifiable intangible assets (see below for discussion of intangible assets), for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable in accordance with ASC 360-10-35-15, *Property, Plant and Equipment—Impairment or Disposal of Long-Lived Assets* (ASC 360). Recoverability of these assets is evaluated by comparing the carrying value of the assets to the undiscounted cash flows estimated to be generated by those assets over their remaining economic life. If the undiscounted cash flows are not sufficient to recover the carrying value of the assets, the assets are considered impaired. The impairment loss is measured by comparing the fair value of the assets to their carrying value. Fair value is determined by either a quoted market price, if any, or a value determined by a discounted cash flow technique.

Business Combinations and Acquisition of Intangible Assets

The Company accounts for the acquisition of a business in accordance with ASC 805, *Business Combinations* (ASC 805). Amounts paid for each acquisition are allocated to the assets acquired and liabilities assumed based on their fair values at the date of acquisition. The Company determines the fair value of acquired intangible assets based on detailed valuations that use certain information and assumptions provided by management. The Company allocates any excess purchase price over the fair value of the net tangible and intangible assets acquired to goodwill.

The Company uses the income approach to determine the fair value of developed technology and in-process research and development ("IPR&D") acquired in a business combination. This approach determines fair value by estimating the after-tax cash flows attributable to the respective asset over its useful life and then discounting these after-tax cash flows back to a present value. The Company bases its revenue assumptions on estimates of relevant market sizes, expected market growth rates, expected trends in technology and expected product introductions by competitors. Developed technology represents patented and unpatented technology and know-how. The value of the in-process projects is based on the project's stage of completion, the complexity of the work completed as of the acquisition date, the projected costs to complete, the contribution

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of core technologies and other acquired assets, the expected introduction date, the estimated cash flows to be generated upon commercial release and the estimated useful life of the technology. The Company believes that the estimated developed technology and IPR&D amounts represent the fair value at the date of acquisition and do not exceed the amount a third-party would pay for the assets.

The Company also uses the income approach, as described above, to determine the estimated fair value of certain other identifiable intangible assets including customer relationships, distribution agreements, trade names and business licenses. Customer relationships represent established relationships with customers, which provide a ready channel for the sale of additional products and services. Trade names represent acquired company and product names, and distribution agreements generally pertain to exclusive distribution of certain products manufactured by third parties.

Intangible Assets and Goodwill

Intangible Assets

Intangible assets are initially recorded at fair value and stated net of accumulated amortization and impairments. The Company amortizes its intangible assets that have finite lives using either the straight-line method, or if reliably determinable, based on the pattern in which the economic benefit of the asset is expected to be utilized. Amortization is recorded over the estimated useful lives ranging from 2 to 30 years. The Company evaluates the recoverability of its definite lived intangible assets whenever events or changes in circumstances or business conditions indicate that the carrying value of these assets may not be recoverable based on expectations of future undiscounted cash flows for each asset group. If the carrying value of an asset or asset group exceeds its undiscounted cash flows, the Company estimates the fair value of the assets, generally utilizing a discounted cash flow analysis based on the present value of estimated future cash flows to be generated by the assets using a risk-adjusted discount rate. To estimate the fair value of the assets, the Company uses market participant assumptions pursuant to ASC 820, *Fair Value Measurements*.

Indefinite lived intangible assets, such as IPR&D assets, are required to be tested for impairment annually, or more frequently if indicators of impairment are present. The Company's annual impairment test date is as of the first day of its fourth quarter.

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Intangible assets consisted of the following:

Description	September 29, 2018		September 30, 2017	
	Gross Carrying Value	Accumulated Amortization	Gross Carrying Value	Accumulated Amortization
Acquired intangible assets:				
Developed technology	\$ 4,573.3	\$ 2,505.8	\$ 4,528.7	\$ 2,186.8
In-process research and development	5.5	—	46.0	—
Customer relationships	556.5	428.1	552.8	393.8
Trade names	312.5	175.0	310.3	156.4
Distribution agreement	42.0	8.0	42.0	2.8
Non-competition agreements	1.5	0.5	1.5	0.1
Business licenses	2.4	2.2	2.4	2.2
Total acquired intangible assets	\$ 5,493.7	\$ 3,119.6	\$ 5,483.7	\$ 2,742.1
Internal-use software	58.5	49.3	64.5	46.1
Capitalized software embedded in products	19.6	4.3	14.3	2.0
Total intangible assets	\$ 5,571.8	\$ 3,173.2	\$ 5,562.5	\$ 2,790.2

During first quarter of fiscal 2018, the Company acquired Emsor S.A. and recorded \$4.6 million of customer relationship intangible assets. In the fourth quarter of fiscal 2018, the Company acquired Faxitron Bipotics, LLC and recorded an aggregate of \$53.4 million of intangible assets.

During the second quarter of fiscal 2017, the Company divested its blood screening business and the net book value of \$154.0 million of developed technology and \$387.7 million of customer relationship assets were disposed of (see Note 13). In the second quarter of fiscal 2017, the Company acquired Cynosure and recorded an aggregate of \$994.0 million of intangible assets (see Note 3). In the third quarter of fiscal 2017, the Company acquired Medicor and recorded \$5.4 million of intangible assets. In addition, during the third quarter of fiscal 2017, the Company obtained CE approval for its last in-process research and development project acquired in the Gen-Probe Incorporated acquisition and transferred \$3.7 million to developed technology.

During the fourth quarter of fiscal 2017, the Company obtained regulatory approval for two of three projects from the Cynosure acquisition with an aggregate fair value of \$61.0 million and these assets were reclassified to developed technology. The remaining project, which had an initial fair value of \$46.0 million, was abandoned in the second quarter of fiscal 2018 due to unsuccessful clinical results. As a result, the Company recorded a \$46.0 million impairment charge in the second quarter of fiscal 2018.

The Company had identified certain software acquired in the Cynosure acquisition that would be abandoned in fiscal 2018 and shortened the useful life. As such, the Company accelerated depreciation of the asset resulting in an additional \$5.9 million and \$3.0 million of expense recorded in fiscal 2018 and 2017, respectively.

Amortization expense related to developed technology is classified as a component of cost of product revenues—amortization of intangible assets. Amortization expense related to customer relationships, contracts, trade names, distribution agreements, and business licenses is classified as a component of amortization of intangible assets within operating expenses.

The estimated amortization expense at September 29, 2018 for each of the five succeeding fiscal years was as follows:

Fiscal 2019	\$	370.9
Fiscal 2020	\$	359.8
Fiscal 2021	\$	338.2
Fiscal 2022	\$	325.4
Fiscal 2023	\$	226.0

Goodwill

In accordance with ASC 350, *Intangibles—Goodwill and Other* (ASC 350), the Company tests goodwill for impairment annually at the reporting unit level and between annual tests if events and circumstances indicate it is more likely than not that the fair value of a reporting unit is less than its carrying value. Events that could indicate impairment and trigger an interim impairment assessment include, but are not limited to, current economic and market conditions, including a decline in market capitalization, a significant adverse change in legal factors, business climate, operational performance of the business or key personnel, and an adverse action or assessment by a regulator.

In performing the impairment test, the Company utilizes the two-step approach prescribed under ASC 350. The first step requires a comparison of the carrying value of each reporting unit to its estimated fair value. To estimate the fair value of its reporting units for Step 1, the Company primarily utilizes the income approach. The income approach is based on a DCF analysis and calculates the fair value by estimating the after-tax cash flows attributable to a reporting unit and then discounting the after-tax cash flows to present value using a risk-adjusted discount rate. Assumptions used in the DCF require significant judgment, including judgment about appropriate discount rates and terminal values, growth rates, and the amount and timing of expected future cash flows. The forecasted cash flows are based on the Company's most recent budget and strategic plan and for years beyond this period, the Company's estimates are based on assumed growth rates expected as of the measurement date. The Company believes its assumptions are consistent with the plans and estimates used to manage the underlying businesses. The discount rates used are intended to reflect the risks inherent in future cash flow projections and are based on estimates of the weighted-average cost of capital ("WACC") of market participants relative to each respective reporting unit. The market approach considers comparable market data based on multiples of revenue or earnings before interest, taxes, depreciation and amortization ("EBITDA") and is primarily used as a corroborative analysis to the results of the DCF analysis. The Company believes its assumptions used to determine the fair value of its reporting units are reasonable. If different assumptions were used, particularly with respect to forecasted cash flows, terminal values, WACCs, or market multiples, different estimates of fair value may result and there could be the potential that an impairment charge could result. Actual operating results and the related cash flows of the reporting units could differ from the estimated operating results and related cash flows.

If the carrying value of a reporting unit exceeds its estimated fair value, the Company applies the single step approach under Accounting Standards Update No. 2017-04, *Intangibles-Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment* (ASU 2017-04). As a result of this simplified approach the goodwill impairment is calculated as the amount by which the carrying value of the reporting unit exceeds its fair value to the extent of the goodwill balance. The Company adopted this ASU in fiscal 2018.

During the second quarter of fiscal 2018, in connection with commencing its company-wide annual budgeting and strategic planning process, evaluating its current operating performance of its Medical Aesthetics reporting unit, and abandoning an in-process research and development project, the Company reduced its short term and long term revenue and operating income forecasts and determined that indicators of impairment existed in its Medical Aesthetics reporting unit. The Medical Aesthetics reporting unit is solely comprised of the Cynosure business, which the Company acquired on March 22, 2017. The updated forecast reflected significantly reduced volume and market penetration projections resulting in lower short-term and long-term profitability than expected at the time of the Cynosure acquisition. As a result of these current events and circumstances, the Company determined that it was more likely than not that this change would reduce the fair value of the reporting unit below its carrying amount. To estimate the fair value of the reporting unit, the Company utilized the DCF analysis. The forecasted cash flows were based on the Company's most recent budget and strategic plan and for period beyond the strategic plan, the Company's estimates are based on assumed growth rates expected as of the measurement date. The Company believes its assumptions were consistent with the plans and estimates used to manage the underlying business. The discount rate used is intended to reflect the risks inherent in future cash flow projections and was based on an estimate of the weighted average cost of capital (WACC) of market participants relative to the reporting unit. The basis of fair value for Medical Aesthetics assumed the reporting unit would be purchased or sold in a non-taxable transaction, and the discount rate of 12.0% applied to the after-tax cash flows was consistent with that used in the purchase accounting performed in fiscal 2017. As a result of this analysis, the fair value of the Medical Aesthetic reporting unit was significantly below its carrying value, and the Company recorded a goodwill impairment charge of \$685.7 million during the second quarter of fiscal 2018. This reporting unit now has a goodwill value of zero. Actual operating results and the related cash flows of the reporting units could differ from the estimated operating results and related cash flows.

Due to the presence of impairment indicators, the Company also performed an impairment test of this reporting unit's long-lived assets. This impairment evaluation was based on expectations of future undiscounted cash flows compared to the carrying value of the long-lived assets. The Company's cash flow estimates were consistent with those used in the goodwill impairment test discussed above. Based on this analysis, the undiscounted cash flows of the Medical Aesthetics long-lived assets were in excess of their carrying value and thus deemed to not be impaired. The Company believes its procedures for estimating future cash flows were reasonable and consistent with market conditions at the time of estimation.

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The Company conducted its fiscal 2018 impairment test for its reporting units on the first day of the fourth quarter, and as noted above used DCF and market approaches to estimate the fair value of its reporting units as of July 1, 2018, and ultimately used the fair value determined by the DCF approach in making its impairment test conclusions. The Company believes it used reasonable estimates and assumptions about future revenue, cost projections, cash flows, market multiples and discount rates as of the measurement date. As a result of completing this analysis, all of the Company's reporting units had fair values exceeding their carrying values, and as such, Step 2 of the impairment test was not required. For illustrative purposes, had the fair value of each of the reporting units been lower by 10% , all of the reporting units would still have passed Step 1 of the goodwill impairment test.

At September 29, 2018 , the Company believes that its reporting units, with goodwill aggregating \$2.5 billion , were not at risk of failing Step 1 of the goodwill impairment test based on its current forecasts.

The Company conducted its fiscal 2017 and 2016 impairment tests on the first day of the respective year's fourth quarter, and as noted above used DCF and market approaches to estimate the fair value of its reporting units as of July 2, 2017 and June 26, 2016, respectively, and ultimately used the fair value determined by the DCF approach in making its impairment test conclusions. As a result of completing Step 1, all of the Company's reporting units had fair values exceeding their carrying values, and as such, Step 2 of the impairment test under the applicable goodwill impairment standard at these dates was not required.

A rollforward of goodwill activity by reportable segment from September 30, 2017 to September 29, 2018 is as follows:

	Diagnostics	Breast Health	Medical Aesthetics	GYN Surgical	Skeletal Health	Total
Balance at September 30, 2017	\$ 823.0	\$ 641.5	\$ 683.5	\$ 1,015.1	\$ 8.1	\$ 3,171.2
Faxitron acquisition	—	41.6	—	—	—	41.6
Emsor acquisition	—	5.7	—	—	—	5.7
Impairment charge	—	—	(685.7)	—	—	(685.7)
Foreign currency and other adjustments	(1.8)	0.7	2.2	(0.7)	—	0.4
Balance at September 29, 2018	<u>\$ 821.2</u>	<u>\$ 689.5</u>	<u>\$ —</u>	<u>\$ 1,014.4</u>	<u>\$ 8.1</u>	<u>\$ 2,533.2</u>

Other Assets

Other assets consisted of the following:

	September 29, 2018	September 30, 2017
Other Assets		
Life insurance contracts	\$ 44.2	\$ 41.0
Deferred tax assets	12.9	9.1
Cost-method equity investments	8.8	3.0
Manufacturing access fees	4.6	7.1
Other	27.2	24.5
	<u>\$ 97.7</u>	<u>\$ 84.7</u>

Life insurance contracts were purchased in connection with the Company's Nonqualified Deferred Compensation Plan ("DCP") and are recorded at their cash surrender value (see Note 9 for further discussion).

Research and Software Development Costs

Costs incurred for the research and development of the Company's products are expensed as incurred. Nonrefundable advance payments for goods or services to be received in the future by the Company for use in research and development activities are deferred. The deferred costs are expensed as the related goods are delivered or the services are performed.

The Company accounts for the development costs of software embedded in the Company's products in accordance with ASC 985, *Software*. Costs incurred in the research, design and development of software embedded in products to be sold to customers are charged to expense until technological feasibility of the ultimate product to be sold is established. The

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Company's policy is that technological feasibility is achieved when a working model, with the key features and functions of the product, is available for customer testing. Software development costs incurred after the establishment of technological feasibility and until the product is available for general release are capitalized, provided recoverability is reasonably assured. Capitalized software development costs are amortized over their estimate useful life and recorded within cost of revenues - product.

Foreign Currency Translation

The financial statements of the Company's foreign subsidiaries are translated in accordance with ASC 830, *Foreign Currency Matters*. The reporting currency for the Company is the U.S. dollar. The functional currency of the Company's foreign subsidiaries is determined based on the guidance in ASC 830. The majority of the Company's foreign subsidiaries' functional currency is the applicable local currency, although certain of the Company's foreign subsidiaries' functional currency is the U.S. dollar based on the nature of their operations or functions. Assets and liabilities of subsidiaries whose functional currency is the local currency are translated at the exchange rate in effect at each balance sheet date. Before translation, the Company re-measures foreign currency denominated assets and liabilities, including inter-company accounts receivable and payable, into the functional currency of the respective entity, resulting in unrealized gains or losses recorded in other income, net in the Consolidated Statements of Operations. Revenues and expenses are translated using average exchange rates during the respective period. Foreign currency translation adjustments are accumulated as a component of other comprehensive income (loss) as a separate component of stockholders' equity. Gains and losses arising from transactions denominated in foreign currencies are included in other income, net in the Consolidated Statements of Operations and were not significant in any of the reporting periods presented.

Accumulated Other Comprehensive Loss

Other comprehensive income (loss) includes certain transactions that have generally been reported in the statement of stockholders' equity. The following tables summarize the components and changes in accumulated balances of other comprehensive income for the periods presented:

	Year Ended September 29, 2018					Year Ended September 30, 2017				
	Foreign Currency Translation	Marketable Securities	Pension Plans	Hedged Interest Rate Caps	Total	Foreign Currency Translation	Marketable Securities	Pension Plans	Hedged Interest Rate Caps	Total
Beginning Balance	\$ (18.5)	\$ (0.4)	\$ (1.6)	\$ 4.3	\$ (16.2)	\$ (26.1)	\$ (0.3)	\$ (2.5)	\$ (3.4)	\$ (32.3)
Other comprehensive loss before reclassifications	(8.1)	—	0.5	(5.7)	(13.3)	7.6	2.3	0.9	0.8	11.6
Charges (gains) reclassified to statement of operations	—	0.4	—	3.6	4.0	—	(2.4)	—	6.9	4.5
Ending Balance	\$ (26.6)	\$ —	\$ (1.1)	\$ 2.2	\$ (25.5)	\$ (18.5)	\$ (0.4)	\$ (1.6)	\$ 4.3	\$ (16.2)

In the first quarter of fiscal 2016, the Company sold all of its shares in one of its marketable securities and recorded a realized gain of \$25.1 million in other income, net and resulted in reclassifying a \$7.2 million gain out of accumulated other comprehensive loss to other income, net.

Derivatives

Interest Rate Cap - Cash Flow Hedge

The Company is exposed to certain risks arising from both its business operations and economic conditions. The Company manages its exposure to some of its interest rate risk through the use of interest rate caps, which are derivative financial instruments. The Company does not use derivatives for speculative purposes. For a derivative that is designated as a cash flow hedge, changes in the fair value of the derivative are recognized in accumulated other comprehensive income ("AOCI") to the extent the derivative is effective at offsetting the changes in the cash flows being hedged until the hedged item affects earnings. To the extent there is any hedge ineffectiveness, changes in fair value relating to the ineffective portion are immediately recognized in earnings in other income, net in the Consolidated Statements of Operations.

During fiscal 2015, the Company entered into separate interest rate cap agreements with multiple counter-parties to help mitigate the interest rate volatility associated with the variable rate interest on its credit facilities under the term loan feature of its credit facilities (see Note 5). Interest rate cap agreements provide the right to receive cash if the reference interest

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rate rises above a contractual rate. The aggregate premium paid for the interest rate cap agreements was \$13.2 million, which was the initial fair value of the instruments recorded in the Company's financial statements. Certain of these cap agreements expired during fiscal 2017.

During fiscal 2017, the Company entered into separate interest rate cap agreements with multiple counter-parties to help mitigate the interest rate volatility associated with the variable interest rate on amounts borrowed under the term loan feature of its credit facilities (see Note 5). The aggregate premium paid for the interest rate cap agreements was \$1.9 million, which was the initial fair value of the instruments recorded in the Company's financial statements.

During fiscal 2018, the Company entered into new separate interest rate cap agreements with multiple counter-parties to extend the expiration date of its hedges by an additional year. The aggregate premium paid for these interest rate cap agreements was \$3.7 million, which was the initial fair value of the instruments recorded in the Company's financial statements.

The critical terms of the interest rate caps were designed to mirror the terms of the Company's LIBOR-based borrowings under its Prior Credit Agreement and Amended and Restated Credit Agreement and therefore are highly effective at offsetting the cash flows being hedged. The Company designated these derivatives as cash flow hedges of the variability of the LIBOR-based interest payments on \$1.0 billion of principal, which will end on December 30, 2018 and December 27, 2019 for the interest rate cap agreements entered into in fiscal 2017 and fiscal 2018, respectively.

As of September 29, 2018, the Company determined that the existence of hedge ineffectiveness, if any, was immaterial and all changes in the fair value of the interest rate caps were recorded in the Consolidated Statements of Comprehensive Loss as a component of AOCI.

During fiscal 2018, 2017 and 2016, interest expense of \$3.6 million, \$6.9 million and \$3.9 million, respectively, was reclassified from AOCI to the Company's Consolidated Statements of Income related to the interest rate cap agreements. The Company expects to similarly reclassify approximately \$3.1 million from AOCI to the Consolidated Statements of Operations in the next twelve months.

The aggregate fair value of these interest rate caps was \$7.7 million and \$4.8 million at September 29, 2018 and September 30, 2017, respectively, and is included in both Prepaid expenses and other current assets and Other assets on the Company's Consolidated Balance Sheet. Refer to Note 6 "Fair Value Measurements" below for related fair value disclosures.

Forward Foreign Currency Contracts

The Company enters into forward foreign currency exchange contracts to mitigate certain operational exposures from the impact of changes in foreign currency exchange rates. Such exposures result from the portion of the Company's operations that are denominated in currencies other than the U.S. dollar, primarily the Euro, the UK Pound, the Australian dollar, the Canadian dollar, the Chinese Yuan and the Japanese Yen. These foreign currency exchange contracts are entered into to support transactions made in the ordinary course of business and are not speculative in nature. The contracts are generally for periods of one year or less. The Company did not elect hedge accounting for these forward foreign currency contracts; however, the Company may seek to apply hedge accounting in future scenarios. The change in the fair value of these contracts is recognized directly in earnings as a component of other income, net. During fiscal 2018, 2017 and 2016, the Company recorded net realized losses of \$1.3 million, and net realized gains of \$3.1 million and \$1.5 million, respectively from settling forward foreign currency contracts, and net unrealized gains of \$6.6 million and net unrealized losses of \$3.6 million and \$1.1 million in fiscal 2018, 2017 and 2016, respectively, on outstanding contracts.

As of September 30, 2018, the Company had outstanding forward foreign currency contracts that were not designated for hedge accounting and are used to hedge fluctuations in the U.S. dollar of forecasted transactions denominated in the Euro, UK Pound, Australian Dollar, Canadian Dollar, Chinese Yuan and Japanese Yen with a notional amount of \$288.4 million.

Financial Instrument Presentation

The table below presents the fair value of the Company's derivative financial instruments as well as their classification on the balance sheet as of September 29, 2018:

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	Balance Sheet Location	September 29, 2018	September 30, 2017
Assets:			
Derivative instruments designated as a cash flow hedge:			
Interest rate cap agreements	Prepaid expenses and other current assets	\$ 6.0	\$ 3.6
Interest rate cap agreements	Other Assets	1.7	1.2
		<u>\$ 7.7</u>	<u>\$ 4.8</u>
Derivatives not designated as hedging instruments:			
Forward foreign currency contracts	Prepaid expenses and other current assets	\$ 3.2	\$ 0.4
Liabilities:			
Derivatives not designated as hedging instruments:			
Forward foreign currency contracts	Accrued expenses	\$ 0.2	\$ 4.0

The following table presents the unrealized (gain) loss recognized in AOCI related to the interest rate caps for the following reporting periods:

	Year Ended September 29, 2018	Year Ended September 30, 2017	Year Ended September 24, 2016
Amount of (gain) loss recognized in other comprehensive (loss) income, net of taxes:			
Interest rate cap agreements	\$ (5.7)	\$ 0.8	\$ (3.4)

The following table presents the adjustment to fair value (realized and unrealized) recorded within the Consolidated Statements of Operations for derivative instruments for which the Company did not elect hedge accounting:

Derivatives not classified as hedging instruments	Location of Gain Recognized in Income		
	Year Ended September 29, 2018	Year Ended September 30, 2017	Year Ended September 24, 2016
Forward foreign currency contracts	\$ 5.3	\$ 0.5	\$ 0.4
			Other income, net

Revenue Recognition

The Company generates revenue from the sale of its products, primarily medical imaging systems, aesthetic treatment systems and diagnostic and surgical disposable products, and related services, which are primarily support and maintenance services on its medical imaging systems.

The Company recognizes product revenue upon shipment provided that there is persuasive evidence of an arrangement, there are no uncertainties regarding acceptance, the sales price is fixed or determinable, and collection of the resulting receivable is reasonably assured. Generally, the Company's product arrangements for capital equipment sales, primarily in its Breast Health, Medical Aesthetics and Skeletal Health reporting segments, are multiple-element arrangements, including services, such as installation, training and support and maintenance, and multiple products. Based on the terms and conditions of the product arrangements, the Company believes that these services and undelivered products can be accounted for separately from the delivered product element as the Company's delivered products have value to its customers on a stand-alone basis. Accordingly, revenue for services not yet performed at the time of product delivery are deferred and recognized as such services are performed. The relative selling price of any undelivered products is also deferred at the time of shipment and recognized as revenue when these products are delivered. There is no customer right of return in the Company's sales agreements for its capital equipment.

Service revenues primarily consist of amounts recorded under service and maintenance contracts and repairs not covered under warranty, installation and training, and shipping and handling costs billed to customers. Service and maintenance contract

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revenues are recognized ratably over the term of the contract. Other service revenues are recognized as the services are completed using the specific performance method. Service and other revenue also includes royalties which are recognized in the period the payments are due to the Company.

For revenue arrangements with multiple deliverables, the Company records revenue as separate units of accounting if the delivered items have value to the customer on a stand-alone basis and the delivery or performance of the undelivered items is considered probable and substantially within the Company's control. Some of the Company's products have both software and non-software components that function together to deliver the product's essential functionality. The Company determined that except for its computer-aided detection ("CAD") products and C-View and Intelligent 2D products, the software element in its other products is not within the scope of the software revenue recognition rules, ASC 985-605, *Software—Revenue Recognition*. The Company determined that given the significance of the software component's functionality to its CAD, C-View and Intelligent 2D components, which are sold by its Breast Health segment, these products are within the scope of the software revenue recognition rules. The Company evaluated the appropriate revenue recognition treatment of its hardware products, including its Dimensions digital mammography systems, which have both software and non-software components that function together to deliver the products' essential functionality (i.e., it is a tangible product), and determined they are not within the scope of ASC 985-605.

The Company is required to allocate revenue to its multiple element arrangements based on the relative fair value of each element's selling price. The Company typically determines the selling price of its products based on its best estimate of selling prices ("ESP") and services based on vendor-specific objective evidence of selling price ("VSOE"). The Company determines VSOE based on its normal pricing and discounting practices for the specific product or service when sold on a stand-alone basis. In determining VSOE, the Company's policy requires a substantial majority of selling prices for a product or service to be within a reasonably narrow range. The Company also considers the class of customer, method of distribution, and the geographies into which its products and services are sold when determining VSOE. If VSOE cannot be established, which may occur in instances when a product or service has not been sold separately, stand-alone sales are too infrequent, or product pricing is not within a relatively narrow range, the Company will generally establish the selling price using ESP to allocate arrangement consideration. The objective of ESP is to determine the price at which the Company would typically transact a stand-alone sale of the product or service. ESP is determined by considering a number of factors including Company pricing policies, internal costs and gross margin objectives, method of distribution, information gathered from experience in customer negotiations, market research and information, recent technological trends, competitive landscape and geographies.

For those arrangements accounted for under the software revenue recognition rules, ASC 985-605 generally requires revenue earned on software arrangements involving multiple elements to be allocated to each element based on their relative VSOE of fair value. If VSOE does not exist for a delivered element, the residual method is applied in which the arrangement consideration is allocated to the undelivered elements based on their VSOE with the remaining consideration recognized as revenue for the delivered elements. For multiple-element software arrangements where VSOE of fair value of Post-Contract Customer Support ("PCS") has been established, the Company recognizes revenue using the residual method at the time all other revenue recognition criteria have been met.

Within its Diagnostics segment, the Company manufactured blood screening products according to demand schedules provided by its former collaboration partner, Grifols, S.A. ("Grifols"). In the second quarter of fiscal 2017, the Company sold its assets in the blood screening business to Grifols. Upon the closing of the transaction, the Company's existing collaboration agreement with Grifols terminated, and a new collaboration agreement was executed as part of this transaction for the Company to provide certain research and development services to Grifols. In addition, the Company agreed to provide transition services to Grifols over the next two to three years depending on the nature of the respective service, including the manufacture of inventory, and the Company is in effect serving as a contract manufacturer of assays to Grifols for a two to three year period. The Company also agreed to sell Panther instrumentation and certain supplies to Grifols as part of a long term supply agreement. As such, the Company will generate a level of revenues, but much lower than historical trends prior to fiscal 2017. Prior to the divestiture, the Company's agreement provided that it would share a portion of Grifols's revenue from screening blood donations. Upon shipment to Grifols, the Company recognized product revenue at an agreed upon fixed transfer price, which was not refundable, and recorded the related cost of products sold. Based on the terms of the Company's prior collaboration agreement with Grifols, the Company's ultimate share of the net revenue from sales to the end user in excess of the transfer price was not known until it was reported to the Company by Grifols. On a monthly basis, Grifols reported net revenue generated during the prior month and remitted an additional corresponding net payment to the Company, which was recorded as revenue at that time. This payment combined with the transfer price revenues previously recognized represented the Company's ultimate share of net revenue under the prior agreement.

While the majority of its instruments are placed at customer sites, in certain instances the Company sells instruments to its clinical diagnostics customers and records sales of these instruments upon shipment or delivery, depending on the terms of the arrangement.

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Within its Diagnostics business, and to a lesser extent, its GYN Surgical business, the Company provides its instrumentation (for example, the ThinPrep Processor, ThinPrep Imaging System, and the Panther and Tigris systems) and certain other hardware to customers without requiring them to purchase the equipment or enter into a lease. The Company installs the instrumentation or equipment at the customer's site and recovers the cost of providing the instrumentation or equipment in the amount it charges for its diagnostic tests, assays and other disposables. Customers enter into a customer usage agreement and typically commit to purchasing minimum quantities of disposable products at a stated price over a defined contract term, which is typically between three and five years. Revenue is recognized over the term of the customer usage agreement as tests, assays and other disposable products are shipped or delivered, depending on the customer's arrangement.

Accounts Receivable and Reserves

The Company records reserves for doubtful accounts based upon a specific review of all outstanding invoices, known collection issues and historical experience. The Company regularly evaluates the collectability of its trade accounts receivables and performs ongoing credit evaluations of its customers and adjusts credit limits based upon payment history and its assessment of the customer's current credit worthiness.

Accounts receivable reserve activity for fiscal 2018 , 2017 and 2016 was as follows:

Period Ended:	Balance at Beginning of Period	Charged to Costs and Expenses	Write- offs and Payments	Balance at End of Period
September 29, 2018	\$ 9.8	\$ 7.0	\$ (0.6)	\$ 16.2
September 30, 2017	\$ 12.7	\$ 1.8	\$ (4.7)	\$ 9.8
September 24, 2016	\$ 11.1	\$ 2.0	\$ (0.4)	\$ 12.7

Cost of Service and Other Revenues

Cost of service and other revenues primarily represents payroll and related costs associated with the Company's professional services' employees, consultants, infrastructure costs and overhead allocations, including depreciation, rent and materials consumed in providing the service.

Stock-Based Compensation

The Company accounts for share-based payments in accordance with ASC 718, *Stock Compensation* (ASC 718) . As such, all share-based payments to employees, including grants of stock options, restricted stock units, performance stock units and market stock units and shares issued under the Company's employee stock purchase plan, are recognized in the Consolidated Statements of Operations based on their fair values on the date of grant. In addition as a result of the adoption of ASU 2016-09 in fiscal 2017, all excess tax benefits and deficiencies are recognized as a component of the provision for income taxes on a discrete basis in the period in which the equity awards vest and/or are settled.

Net (Loss) Income Per Share

Basic net (loss) income per share is computed by dividing net income by the weighted average number of common shares outstanding. Diluted net income per share is computed by dividing net income by the weighted average number of common shares and the dilutive effect of potential future issuances of common stock from outstanding stock options, restricted stock units and convertible debt for the period outstanding determined by applying the treasury stock method. In accordance with ASC 718, the assumed proceeds under the treasury stock method include the average unrecognized compensation expense of in-the-money stock options and restricted stock units. This results in the assumed buyback of additional shares, thereby reducing the dilutive impact of equity awards.

The Company applied the provisions of ASC 260, *Earnings Per Share*, Subsection 10-45-44, to determine the diluted weighted average shares outstanding as it related to its convertible notes, and due to the type of debt instrument issued and its accounting policy, the Company applied the treasury stock method and not the if-converted method. The dilutive impact of the Company's convertible notes was based on the difference between the Company's current period average stock price and the conversion price of the convertible notes, provided there was a premium. As such, dilution related to the conversion premium on the 2010 Notes, 2012 Notes and 2013 Notes was included in the calculation of diluted weighted-average shares outstanding in all years to the extent each issuance is dilutive based on the average stock price during each reporting period being greater than the conversion price of the respective Notes.

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A reconciliation of basic and diluted share amounts for fiscal 2018 , 2017 , and 2016 was as follows:

	September 29, 2018	September 30, 2017	September 24, 2016
Basic weighted average common shares outstanding	275,105	279,811	280,213
Weighted average common stock equivalents from assumed exercise of stock options and restricted stock units	—	2,885	2,631
Incremental shares from convertible notes premium	—	2,957	3,312
Diluted weighted average common shares outstanding	275,105	285,653	286,156
Weighted-average anti-dilutive shares related to:			
Outstanding stock options and stock units	5,073	1,677	1,029
Convertible notes	703	12	62

In those reporting periods in which the Company has reported net income, anti-dilutive shares include those stock options that either have an exercise price above the average stock price for the period or the stock options' combined exercise price and average unrecognized stock compensation expense upon exercise is greater than the average stock price. In those reporting periods in which the Company has a net loss, anti-dilutive shares are comprised of the impact of those number of shares that would have been dilutive had the Company had net income plus the number of common stock equivalents that would be antidilutive had the company had net income.

Product Warranties

The Company generally offers a one -year warranty for its products. The Company provides for the estimated cost of product warranties at the time product revenue is recognized. Factors that affect the Company's warranty reserves include the number of units sold, historical and anticipated rates of warranty repairs and the cost per repair. The Company periodically assesses the adequacy of the warranty reserve and adjusts the amount as necessary.

Product warranty activity for fiscal 2018 and 2017 was as follows:

Period ended:	Balance at Beginning of Period	Acquired	Provisions	Settlements/ Adjustments	Balance at End of Period
September 29, 2018	\$ 17.0	\$ —	\$ 18.3	\$ (19.4)	\$ 15.9
September 30, 2017	\$ 5.0	\$ 9.9	\$ 15.3	\$ (13.2)	\$ 17.0

Advertising Costs

Advertising costs are charged to operations as incurred. The Company does not have any direct-response advertising. Advertising costs, which include trade shows and conventions, were approximately \$26.9 million , \$22.5 million and \$20.2 million for fiscal 2018 , 2017 and 2016 , respectively, and were included in selling and marketing expense in the Consolidated Statements of Income.

Recently Adopted Accounting Pronouncements

In August 2018, the FASB issued Accounting Standards Update No. 2018-15, *Intangibles-Goodwill and Other - Internal Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That is a Service Contract* (ASU 2018-15). This guidance reduces diversity in practice and requires companies to apply the internal-use software guidance in ASC 350-40 to implementation costs incurred in a hosting arrangement that is a service contract to determine whether to capitalize certain implementation costs or expense them as incurred. The amendments in the update are effective for annual periods beginning after December 15, 2019, and is applicable to the Company in fiscal 2021. Early adoption is allowed, and the Company adopted ASU 2018-15 in the fourth quarter of fiscal 2018. The adoption of this standard had an immaterial impact.

In January 2017, the FASB issued Accounting Standards Update No. 2017-04, *Intangibles-Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment* (ASU 2017-04). This guidance simplifies how companies calculate goodwill impairments by eliminating Step 2 of the impairment test. The guidance requires companies to compare the fair value

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of a reporting unit to its carrying amount and recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value. This ASU is effective for annual periods beginning after December 15, 2019, and is applicable to the Company in fiscal 2021. Early adoption is allowed, and the Company adopted ASU 2017-04 in the second quarter of fiscal 2018. The Company applied this standard to the interim goodwill impairment test it performed on its Medical Aesthetics reporting unit in the second quarter of fiscal 2018. The interim goodwill impairment test is more fully described in Note 14.

In December 2016, the FASB issued Accounting Standard Update No. 2016-19, *Technical Corrections and Improvements* (ASU 2016-19). This guidance changes how companies classify internal-use software from classification within property, plant, and equipment to intangible assets. The amendments in the update are effective for annual periods beginning after December 15, 2016, and were applicable to the Company in fiscal 2018. The Company adopted ASU 2016-19 in the first quarter of fiscal 2018 and reclassified \$18.4 million of internal-use software from property, plant, and equipment to intangible assets as of September 30, 2017. Additionally, the Company reclassified \$12.3 million of capitalized software embedded in its products from other assets to intangible assets as of September 30, 2017.

Recently Issued Accounting Pronouncements

In August 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement (Topic 820)*. The guidance modifies disclosure requirements for fair value measurements under ASC 820. The guidance is effective for annual periods beginning after December 15, 2019, and is applicable to the Company in fiscal 2021. Early adoption is permitted as of the beginning of an annual reporting period. The Company is currently evaluating the impact of the adoption of ASU 2018-13 on its consolidated financial position and results of operations.

In July 2018, the FASB issued ASU No. 2018-09, *Codification Improvements*. The guidance provides clarifications and improvements to the Codification to help eliminate inconsistencies or incorrect application of various standards. The transition and effective date guidance is based on the facts and circumstances of each amendment. However, many of the amendments in ASU 2018-09 are effective for annual periods beginning after December 15, 2018, and are applicable to the Company in fiscal 2020. The Company is currently evaluating the impact of the adoption of ASU 2018-09 on its consolidated financial position and results of operations.

In October 2016, the FASB issued ASU No. 2016-16, *Income Taxes (Topic 740)*. The guidance requires companies to recognize the income tax effects of intercompany sales and transfers of assets, other than inventory, in the income statement as income tax expense (or benefit) in the period in which the transfer occurs. The guidance is effective for annual periods beginning after December 15, 2017, and is applicable to the Company in fiscal 2019. Early adoption is permitted as of the beginning of an annual reporting period. The Company is currently evaluating the impact of the adoption of ASU 2016-16 on its consolidated financial position and results of operations.

In August 2016, the FASB issued ASU No. 2016-15, *Statement of Cash Flow (Topic 230)*. The guidance reduces diversity in how certain cash receipts and cash payments are presented and classified in the Statements of Cash Flows. Certain of ASU 2016-15 requirements are as follows: 1) cash payments for debt prepayment or debt extinguishment costs should be classified as cash outflows for financing activities, 2) contingent consideration payments made soon after a business combination should be classified as cash outflows for investing activities and cash payment made thereafter should be classified as cash outflows for financing up to the amount of the contingent consideration liability recognized at the acquisition date with any excess classified as operating activities, 3) cash proceeds from the settlement of insurance claims should be classified on the basis of the nature of the loss, 4) cash proceeds from the settlement of Corporate-Owned Life Insurance (COLI) Policies should be classified as cash inflows from investing activities and cash payments for premiums on COLI policies may be classified as cash outflows for investing activities, operating activities, or a combination of investing and operating activities, and 5) cash paid to a tax authority by an employer when withholding shares from an employee's award for tax-withholding purposes should be classified as cash outflows for financing activities. The guidance is effective for annual periods beginning after December 15, 2017, and is applicable to the Company in fiscal 2019. Early adoption is permitted. The adoption of ASU 2016-15 is not expected to have a material effect on the Company's consolidated financial statements.

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments - Credit Losses (Topic 326)*. The guidance requires that financial assets measured at amortized cost be presented at the net amount expected to be collected. The allowance for credit losses is a valuation account that is deducted from the amortized cost basis. The income statement reflects the measurement of credit losses for newly recognized financial assets, as well as the expected credit losses during the period. The measurement of expected credit losses is based upon historical experience, current conditions, and reasonable and supportable forecasts that affect the collectability of the reported amount. Credit losses relating to available-for-sale debt securities will be

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recorded through an allowance for credit losses rather than as a direct write-down to the security. The updated guidance is effective for annual periods beginning after December 15, 2019, and is applicable to the Company in fiscal 2021. Early adoption is permitted. The Company is currently evaluating the impact of the adoption of ASU 2016-13 on its consolidated financial position and results of operations.

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842)*. The guidance requires an entity to recognize a right-of-use asset and a lease liability for virtually all of its leases with terms of more than 12 months. Recognition, measurement and presentation of expenses will depend on classification as a finance or operating lease. The amendments also require certain quantitative and qualitative disclosures about leasing arrangements. In July 2018, the FASB issued ASU No. 2018-10, *Codification Improvements to Topic 842, Leases*, to clarify specific guidance issued in ASC 2016-02. The guidance for both ASU 2016-02 and ASU 2018-10 is effective for annual periods beginning after December 15, 2018, and is applicable to the Company in fiscal 2020. Early adoption is permitted. The updated guidance requires a modified retrospective adoption. The Company is currently evaluating the anticipated impact of the adoption of ASU 2016-02 and ASU 2018-10 on its consolidated financial position and results of operations.

In January 2016, the FASB issued ASU No. 2016-01, *Financial Instruments - Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities*. This guidance changes how entities measure equity investments that do not result in consolidation and are not accounted for under the equity method. Entities will be required to measure these investments at fair value at the end of each reporting period and recognize changes in fair value in net income. A practicability exception will be available for equity investments that do not have readily determinable fair values (e.g. cost method investments), however; the exception requires the Company to consider relevant transactions that can be reasonably known to identify any observable price changes that would impact the fair value. This guidance also changes certain disclosure requirements and other aspects of current U.S. GAAP. This guidance is effective for annual periods beginning after December 15, 2017, and is applicable to the Company in fiscal 2019. Early adoption is permitted. The Company is currently evaluating the anticipated impact of the adoption of ASU 2016-01 on its consolidated financial position and results of operations.

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers (Topic 606)*, which provides guidance for revenue recognition, and has been subsequently updated. This ASU is applicable to any entity that either enters into contracts with customers to transfer goods or services or enters into contracts for the transfer of nonfinancial assets. Topic 606 will supersede the revenue recognition requirements in Topic 605, *Revenue Recognition*, and most industry-specific guidance. The standard's core principle is that a company will recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the company expects to be entitled to receive in exchange for those goods or services. In doing so, companies will need to use more judgment and make more estimates than under current U.S. GAAP. These judgments may include identifying performance obligations in the contract, estimating the amount of variable consideration to include in the transaction price and allocating the transaction price to each separate performance obligation. Topic 606, as amended, is effective prospectively for fiscal years, and interim reporting periods within those years, beginning after December 15, 2017, which is fiscal 2019 for the Company.

The Company will adopt Topic 606 using the modified retrospective method effective September 30, 2018. The Company is in the process of completing its evaluation of the anticipated impact of the adoption of this standard on its consolidated financial position and results of operations. As a result of its implementation efforts to date, the Company believes the most significant effect of adopting Topic 606 will be to transactions which have historically been deferred as a result of extended payment terms (i.e., the fees were not fixed or determinable) and collectability concerns under ASC 605. Under the ASC 606, the Company expects that it will be able to estimate the transaction price, subject to a constraint if the Company determines it is probable a significant revenue reversal may occur in the future. The Company believes in many cases this will result in revenue being recognized earlier upon the satisfaction of performance obligations to which the transaction price is allocated. Upon adoption of Topic 606, the Company will provide additional disclosures in the notes to the consolidated financial statements for the first quarter of fiscal 2019.

(3) Business Combinations

Cynosure, Inc.

On March 22, 2017, the Company completed the acquisition of Cynosure and acquired all of the outstanding shares of Cynosure. Pursuant to the terms and conditions of the merger agreement, each share of common stock of Cynosure outstanding immediately prior to the effective time of the acquisition was canceled and converted into the right to receive \$66.00 in cash less any applicable exercise price. The acquisition was funded through available cash, and the total purchase price was \$1.66 billion. The Company incurred \$18.8 million of direct transaction costs recorded within general and administrative expenses.

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Cynosure, headquartered in Westford, Massachusetts, develops, manufactures, and markets aesthetic treatment systems that enable plastic surgeons, dermatologists and other medical practitioners to perform non-invasive and minimally invasive procedures to remove hair, treat vascular and benign pigmented lesions, remove multi-colored tattoos, revitalize the skin, reduce fat through laser lipolysis, reduce cellulite, clear nails infected by toe fungus, ablate sweat glands and improve women's health. Cynosure also markets radiofrequency (RF) energy-sourced platforms that offer both non-surgical and surgical aesthetic treatments and procedures. Cynosure's results of operations are reported in the Company's Medical Aesthetics reportable segment from the date of acquisition.

The total purchase price was allocated to Cynosure's tangible and identifiable intangible assets and liabilities based on the estimated fair values of those assets as of March 22, 2017, as set forth below. The purchase price allocation is as follows:

Cash	\$	107.2
Marketable securities		82.9
Accounts receivable		40.2
Inventory		120.0
Property, plant and equipment		44.1
Other assets and liabilities, net		11.9
Accounts payable and accrued expenses		(76.6)
Deferred revenue		(11.2)
Capital lease obligation		(25.2)
Identifiable intangible assets:		
Developed technology		736.0
In-process research and development		107.0
Distribution agreement		42.0
Customer relationships		35.0
Trade names		74.0
Deferred income taxes, net		(315.2)
Goodwill		685.7
Purchase Price	\$	<u>1,657.8</u>

In performing the purchase price allocation, the Company considered, among other factors, the intended future use of acquired assets, analysis of historical financial performance and estimates of future performance of Cynosure's business.

As part of the purchase price allocation, the Company determined the identifiable intangible assets were developed technology, in-process research and development ("IPR&D"), a distribution agreement, customer relationships, and trade names. The fair value of the intangible assets was estimated using the income approach, and the cash flow projections were discounted using rates ranging from 11% to 12%, except for the IPR&D assets in which the Company used a range of 14% to 22%. The cash flows were based on estimates used to price the transaction, and the discount rates applied were benchmarked with reference to the implied rate of return from the transaction model and the weighted average cost of capital.

The developed technology assets are comprised of know-how, patents and technologies embedded in Cynosure's products and relate to currently marketed products. The developed technology assets comprise the significant product families of Cynosure, primarily SculpSure, Icon, and PicoSure.

IPR&D projects related to in-process projects that had not reached technological feasibility as of the acquisition date and had no alternative future use. The primary basis for determining technological feasibility of these projects is obtaining regulatory approval to market the underlying product or expected commercial release depending on the project. The Company recorded \$107.0 million of IPR&D related to three projects, which were expected to be completed during fiscal 2018 and 2019 with a cost to complete of approximately \$18.0 million. All of the IPR&D assets were valued using the multiple-period excess earnings method approach.

During the fourth quarter of fiscal 2017, the Company obtained regulatory approval for two projects with an aggregate fair value of \$61.0 million and these assets were reclassified to developed technology. The remaining project, which had an

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initial fair value of \$46.0 million, was abandoned in the second quarter of fiscal 2018 due to unsuccessful clinical results. As a result, the Company recorded a \$46.0 million impairment charge in the second quarter of fiscal 2018.

The distribution agreement intangible asset relates to Cynosure's exclusive distribution rights for the MonaLisa Touch device in certain geographic regions. The customer relationships intangible asset pertains to Cynosure's relationships with its end customers and related service arrangements and distributors throughout the world. Trade names relate to the Cynosure corporate name and primary product names, and the Company used the Relief-from-Royalty Method to estimate the fair value of this asset.

Developed technology, distribution agreement, customer relationships and trade names are being amortized on a straight-line basis over a weighted average period of 11.8 years, 8 years, 7.7 years and 8.9 years, respectively.

The calculation of the excess of the purchase price over the estimated fair value of the tangible net assets and intangible assets acquired was recorded to goodwill. The factors contributing to the recognition of goodwill were based on several strategic and synergistic benefits that were expected to be realized from the Cynosure acquisition. These benefits included the expectation that the Company's entry into the aesthetics market would significantly broaden the Company's offering in women's health. The combined company was expected to benefit from a broader global presence, synergistic utilization of Hologic's direct sales force, primarily its GYN Surgical sales force, with certain Cynosure products, and the Company's entry into an adjacent cash-pay segment. During the second quarter of fiscal 2018, the Company identified indicators of impairment and performed an interim goodwill impairment analysis. This analysis resulted in the Company recording a goodwill impairment charge of \$685.7 million in the second quarter of fiscal 2018 (see Note 2).

Cynosure's revenue and pre-tax loss, which excluded acquisition expenses incurred by the Company, for the period from the acquisition date to September 30, 2017, were \$207.5 million and \$96.4 million, respectively. The pre-tax loss included amortization expense, the impact of the step-up in inventory, retention and integration expenses including legal and consulting fees, and restructuring charges. The following unaudited pro forma information presents the combined financial results for the Company and Cynosure as if the acquisition of Cynosure had been completed at the beginning of the prior fiscal year, September 26, 2015 (the first day of fiscal 2016):

	Twelve Months Ended	
	September 30, 2017	September 24, 2016
Revenue	\$ 3,241.4	\$ 3,244.6
Net income	\$ 768.5	\$ 252.3
Basic earnings per common share	\$ 2.75	\$ 0.90
Diluted earnings per common share	\$ 2.69	\$ 0.88

The pro forma information for fiscal 2017 and 2016 was calculated after applying the Company's accounting policies and the impact of acquisition date fair value adjustments. Fiscal 2017 pro forma net income was adjusted to exclude acquisition-related transaction costs and restructuring costs solely related to the consolidation of the Medical Aesthetics business, which would have been included in fiscal 2016 pro forma net income. In addition, the fiscal 2017 pro forma net income was adjusted to exclude expenses related to the fair value adjustments associated with the acquisition of Cynosure that were recorded by the Company. The pro forma condensed consolidated financial results have been prepared for comparative purposes only and include certain adjustments to reflect pro forma results of operations as if the acquisition occurred on September 27, 2015 (the beginning of fiscal 2016), such as increased amortization for the fair value of acquired intangible assets. The pro forma information does not reflect the effect of costs or synergies that would have been expected to result from the integration of the acquisition. The pro forma information does not purport to be indicative of the results of operations that actually would have resulted had the combination occurred at the beginning of the period presented, or of future results of the consolidated entities.

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Medicor Medical Supply

On April 7, 2017, the Company completed the acquisition of MMS Medicor Medical Supplies GmbH ("Medicor") for a purchase price of approximately \$19.0 million, which includes a working capital adjustment of \$2.0 million that was paid in the fourth quarter of fiscal 2017, and a holdback of \$1.9 million that is payable two years from the date of acquisition. Medicor was a long-standing distributor of the Company's Breast and Skeletal Health products in Germany, Austria and Switzerland. Based on the Company's valuation, it has allocated \$5.4 million of the purchase price to the intangible assets, which have a weighted average life of 7.7 years, and \$8.9 million to goodwill. The remaining \$4.7 million of purchase price was allocated to the acquired tangible assets and liabilities.

Emsor, S.A.

On December 11, 2017, the Company completed the acquisition of Emsor S.A. ("Emsor") for a purchase price of \$16.3 million, which includes a hold-back of \$0.5 million that is payable eighteen months from the date of acquisition, and contingent consideration which the Company has estimated at \$4.9 million. The contingent consideration is payable upon Emsor achieving predefined amounts of cumulative revenue over a two year period from the date of acquisition. Emsor was a distributor of the Company's Breast and Skeletal Health products in Spain and Portugal. Based on the Company's preliminary valuation, it has allocated \$4.6 million of the purchase price to the preliminary value of customer relationship intangible assets and \$5.7 million to goodwill. The remaining \$6.0 million of purchase price has been allocated to acquired tangible assets and liabilities. The allocation of the purchase price is preliminary as the Company continues to gather information supporting the acquired assets and liabilities.

Faxitron

On July 31, 2018, the Company completed the acquisition of Faxitron Bioptics, LLC ("Faxitron") and acquired all of the outstanding shares of Faxitron. The acquisition was funded through available cash, and the total purchase price was \$89.0 million, which include hold-backs of \$11.7 million that are payable up to one year from the date of acquisition, and contingent consideration which the Company has estimated at \$2.9 million. The contingent consideration is payable upon meeting certain revenue growth metrics. Faxitron, headquartered in Tucson, Arizona, develops, manufactures, and markets digital radiography systems. Faxitron's results of operations are reported in the Company's Breast Health reportable segment from the date of acquisition.

The total purchase price was allocated to Faxitron's preliminary tangible and identifiable intangible assets and liabilities based on the estimated fair values of those assets as of July 31, 2018, as set forth below. The preliminary purchase price allocation is as follows:

Cash	\$	2.4
Accounts receivable		4.0
Inventory		6.0
Other assets		3.1
Accounts payable and accrued expenses		(4.9)
Deferred revenue		(1.9)
Long-term debt		(3.3)
Identifiable intangible assets:		
Developed technology		44.9
In-process research and development		5.5
Customer relationships		0.7
Trade names		2.3
Deferred income taxes, net		(11.4)
Goodwill		41.6
Purchase Price	\$	89.0

In performing the preliminary purchase price allocation, the Company considered, among other factors, the intended future use of acquired assets, analysis of historical financial performance and estimates of future performance of Faxitron's

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business. The Company has not yet obtained all of the information related to the fair value of the acquired assets and liabilities, primarily taxes, to finalize the purchase price allocation.

As part of the preliminary purchase price allocation, the Company has determined the identifiable intangible assets are developed technology, in-process research and development ("IPR&D"), customer relationships, and trade names. The preliminary fair value of the intangible assets has been estimated using the income approach, and the cash flow projections were discounted using rates ranging from 17% to 19%. The cash flows are based on estimates used to price the transaction, and the discount rates applied were benchmarked with reference to the implied rate of return from the transaction model and the weighted average cost of capital. The weighted average life of developed technology and customer relationships is 9 years the for trade names it is 7 years. The preliminary calculation of the excess of the purchase price over the estimated fair value of the tangible net assets and intangible assets acquired was recorded to goodwill. The factors contributing to the recognition of the preliminary amount of goodwill are based on synergistic benefits that are expected to be realized from this acquisition. Benefits include the expectation of broadening the Company's Breath Health portfolio of products and technology. None of the goodwill is expected to be deductible for income tax purposes.

Focal Therapeutics

On October 1, 2018, the Company completed the acquisition of Focal Therapeutics, Inc. ("Focal") for an initial purchase price of approximately \$125.0 million and paid \$108.0 million in initial consideration, which is less certain holdbacks. Focal, headquartered in California, has commercialized its BioZorb marker, which is an implantable three-dimensional marker that helps clinicians overcome challenges in breast conserving surgery, or lumpectomy. Given that the acquisition closed on October 1, 2018, the Company determined it was impractical to provide all the disclosure required for a business combination pursuant to ASC 805.

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4. Restructuring Charges

The Company evaluates its operations for opportunities to improve operational effectiveness and efficiency, including facility and operations consolidation, and to better align expenses with revenues. As a result of these assessments, the Company has undertaken various restructuring actions which are described below. The following table displays charges taken related to restructuring actions in fiscal 2018, 2017 and 2016 and a rollforward of the charges to the accrued balances as of September 29, 2018:

	Fiscal 2018 Actions	Fiscal 2017 Actions	Fiscal 2016 Actions	Total	
Restructuring Charges					
Fiscal 2016 charges:					
Workforce reductions	\$ —	\$ —	\$ 10.5	\$ 10.5	
Fiscal 2016 restructuring charges	\$ —	\$ —	\$ 10.5	\$ 10.5	
Fiscal 2017 charges:					
Workforce reductions	\$ —	\$ 8.5	\$ —	\$ 8.5	
Facility closure costs	—	—	4.8	4.8	
Fiscal 2017 restructuring charges	\$ —	\$ 8.5	\$ 4.8	\$ 13.3	
Fiscal 2018 charges:					
Workforce reductions	\$ 11.7	\$ —	\$ —	\$ 11.7	
Facility closure costs	0.9	—	1.6	2.5	
Fiscal 2018 restructuring charges	\$ 12.6	\$ —	\$ 1.6	\$ 14.2	
	Fiscal 2018 Actions	Fiscal 2017 Actions	Fiscal 2016 Actions	Previous Other Charges	Total
Rollforward of Accrued Restructuring					
Balance as of September 26, 2015	\$ —	\$ —	\$ —	\$ 5.7	\$ 5.7
Fiscal 2016 restructuring charges	\$ —	\$ —	\$ 10.5	\$ —	\$ 10.5
Stock-based compensation	—	—	(0.4)	—	(0.4)
Severance payments	—	—	(4.6)	(4.4)	(9.0)
Other payments	—	—	—	(0.5)	(0.5)
Balance as of September 24, 2016	\$ —	\$ —	\$ 5.5	\$ 0.8	\$ 6.3
Fiscal 2017 restructuring charges	\$ —	\$ 8.5	\$ 4.8	\$ —	\$ 13.3
Severance payments	—	(1.0)	(5.4)	(0.2)	(6.6)
Other payments	—	—	(1.2)	(0.3)	(1.5)
Balance as of September 30, 2017	\$ —	\$ 7.5	\$ 3.7	\$ 0.3	\$ 11.5
Fiscal 2018 restructuring charges	\$ 12.6	\$ —	\$ 1.6	\$ —	\$ 14.2
Stock-based compensation	(1.3)	—	—	—	(1.3)
Severance payments and adjustments	(6.8)	(6.7)	(0.2)	—	(13.7)
Other payments	(0.2)	—	(1.2)	(0.2)	(1.6)
Balance as of September 29, 2018	\$ 4.3	\$ 0.8	\$ 3.9	\$ 0.1	\$ 9.1

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Fiscal 2018 Actions

During the first, second and third quarters of fiscal 2018, the Company decided to terminate certain employees across the organization, including a corporate executive and primarily sales and marketing personnel in its Diagnostics and Medical Aesthetics reportable segments. The charges were recorded pursuant to ASC 712, *Compensation-Nonretirement Postemployment Benefits* (ASC 712) or ASC 420, *Exit or Disposal Cost Obligations* (ASC 420) depending on the employee. As such, the Company recorded severance and benefits charges of \$9.0 million in fiscal 2018. Included within the charge is \$1.3 million related to the modification of equity awards.

During fiscal 2018, the Company finalized its decision and plan to consolidate its legacy international accounting and customer service organizations into its Manchester, UK location and will be eliminating these positions in Belgium, France, Italy, Spain and Germany. This transition is expected to be completed in the first quarter of fiscal 2019 and upon completion these employees will be terminated. During fiscal 2018, the Company recorded \$2.2 million for severance and benefits pursuant to both ASC 712 and ASC 420 depending on the legal requirements on a country by country basis. The Company expects to record an additional \$0.6 million in the first quarter of fiscal 2019 for the remaining pro-rata charges.

During the third quarter of fiscal 2018, the Company decided to close its Hicksville, New York facility where it manufactured the Cynosure element products. In connection with this plan, certain employees, primarily in manufacturing, were terminated. The employees were notified of termination and related benefits in the third quarter of fiscal 2018, and the Company recorded these charges pursuant to ASC 420. Employees were required to remain employed during this transition period and charges were recorded ratably over the required service period, which is expected to continue through the first quarter of fiscal 2019. The Company recorded a total of \$0.5 million in severance and benefits charges in fiscal 2018. The Company expects to record an additional \$0.3 million in the first quarter of fiscal 2019 for the remaining pro-rata charges.

Fiscal 2017 Actions

During the second quarter of fiscal 2017, the Company completed its acquisition of Cynosure. In connection with the acquisition, the Company decided to terminate certain Cynosure executives in the second quarter of fiscal 2017 and recorded \$1.5 million in severance and benefits charges. During the third and fourth quarters of fiscal 2017, the Company terminated additional executives and employees and recorded \$4.3 million and \$1.3 million, respectively, in severance and benefits charges. The charges were recorded pursuant to ASC 712 and ASC 420 depending on the executive.

During the fourth quarter of fiscal 2017, the decision was made to reduce headcount and related costs in R&D within Breast Health and to eliminate certain manufacturing personnel, primarily in Diagnostics. The majority of employees were notified of termination and related benefits in the fourth quarter of fiscal 2017, and the Company recorded these charges pursuant to ASC 420 as the benefits qualify as one-time termination benefits. As such, the Company recorded a charge for severance and benefits for these employees of \$1.4 million in the fourth quarter.

Fiscal 2016 Actions

During the third quarter of fiscal 2015, the Company decided to close its Bedford, Massachusetts facility where it manufactured its Skeletal Health products and provided certain support manufacturing services for its Breast Health segment. The manufacturing of the Skeletal Health products was outsourced to a third-party, and the Breast Health manufacturing services were moved to the Company's Danbury, Connecticut and Marlborough, Massachusetts facilities. In addition, research and development, sales and services support and administrative functions were moved to both Marlborough and Danbury. The transition was substantially completed by the end of calendar year 2016. In connection with this plan, certain employees, primarily in manufacturing, were terminated. The employees were notified of termination and related benefits in the first quarter of fiscal 2016, and the Company recorded these charges pursuant to ASC 420. Employees were required to remain employed during this transition period and charges were recorded ratably over the required service period. The Company recorded \$1.7 million in severance and benefits charges related to this action in fiscal 2016. This action was completed in the first quarter of fiscal 2017.

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In connection with the closure of the Bedford location, during the first quarter of fiscal 2017 the Company recorded \$3.5 million for lease obligation charges related to the first floor of the facility as the Company determined it had met the cease-use date criteria. The Company made certain assumptions regarding the time period it would take to obtain a subtenant and the sublease rates it could obtain. During the third quarter of fiscal 2017, the Company updated its assumption regarding the time period it would take to obtain a subtenant at the Bedford location and as a result recorded an additional \$1.3 million lease obligation charge. During the third quarter of fiscal 2018, the Company further adjusted its assumptions and lowered the estimate of the sublease income rate and extended the time period to obtain a sub-tenant. As a result, the Company recorded an additional charge of \$1.6 million. These estimates may vary from the actual sublease agreements executed, if at all, resulting in an adjustment to the charge. The Company has vacated other portions of the building but not the entire facility, and at this time does not meet the cease-use date criteria to record additional restructuring charges.

During the first quarter of fiscal 2016, the Company began implementing a second plan to consolidate and improve operational efficiency of its international sales and marketing and field services operations and certain support functions. As a result, the Company identified and terminated certain employees during each quarter in fiscal 2016. Severance and benefits under this action were recorded pursuant to ASC 712, and ASC 420 depending on the circumstances. The Company recorded severance and benefit charges of \$7.9 million in fiscal 2016 related to this plan.

5. Borrowings and Credit Agreements

The Company's borrowings consisted of the following:

	September 29, 2018	September 30, 2017
Current debt obligations, net of debt discount and deferred issuance costs:		
Term Loan	\$ 74.7	\$ 121.3
Revolver	300.0	345.0
Securitization Program	225.0	200.0
Convertible Notes	—	484.5
Total current debt obligations	599.7	1,150.8
Long-term debt obligations, net of debt discount and issuance costs:		
Term Loan	1,376.3	1,190.5
2022 Senior Notes	—	981.6
2025 Senior Notes	935.2	—
2028 Senior Notes	393.1	—
Total long-term debt obligations	2,704.6	2,172.1
Total debt obligations	<u>\$ 3,304.3</u>	<u>\$ 3,322.9</u>

The debt maturity schedule for the Company's obligations as of September 29, 2018 is as follows:

	2019	2020	2021	2022	2023	2024 and Thereafter	Total
Term Loan	\$ 75.0	\$ 75.0	\$ 112.5	\$ 150.0	\$ 1,050.0	\$ —	\$ 1,462.5
Revolver	300.0	—	—	—	—	—	300.0
Securitization Program	225.0	—	—	—	—	—	225.0
2025 Senior Notes	—	—	—	—	—	950.0	950.0
2028 Senior Notes	—	—	—	—	—	400.0	400.0
	<u>\$ 600.0</u>	<u>\$ 75.0</u>	<u>\$ 112.5</u>	<u>\$ 150.0</u>	<u>\$ 1,050.0</u>	<u>\$ 1,350.0</u>	<u>\$ 3,337.5</u>

Amended and Restated Credit Agreement

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On October 3, 2017, the Company and certain of its domestic subsidiaries entered into an Amended and Restated Credit and Guaranty Agreement (the "Amended and Restated Credit Agreement") with Bank of America, N.A. in its capacity as Administrative Agent, Swing Line Lender and L/C Issuer, and certain other lenders from time to time party thereto. The Amended and Restated Credit Agreement amended and restated the Company's prior credit and guaranty agreement, originally dated as of May 29, 2015 (the "Prior Credit Agreement"). The proceeds under the Amended and Restated Credit Agreement of \$1.8 billion were used, among other things, to pay off the Term Loan of \$1.32 billion and the Revolver then outstanding under the Company's Prior Credit Agreement.

The credit facilities under the Amended and Restated Credit Agreement consist of:

- A \$1.5 billion secured term loan to the Company ("Amended Term Loan") with a maturity date of October 3, 2022; and
- A secured revolving credit facility (the "Amended Revolver") under which the Company may borrow up to \$1.5 billion, subject to certain sublimits, with a maturity date of October 3, 2022.

Among other uses, the Company has used its Amended Revolver to make payments on its outstanding debt, to fund acquisitions, and to fund repurchases of its common stock. During the third quarter of fiscal 2018, the Company borrowed \$250.0 million under its Amended Revolver to cash settle the conversions of its 2.00% Convertible Senior Notes due 2042 of which \$165.0 million was repaid. As of September 29, 2018, the Company had \$300.0 million outstanding under the Amended Revolver. Subsequent to September 29, 2018, the Company borrowed an additional \$50.0 million.

Borrowings under the Amended and Restated Credit Facilities bear interest, at the Company's option and in each case plus an applicable margin as follows:

- *Amended Term Loan* : at the Base Rate, Eurocurrency Rate or LIBOR Daily Floating Rate (as defined in the Amended and Restated Credit Agreement),
- *Amended Revolver* : if funded in U.S. dollars, the Base Rate, Eurocurrency Rate, or LIBOR Daily Floating Rate, and, if funded in an alternative currency, the Eurocurrency Rate; and if requested under the swing line sublimit, the Base Rate.

The applicable margin to the Base Rate, Eurocurrency Rate, or LIBOR Daily Floating Rate is subject to specified changes depending on the total net leverage ratio as defined in the Amended and Restated Credit Agreement. The borrowings of the Amended Term Loan initially bear interest at an annual rate equal to the Eurocurrency Rate (i.e., the LIBOR rate) plus an Applicable Rate equal to 1.50%. The borrowings of the Amended Revolver initially bear interest at a rate equal to the LIBOR Daily Floating Rate plus an Applicable Rate equal to 1.50%. The Company is also required to pay a quarterly commitment fee calculated on the undrawn committed amount available under the Amended Revolver.

The Company is required to make scheduled principal payments under the Amended Term Loan in increasing amounts ranging from \$9.375 million per three-month period commencing with the three-month period ending on December 29, 2017 to \$37.5 million per three-month period commencing with the three-month period ending on December 23, 2021. The remaining balance of the Amended Term Loan and any amounts outstanding under the Amended Revolver are due at maturity. In addition, subject to the terms and conditions set forth in the Amended and Restated Credit Agreement, the Company is required to make certain mandatory prepayments from the net proceeds of specified types of asset sales (subject to certain reinvestment rights), debt issuances and insurance recoveries (subject to certain reinvestment rights). These mandatory prepayments are required to be applied by the Company, first, to the Amended Term Loan, second, to any outstanding amount under any Swing Line Loans (as defined in the Amended and Restated Credit Agreement), third, to the Amended Revolver, fourth to prepay any outstanding reimbursement obligations with respect to Letters of Credit (as defined in the Amended and Restated Credit Agreement) and fifth, to cash collateralize any Letters of Credit. Subject to certain limitations, the Company may voluntarily prepay any of the Amended and Restated Credit Facilities without premium or penalty.

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Interest expense, non-cash interest expense, weighted average interest rate, and interest rate at the end of period under the Amended and Restated Credit Agreement, in fiscal 2018, and Prior Credit Agreement, in fiscal 2017 and 2016, is as follows:

	September 29, 2018	September 30, 2017	September 24, 2016
Interest expense (1)	\$ 60.8	\$ 42.3	\$ 40.4
Non-cash interest expense	\$ 2.6	\$ 4.2	\$ 4.4
Weighted average interest rate	3.23%	2.39%	2.08%
Interest rate at end of period	3.74%	2.73%	2.05%

(1) Interest expense includes non-cash interest expense related to the amortization of the deferred issuance costs and accretion of the debt discount.

The Amended and Restated Credit Agreement contains affirmative and negative covenants customarily applicable to senior secured credit facilities, including covenants restricting the ability of the Company, subject to negotiated exceptions, to incur additional indebtedness and grant additional liens on its assets, engage in mergers or acquisitions or dispose of assets, enter into sale-leaseback transactions, pay dividends or make other distributions, voluntarily prepay other indebtedness, enter into transactions with affiliated persons, make investments, and change the nature of their businesses. In addition, the Amended and Restated Credit Agreement requires the Company to maintain certain financial ratios. The Amended and Restated Credit Agreement also contains customary representations and warranties and events of default, including payment defaults, breach of representations and warranties, covenant defaults, cross defaults and an event of default upon a change of control of the Company.

Borrowings are secured by first-priority liens on, and a first-priority security interest in, substantially all of the assets of the Company, with certain exceptions. For example, borrowings under the Amended and Restated Credit Agreement are not secured by those accounts receivable that are transferred to the special purpose entity under the Company's Accounts Receivable Securitization program. The Amended and Restated Credit Agreement contains total net leverage ratio and interest coverage ratio financial covenants measured as of the last day of each fiscal quarter and an excess cash flow prepayment requirement measured as of the end of each fiscal year. The total net leverage ratio was 5.00 :1.00 beginning on the Company's fiscal quarter ended December 30, 2017, and then decreases over time to 4.50 :1.00 for the quarter ending March 27, 2021. The interest coverage ratio was 3.75 :1.00 beginning on the Company's fiscal quarter ended December 30, 2017, and remains as such for each quarter thereafter. The total net leverage ratio is defined as the ratio of the Company's consolidated net debt as of the quarter end to its consolidated adjusted EBITDA (as defined in the Amended and Restated Credit Agreement) for the four-fiscal quarter period ending on the measurement date. The interest coverage ratio is defined as the ratio of the Company's consolidated adjusted EBITDA for the prior four-fiscal quarter period ending on the measurement date to adjusted consolidated cash interest expense (as defined in the Amended and Restated Credit Agreement) for the same measurement period. The Company was in compliance with these covenants as of September 29, 2018.

The Company evaluated the Amended and Restated Credit Agreement for derivatives pursuant to ASC 815, *Derivatives and Hedging*, and identified embedded derivatives that required bifurcation as the features are not clearly and closely related to the host instrument. The embedded derivatives were a default provision, which could require additional interest payments, and a provision requiring contingent payments to compensate the lenders for changes in tax deductions. The Company determined that the fair value of these embedded derivatives was nominal as of September 29, 2018.

Pursuant to ASC 470, *Debt* (ASC 470), the accounting for entering into the Amended and Restated Credit Agreement and using the proceeds to pay off the Prior Credit Agreement was evaluated on a creditor-by-creditor basis to determine whether each transaction should be accounted for as a modification or extinguishment. Certain creditors under the Prior Credit Agreement did not participate in this refinancing transaction and ceased being creditors of the Company. As a result, the Company recorded a debt extinguishment loss of \$1.0 million in the first quarter of fiscal 2018 to write-off the pro-rata amount of unamortized debt discount and deferred issuance costs related to these creditors. For the remainder of the creditors, this transaction was accounted for as a modification because on a creditor-by-creditor basis the present value of the cash flows between the two debt instruments before and after the transaction was less than 10%. Pursuant to ASC 470, subtopic 50-40, third-party costs of \$1.7 million related to this transaction were recorded as interest expense and \$4.9 million was recorded as a reduction to debt representing deferred issuance costs and debt discount for fees paid directly to the lenders.

Prior Credit Agreement

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On May 29, 2015, the Company and certain of its domestic subsidiaries entered into a Credit and Guaranty Agreement (the “Prior Credit Agreement”) with Bank of America, N.A., in its capacity as Administrative Agent, Swing Line Lender and L/C Issuer, and certain other lenders party thereto. This Prior Credit Agreement replaced the Company's previous senior secured credit facility with Goldman Sachs Bank USA, in its capacity as administrative agent and collateral agent and the lenders party thereto (“August 2012 Credit Agreement”) entered into on August 1, 2012, and the proceeds under the Prior Credit Agreement of \$1.68 billion were used to pay off the amounts outstanding under the August 2012 Credit Agreement.

The credit facilities (“Credit Facilities”) under the Credit Agreement consisted of:

- A \$1.5 billion secured term loan to the Company with a final maturity date of May 29, 2020 (the “Term Loan”); and
- A secured revolving credit facility under which the Borrowers (as defined below) may borrow up to \$1 billion, subject to certain sublimits, with a final maturity date of May 29, 2020 (the “Revolver”).

Senior Notes

2025 Senior Notes

On October 10, 2017, the Company completed a private placement of \$350 million aggregate principal amount of its 4.375% Senior Notes due 2025 (the “2025 Senior Notes”) at an offering price of 100% of the aggregate principal amount of the 2025 Senior Notes. On January 19, 2018, the Company completed a private placement and allocated an additional \$600 million in aggregate principal amount to its 2025 Senior Notes pursuant to a supplement to the indenture governing the Company's existing 2025 Senior Notes at an offering price of 100% of the aggregate principal amount. As a result, the total aggregate principal balance of 2025 Senior Notes is \$950 million. The 2025 Senior Notes are general senior unsecured obligations of the Company and are guaranteed on a senior unsecured basis by certain domestic subsidiaries. The 2025 Senior Notes mature on October 15, 2025 and bear interest at the rate of 4.375% per year, payable semi-annually on April 15 and October 15 of each year, commencing on April 15, 2018.

The Company may redeem the 2025 Senior Notes at any time prior to October 15, 2020 at a price equal to 100% of the aggregate principal amount so redeemed, plus accrued and unpaid interest, if any, to the redemption date and a make-whole premium set forth in the indenture. The Company may also redeem up to 35% of the aggregate principal amount of the 2025 Senior Notes with the net cash proceeds of certain equity offerings at any time and from time to time before October 15, 2020, at a redemption price equal to 104.375% of the aggregate principal amount so redeemed, plus accrued and unpaid interest, if any, to the redemption date. The Company also has the option to redeem the 2025 Senior Notes on or after: October 15, 2020 through October 14, 2021 at 102.188% of par; October 15, 2021 through October 14, 2022 at 101.094% of par; and October 15, 2022 and thereafter at 100% of par. In addition, if the Company undergoes a change of control coupled with a decline in ratings, as provided in the indenture, the Company will be required to make an offer to purchase each holder's 2025 Senior Notes at a price equal to 101% of their principal amount, plus accrued and unpaid interest, if any, to the repurchase date.

The Company evaluated the 2025 Senior Notes for derivatives pursuant to ASC 815 and did not identify any embedded derivatives that require bifurcation. All features were deemed to be clearly and closely related to the host instrument.

2028 Senior Notes

On January 19, 2018, the Company completed a private placement of \$1.0 billion aggregate principal amount of senior notes and allocated \$400 million in aggregate principal amount to its 4.625% Senior Notes due 2028 (the “2028 Senior Notes”) at an offering price of 100% of the aggregate principal amount of the 2028 Senior Notes. The 2028 Senior Notes are general senior unsecured obligations of the Company and are guaranteed on a senior unsecured basis by certain domestic subsidiaries. The 2028 Senior Notes mature on February 1, 2028 and bear interest at the rate of 4.625% per year, payable semi-annually on February 1 and August 1 of each year, commencing on August 1, 2018.

The Company may redeem the 2028 Senior Notes at any time prior to February 1, 2023 at a price equal to 100% of the aggregate principal amount so redeemed, plus accrued and unpaid interest, if any, to the redemption date and a make-whole premium set forth in the indenture. The Company may also redeem up to 35% of the aggregate principal amount of the 2028 Senior Notes with the net cash proceeds of certain equity offerings at any time and from time to time before February 1, 2021, at a redemption price equal to 104.625% of the aggregate principal amount so redeemed, plus accrued and unpaid interest, if any, to the redemption date. The Company also has the option to redeem the 2028 Senior Notes on or after: February 1, 2023 through February 1, 2024 at 102.312% of par; February 1, 2024 through February 1, 2025 at 101.541% of par; February 1, 2025 through February 1, 2026 at 100.770% of par; and February 1, 2026 and thereafter at 100% of par. In addition, if the Company undergoes a change of control coupled with a decline in ratings, as provided in the indenture, the Company will be

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required to make an offer to purchase each holder's 2028 Senior Notes at a price equal to 101% of their principal amount, plus accrued and unpaid interest, if any, to the repurchase date.

The Company evaluated the 2028 Senior Notes for derivatives pursuant to ASC 815 and did not identify any embedded derivatives that require bifurcation. All features were deemed to be clearly and closely related to the host instrument.

Interest expense for the 2028 Senior Notes, 2025 Senior Notes and 2022 Senior Notes is as follows:

	Interest Rate	September 29, 2018		September 30, 2017		September 24, 2016	
		Interest Expense (1)	Non-Cash Interest Expense	Interest Expense (1)	Non-Cash Interest Expense	Interest Expense (1)	Non-Cash Interest Expense
2028 Senior Notes	4.625%	\$ 13.3	\$ 0.5	\$ —	\$ —	\$ —	\$ —
2025 Senior Notes	4.375%	34.7	1.6	—	—	—	—
2022 Senior Notes	5.250%	21.2	1.5	57.3	3.9	56.0	3.8
Total		\$ 69.2	\$ 3.6	\$ 57.3	\$ 3.9	\$ 56.0	\$ 3.8

(1) Interest expense includes non-cash interest expense related to the amortization of the deferred issuance costs and accretion of the debt discount.

2022 Senior Notes

The Company had 5.250% Senior Notes due 2022 (the "2022 Senior Notes") outstanding and bore interest at the rate of 5.250% per year, payable semi-annually on January 15 and July 15 of each year. The Company used the net proceeds of the 2025 Senior Notes and the 2028 Senior Notes offering in January 2018 to redeem in full the 2022 Senior Notes in the aggregate principal amount of \$1.0 billion on February 15, 2018 at an aggregate redemption price of \$1.04 billion, including a make-whole provision payment \$37.7 million. Since the Company planned to use the proceeds from the 2025 Senior Notes and the 2028 Senior Notes offering to redeem the 2022 Senior Notes, the Company evaluated the accounting for this transaction under ASC 470 to determine modification versus extinguishment accounting on a creditor-by-creditor basis. Certain 2022 Senior Note holders either did not participate in this refinancing transaction or reduced their holdings and these transactions were accounted for as extinguishments. As a result, the Company recorded a debt extinguishment loss in the second quarter of fiscal 2018 of \$44.9 million, which comprised pro-rata amounts of the make-whole provision premium payment, debt discount and debt issuance costs. For the remaining 2022 Senior Notes holders who participated in the refinancing, these transactions were accounted for as modifications because on a creditor-by-creditor basis the present value of the cash flows between the debt instruments before and after the transaction was less than 10%. The Company recorded a portion of the transaction expenses of \$2.6 million to interest expense pursuant to ASC 470, subtopic 50-40. The remaining debt issuance costs of \$1.5 million and debt discount of \$1.5 million related to the modified debt were allocated between the 2025 Senior Notes and 2028 Senior Notes on a pro-rata basis, and will be amortized over the life of the debt using the effective interest method.

Convertible Notes

As of September 29, 2018, the Company had no Convertible Notes outstanding. The following describes the Convertible Note transactions during fiscal 2018, 2017, and 2016.

On December 10, 2007, the Company issued and sold \$1.725 billion, at par, of 2.00% Convertible Senior Notes due December 15, 2037 ("2007 Notes"). On November 18, 2010, the Company entered into separate, privately-negotiated exchange agreements under which it retired \$450.0 million in aggregate principal of its 2007 Notes for \$450.0 million in aggregate principal of new 2.00% Convertible Exchange Senior Notes due December 15, 2037 ("2010 Notes"). On February 29, 2012, the Company entered into separate, privately-negotiated exchange agreements under which it retired \$500.0 million in aggregate principal of the 2007 Notes for \$500.0 million in aggregate principal of new 2.00% Convertible Senior Notes due March 1, 2042 ("2012 Notes"). On February 14, 2013, the Company entered into separate, privately-negotiated exchange agreements under which it retired \$370.0 million in aggregate principal of the 2007 Notes for \$370.0 million in aggregate principal of new 2.00% Convertible Senior Notes due December 15, 2043 ("2013 Notes"). The remaining 2007 Notes were redeemed in fiscal 2014.

On November 9, 2016, the Company announced that pursuant to the terms of the indenture for the 2010 Notes, holders of the 2010 Notes had the option of requiring the Company to repurchase their 2010 Notes on December 16, 2016 at a repurchase price payable in cash equal to 100% of the original principal amount of the 2010 Notes. None of the 2010 Notes were surrendered for repurchase pursuant to the option. In addition, the Company also announced on November 9, 2016 that, pursuant to the terms of the indenture, it had elected to redeem, on December 19, 2016, all of the then outstanding 2010 Notes

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at a redemption price payable in cash equal to 100% of the accreted principal amount of the 2010 Notes. Holders of the 2010 Notes also had a right to convert their 2010 Notes. During the first quarter of fiscal 2017, all of the outstanding 2010 Notes were either converted or surrendered for conversion in aggregate principal of \$12.3 million, which was paid out over the first and second quarters of fiscal 2017. The payouts included an additional \$8.7 million of premium payments due to the Company's stock price exceeding the conversion price.

The 2012 Notes and the 2013 Notes are collectively referred to herein as the "Convertible Notes."

On January 29, 2018, the Company announced that pursuant to the terms of the indenture for the 2012 Notes, holders of the 2012 Notes had the option of requiring the Company to repurchase their 2012 Notes on March 1, 2018 at a repurchase price payable in cash equal to 100% of the accreted principal amount of the 2012 Notes, plus accrued and unpaid interest. The Company also announced on January 29, 2018 that, it had elected to redeem, on March 6, 2018, all of the then outstanding 2012 Notes at a redemption price payable in cash equal to 100% of the accreted principal amount of the 2012 Notes, plus accrued and unpaid interest. Holders also had the right to convert their 2012 Notes. During the second quarter of fiscal 2018, 2012 Notes in aggregate original principal amount of \$200.5 million were surrendered for conversion and the Company cash settled these conversions for \$243.3 million during April 2018. As a result, on a gross basis, \$42.8 million of the consideration paid was allocated to the reacquisition of the equity component of the original instrument, which was recorded net of deferred taxes of \$12.0 million within additional paid-in-capital. The remaining \$5.5 million in original principal amount of the 2012 Notes was redeemed by the Company on March 6, 2018.

On December 15, 2017, pursuant to the provisions of the indenture governing the Company's 2013 Notes, the Company redeemed or repurchased an aggregate of \$201.7 million in original principal amount of the 2013 Notes then outstanding for an aggregate repurchase price of \$244.1 million, representing the then accreted principal amount of the 2013 Notes. The remaining \$0.3 million in original principal amount of the 2013 Notes were converted, and the Company settled these conversions in cash in the second quarter of fiscal 2018.

On various dates during the first quarter of fiscal 2018, the Company entered into privately negotiated repurchase transactions and extinguished \$39.3 million principal amount of its 2012 Notes for total payments of \$52.8 million. This amount includes the conversion premium resulting from the Company's stock price on the date of the transactions being in excess of the conversion prices of \$31.175. As a result, on a gross basis, \$13.4 million of the consideration paid was allocated to the reacquisition of the equity component of the original instrument, which was recorded net of deferred taxes of \$3.8 million within additional paid-in-capital.

On various dates during the fourth quarter of fiscal 2017, the Company entered into privately negotiated repurchase transactions and extinguished \$17.9 million and \$68.0 million principal amount of the 2012 Notes and 2013 Notes, respectively, for total payments of \$23.1 million and \$82.9 million, respectively. These amounts include the conversion premium resulting from the Company's stock price on the date of the transactions being in excess of the conversion prices of \$31.175 and \$38.59, respectively, and on the 2013 Notes accreted principal of \$13.3 million. Under ASC 470, these transactions were accounted for as an extinguishment and derecognition of the 2012 Notes and 2013 Notes and resulted in an aggregate debt loss extinguishment of \$0.6 million.

On various dates during the third quarter of fiscal 2017, the Company entered into privately negotiated repurchase transactions and extinguished \$100.0 million principal amount of each of its 2012 Notes and 2013 Notes, for total payments of \$269.1 million. This amount includes the conversion premium resulting from the Company's stock price on the date of the transactions being in excess of the conversion prices of \$31.175 and \$38.59, respectively, and on the 2013 Notes accreted principal of \$18.5 million. Under ASC 470, these transactions were accounted for as an extinguishment and derecognition of the 2012 Notes and 2013 Notes and resulted in an aggregate debt loss extinguishment of \$2.6 million.

On various dates during the fourth quarter of fiscal 2016, the Company entered into privately negotiated repurchase transactions and extinguished \$46.3 million principal amount of the 2010 Notes for total payments of \$79.2 million. These amounts include the conversion premium resulting from the Company's stock price on the date of the transactions being in excess of the conversion price of \$23.03 for the 2010 Notes. Under ASC 470, these transactions were accounted for as an extinguishment and derecognition of the 2010 Notes and resulted in a debt loss extinguishment of \$0.8 million. In addition, \$1.3 million principal was put to the Company during the quarter.

On various dates during the second quarter of fiscal 2016, the Company entered into privately negotiated repurchase transactions and extinguished \$90.0 million and \$136.6 million principal amount of the 2010 Notes and 2012 Notes, respectively, for total payments of \$140.1 million and \$171.3 million, respectively. These amounts include the conversion premium resulting from the Company's stock price on the date of the transactions being in excess of the conversion price of \$23.03 and \$31.175 for the 2010 Notes and 2012 Notes, respectively. Under ASC 470, these transactions were accounted for as

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an extinguishment and derecognition of the 2010 and 2012 Notes and resulted in an aggregate debt loss extinguishment of \$4.5 million .

Accounting for the Convertible Notes

The Convertible Notes were recorded pursuant to FASB Staff Position (“FSP”) APB 14-1, *Accounting for Convertible Debt Instruments That May Be Settled in Cash upon Conversion (Including Partial Cash Settlement)* (FSP APB 14-1) (codified within ASC 470) since they can be settled in cash or partially in cash upon conversion. FSP APB 14-1 requires the liability and equity components of the convertible debt instrument to be separately accounted for in a manner that reflects the entity’s nonconvertible debt borrowing rate when interest expense is subsequently recognized. The excess of the debt’s principal amount over the amount allocated to the liability component was recognized as the value of the embedded conversion feature (“equity component”) within additional-paid-in capital in stockholders’ equity and amortized to interest expense over the expected life of the liability component (typically the date of the earliest redemption) using the effective interest method. The liability component was initially recorded at its fair value, which was calculated using a discounted cash flow technique. Key inputs used to estimate the fair value of the liability component included the Company’s estimated nonconvertible debt borrowing rate as of the measurement date (i.e., the date the Convertible Notes are issued), the amount and timing of cash flows, and the expected life of the Convertible Notes. The effective interest rate was estimated by comparing other companies’ debt issuances that had features similar to the Company’s debt excluding the conversion feature and who had similar credit ratings during the same annual period as the Company. In addition, third-party transaction costs were required to be allocated to the liability and equity components based on their relative values. The original issuance of the 2007 Notes and both exchange transactions for the 2010 Notes and 2012 Notes, which each included a derecognition and re-recognition, were accounted for under this accounting guidance. The 2013 Notes exchange transaction was accounted for as a modification pursuant to ASC 470-50 and not an extinguishment because the terms of the two debt instruments were not substantially different.

The Company accounted for the 2012 Notes and 2013 Notes extinguishments in fiscal 2017, discussed above, under the derecognition provisions of subtopic ASC 470-20-40, which requires the allocations of the fair value of the consideration transferred and transaction costs incurred to the extinguishment of the liability component and the reacquisition of the equity component. In connection with these transactions, the Company recorded a debt extinguishment loss on the 2012 Notes of \$0.9 million and a debt extinguishment loss on the 2013 Notes of \$2.3 million , for a total debt extinguishment loss of \$3.2 million in fiscal 2017. The loss on the debt was calculated as the difference between the fair value of the liability component immediately before the respective transactions and their related carrying values, which includes any debt discount and deferred issuance costs. The fair value of the liability component was calculated using a discounted cash flow technique and incorporates an estimated rate for non-convertible debt (with similar features as the 2012 and 2013 Notes excluding the conversion feature) issued by a company with a credit rating similar to the Company. In addition, under this accounting standard, a portion of the fair value of the consideration transferred is allocated to the reacquisition of the equity component, which is the difference between the fair value of the consideration transferred and the fair value of the liability component immediately before the extinguishment. As a result, on a gross basis, \$58.6 million related to the 2012 and 2013 Notes was allocated to the reacquisition of the equity component of the original instrument, which was recorded net of deferred taxes of \$31.1 million within additional paid-in-capital.

The Company accounted for the 2010 Notes and 2012 Notes extinguishments in fiscal 2016, discussed above, under the derecognition provisions of subtopic ASC 470-20-40, which requires the allocation of the fair value of the consideration transferred and transaction costs incurred to the extinguishment of the liability component and the reacquisition of the equity component. In connection with these transactions, the Company recorded a debt extinguishment loss on the 2010 Notes of \$4.6 million and a debt extinguishment loss on the 2012 Notes of \$0.7 million , for a total debt extinguishment loss of \$5.3 million in fiscal 2016. On a gross basis, \$122.6 million related to the 2010 and 2012 Notes was allocated to the reacquisition of the equity component of the original instrument, which was recorded net of deferred taxes of \$28.2 million within additional paid-in-capital.

As of September 29, 2018 the Convertible Notes were fully settled and for September 30, 2017 , the Convertible Notes and related equity components (recorded in additional paid-in-capital, net of deferred taxes) consisted of the following:

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	2017
2012 Notes principal amount	\$ 245.4
Unamortized discount and issuance costs	(1.9)
Net carrying amount	\$ 243.5
Equity component, net of taxes	\$ 24.1
2013 Notes principal amount	\$ 202.0
Principal accretion	40.8
Unamortized discount and issuance costs	(1.8)
Net carrying amount	\$ 241.0
Equity component, net of taxes	\$ 71.8

Interest expense under the Convertible Notes is as follows:

	Years Ended		
	September 29, 2018	September 30, 2017	September 24, 2016
Amortization of debt discount	\$ 3.5	\$ 17.9	\$ 22.3
Amortization of deferred financing costs	0.2	0.8	1.1
Principal accretion	1.6	15.6	16.6
Non-cash interest expense	5.3	34.3	40.0
2.00% accrued interest (cash)	1.8	6.7	10.0
	\$ 7.1	\$ 41.0	\$ 50.0

Accounts Receivable Securitization Program

On April 25, 2016, the Company entered into a one -year \$200.0 million accounts receivable securitization program (the "Securitization Program") with several of its wholly owned subsidiaries and certain financial institutions. Under the terms of the Securitization Program, the Company and certain of its wholly-owned subsidiaries sell their respective customer receivables to a bankruptcy remote special purpose entity, which is also a wholly-owned subsidiary of the Company. In addition, the Company also contributed a portion of its customer receivables to the special purpose entity in connection with its establishment. The Company retains servicing responsibility. The special purpose entity, as borrower, and the Company, as servicer, entered into a Credit and Security Agreement with several lenders pursuant to which the special purpose entity may borrow up to \$200.0 million from the lenders, with the loans secured by the receivables. The amount that the special purpose entity may borrow at a given point in time is determined based on the amount of qualifying receivables that are present in the special purpose entity at such point in time. The entire amount available was borrowed in the third quarter of fiscal 2016. Borrowings outstanding under the Securitization Program bear interest at LIBOR plus the applicable margin of 0.7% and are included as a component of current liabilities in the Company's consolidated balance sheet, while the accounts receivable securing these obligations remain as a component of net receivables in the Company's consolidated balance sheet. The Company and the special purpose entity are operated and maintained as separate legal entities. The assets of the special purpose entity secure the amounts borrowed and cannot be used to pay other debts or liabilities of the Company. The special purpose entity was not a guarantor under the Company's Credit Agreement and is not a guarantor under the Company's Amended and Restated Credit Agreement or of the Company's 2022 and 2025 Senior Notes.

Effective April 21, 2017, the Company entered into an amendment to extend the Securitization Program an additional year to April 20, 2018. The amendment allowed the Company to continue to borrow up to \$200.0 million and due to structural changes to the terms, the borrowing base had fewer limitations.

Effective April 20, 2018, the Company entered into an amendment to extend the Securitization Program an additional year to April 19, 2019. Under the amendment, the maximum borrowing amount increased from \$200.0 million to \$225.0 million. As of September 29, 2018, there was \$225.0 million outstanding under this program.

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Borrowings under the Securitization Program for fiscal 2018 had a weighted-average interest rate of 2.42% . Interest expense under the Securitization Program aggregated \$5.4 million , \$3.3 million and \$1.1 million for fiscal 2018, 2017 and 2016, respectively. The interest rate on the amounts outstanding at September 29, 2018 was 2.24% .

The Credit and Security Agreement contains customary representations and warranties and events of default, including payment defaults, breach of representations and warranties, covenant defaults, and an event of default upon a change of control of the Company. In addition, it contains financial covenants consistent with that of the Credit Agreement. As of September 29, 2018 , the Company was in compliance with the Credit and Security Agreement covenants.

6. Fair Value Measurements

The Company applies the provisions of ASC 820 for its financial assets and liabilities that are re-measured and reported at fair value each reporting period and its nonfinancial assets and liabilities that are re-measured and reported at fair value on a non-recurring basis. Fair value is the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. When determining fair value, the Company considers the principal or most advantageous market in which it would transact and considers assumptions that market participants would use when pricing the asset or liability.

Fair Value Hierarchy

ASC 820 establishes a three-level valuation hierarchy for disclosure of fair value measurements. Financial assets and liabilities are categorized within the valuation hierarchy based upon the lowest level of input that is significant to the measurement of fair value. The three levels of the hierarchy are defined as follows:

- Level 1—Inputs to the valuation methodology are quoted market prices for identical assets or liabilities.
- Level 2—Inputs to the valuation methodology are other observable inputs, including quoted market prices for similar assets or liabilities and market-corroborated inputs.
- Level 3—Inputs to the valuation methodology are unobservable inputs based on management’s best estimate of inputs market participants would use in pricing the asset or liability at the measurement date, including assumptions about risk.

Assets/Liabilities Measured and Recorded at Fair Value on a Recurring Basis

The Company had investments in publicly-traded companies, which were valued using quoted market prices, representing Level 1 assets, and has investments in derivative instruments comprised of interest rate caps and forward foreign currency contracts, which are valued using analyses obtained from independent third party valuation specialists based on market observable inputs, representing Level 2 assets. The fair values of the Company's interest rate caps and forward foreign currency contracts represent the estimated amounts the Company would receive or pay to terminate the contracts. Refer to Note 2 for further discussion and information on the equity investments, the interest rate caps and forward foreign currency contracts. In addition, the Company has contingent consideration liabilities related to its acquisitions that are recorded at fair value and were based on Level 3 inputs (see Note 3).

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Assets and liabilities measured and recorded at fair value on a recurring basis consisted of the following:

	Carrying Value	Fair Value Measurements at September 29, 2018		
		Quoted Prices in Active Market for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Interest rate caps - derivative	7.7	—	7.7	—
Forward foreign currency contracts	3.2	—	3.2	—
Total	\$ 10.9	\$ —	\$ 10.9	\$ —
Liabilities:				
Contingent consideration	\$ 7.8	\$ —	\$ —	\$ 7.8
Forward foreign currency contracts	0.2	—	0.2	—
Total	\$ 8.0	\$ —	\$ 0.2	\$ 7.8

	Carrying Value	Fair Value Measurements at September 30, 2017		
		Quoted Prices in Active Market for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Equity securities	\$ 0.1	\$ 0.1	\$ —	\$ —
Interest rate caps - derivative	4.8	—	4.8	—
Forward foreign currency contracts	0.4	—	0.4	—
Total	\$ 5.3	\$ 0.1	\$ 5.2	\$ —
Liabilities:				
Forward foreign currency contracts	4.0	—	4.0	—
Total	\$ 4.0	\$ —	\$ 4.0	\$ —

There were no Level 3 assets or liabilities outstanding during fiscal 2017.

Assets Measured and Recorded at Fair Value on a Nonrecurring Basis

The Company remeasures the fair value of certain assets and liabilities upon the occurrence of certain events. Such assets are comprised of cost-method equity investments and long-lived assets, including property, plant and equipment, intangible assets and goodwill. There were no such remeasurements to cost-method equity investments and property, plant and equipment for the year ended September 29, 2018. There were no impairments to assets measured using level 3 inputs in fiscal 2017 and 2016. Refer to Note 5 for disclosure of the nonrecurring fair value measurement related to the debt extinguishment losses recorded in fiscal 2018, 2017 and 2016.

Disclosure of Fair Value of Financial Instruments

The Company's financial instruments mainly consist of cash and cash equivalents, accounts receivable, cost-method equity investments, interest rate caps, forward foreign currency contracts, insurance contracts, accounts payable and debt obligations. The carrying amounts of the Company's cash and cash equivalents, accounts receivable and accounts payable approximate their fair value due to the short-term nature of these instruments. The Company's interest rate caps and forward foreign currency contracts are recorded at fair value. The carrying amount of the insurance contracts are recorded at the cash surrender value, as required by U.S. GAAP, which approximates fair value. The Company believes the carrying amounts of its cost-method equity investments approximate fair value.

Amounts outstanding under the Company's Amended and Restated Credit Agreement and Securitization Program of \$1.76 billion and \$225.0 million aggregate principal, respectively, as of September 29, 2018 are subject to variable rates of

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interest based on current market rates, and as such, the Company believes the carrying amount of these obligations approximates fair value. The Company's 2025 Senior Notes and 2028 Senior Notes had a fair values of approximately \$909.6 million and \$377.0 million as of September 29, 2018 based on their trading price, representing a Level 1 measurement. The Company's 2022 Senior Notes had a fair value of approximately \$1.05 billion as of September 30, 2017 based on their trading price, representing a Level 1 measurement. The fair value of the Company's Convertible Notes is based on the trading prices of the respective notes and represents a Level 1 measurement. The Convertible Notes were not outstanding as of September 29, 2018.

The estimated fair values of the Company's Convertible Notes at September 30, 2017 were as follows:

	<u>2017</u>
2012 Notes	297.3
2013 Notes	244.4
	<u>\$ 541.7</u>

7. Income Taxes

The Company's income before income taxes consisted of the following:

	<u>Years ended</u>		
	<u>September 29, 2018</u>	<u>September 30, 2017</u>	<u>September 24, 2016</u>
Domestic	\$ (581.9)	\$ 1,105.8	\$ 310.7
Foreign	163.3	124.7	104.6
	<u>\$ (418.6)</u>	<u>\$ 1,230.5</u>	<u>\$ 415.3</u>

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The (benefit) provision for income taxes contained the following components:

	Years ended		
	September 29, 2018	September 30, 2017	September 24, 2016
Federal:			
Current	\$ 137.1	\$ 701.1	\$ 209.0
Deferred	(461.9)	(276.9)	(122.7)
	(324.8)	424.2	86.3
State:			
Current	11.0	53.1	16.6
Deferred	(11.3)	(15.9)	(22.7)
	(0.3)	37.2	(6.1)
Foreign:			
Current	21.9	13.9	14.7
Deferred	(4.1)	(0.3)	(10.4)
	17.8	13.6	4.3
	\$ (307.3)	\$ 475.0	\$ 84.5

The income tax (benefit) provision differed from the tax (benefit) provision computed at the U.S. federal statutory rate due to the following:

	Years ended		
	September 29, 2018	September 30, 2017	September 24, 2016
Income tax (benefit) provision at federal statutory rate	(24.5)%	35.0 %	35.0 %
Increase (decrease) in tax resulting from:			
Domestic production activities deduction	(3.1)	(1.7)	(5.0)
State income taxes, net of federal benefit	0.7	2.3	2.0
Non-deductible goodwill	39.4	9.2	—
Tax credits	(1.9)	(0.8)	(3.2)
Tax reform	(82.7)	—	—
Unrecognized tax benefits	1.8	(1.4)	2.4
Compensation	0.3	(0.5)	0.1
Foreign rate differential	(5.2)	(2.6)	(6.1)
Change in deferred tax rate	1.2	0.2	(1.8)
Change in valuation allowance	(0.5)	(1.5)	(3.4)
Other	1.1	0.4	0.3
	(73.4)%	38.6 %	20.3 %

On December 22, 2017, the U.S. government enacted the Tax Cuts and Jobs Act (the "Act"), which significantly revised the U.S. system of corporate taxation by, among other things, lowering the U.S. corporate income tax rate from 35% to 21%, implementing a new international tax system, broadening the tax base and imposing a tax on deemed repatriated earnings of foreign subsidiaries. The decrease in the U.S. federal corporate tax rate from 35% to 21% resulted in a blended statutory rate of 24.5% for the Company's fiscal year 2018. The Company's effective tax rate in fiscal 2018, applied to an overall pre-tax loss, resulting in a benefit, is higher than the statutory rate primarily due to the favorable impact of the Act, which required the Company to remeasure its U.S. net deferred tax liabilities at a lower rate, partially offset by the unfavorable impact of the Medical Aesthetic goodwill impairment charge, substantially all of which is non-deductible.

On December 22, 2017, the SEC issued Staff Accounting Bulletin No. 118, Income Tax Accounting Implications of the Tax Cuts and Jobs Act ("SAB 118") directing SEC registrants to consider the impact of the Act as "provisional" when it does not have the necessary information available, prepared or analyzed (including computations) in reasonable detail to complete its accounting for the change in tax law. In accordance with SAB 118, the Company recorded an estimated net income tax benefit of \$346.2 million, representing the Company's best estimate based on its interpretation of the Act. The \$346.2 million income tax benefit is primarily related to the remeasurement of deferred tax assets and liabilities based on the tax rates at which they are exp

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ected to reverse in the future partially offset by additional tax expense pertaining to the deductibility of certain executive compensation pursuant to the Act. In the fourth quarter, the Company reduced the benefit related to the Act by \$8.3 million primarily due to the impact of guidance issued during the quarter affecting the deductibility of certain executive compensation pursuant to the Act and the remeasurement of certain deferred tax assets and liabilities based on the tax rates at which they are expected to reverse in the future. The Company is still accumulating data regarding certain provisional tax estimates in order to finalize the underlying calculations and the U.S. Treasury is expected to issue further guidance on the application of certain provisions of the Act, which could further impact the effect of the Act on the Company's financial statements.

The Company's effective tax rate in fiscal 2017 was higher than the statutory rate primarily due to non-deductible goodwill related to the sale of the Blood Screening business, partially offset by the release of valuation allowances for capital losses utilized against the capital gain generated on the sale of the Blood Screening business, earnings in jurisdictions subject to lower tax rates, the domestic production activities deduction benefit, the release of reserves for uncertain tax positions due to statutes of limitations expirations and audit settlements, stock compensation benefits, and federal and state tax credits.

The Company's effective tax rate in fiscal 2016 was lower than the statutory rate primarily due to earnings in jurisdictions subject to lower tax rates, the domestic production activities deduction benefit, and a change in the valuation allowance related to the sale of a marketable security with a higher tax than book basis.

The Company uses the asset and liability method to account for income taxes in accordance with ASC 740, *Income Taxes*. Under this method, deferred income taxes are recognized for the future tax consequences of differences between the tax and financial accounting bases of assets and liabilities at each reporting period. Deferred income taxes are based on enacted tax laws and statutory tax rates applicable to the period in which these differences are expected to affect taxable income. A valuation allowance is established when necessary to reduce deferred tax assets to the amounts expected to be realized.

The Company's significant deferred tax assets and liabilities were as follows:

	September 29, 2018	September 30, 2017
Deferred tax assets		
Net operating loss carryforwards	\$ 30.9	\$ 50.1
Capital losses	6.5	7.1
Non-deductible accruals	30.7	50.6
Non-deductible reserves	22.1	30.0
Stock-based compensation	24.0	39.3
Research and other credits	13.3	13.6
Nonqualified deferred compensation plan	12.3	16.4
Other temporary differences	11.5	16.5
	151.3	223.6
Less: valuation allowance	(25.5)	(28.2)
	\$ 125.8	\$ 195.4
Deferred tax liabilities		
Depreciation and amortization	\$ (606.6)	\$ (1,071.5)
Debt discounts and deferrals	(4.5)	(88.4)
	\$ (611.1)	\$ (1,159.9)
	\$ (485.3)	\$ (964.5)

Under ASC 740, the Company can only recognize a deferred tax asset for the future benefit to the extent that it is "more likely than not" that these assets will be realized. After considering all available positive and negative evidence, the Company established a valuation allowance against specifically identified deferred tax assets because it is more-likely-than-not that these assets will not be realized. In making this determination, the Company considered numerous factors including historical profitability, estimated future taxable income and the character of such income. The valuation allowance decreased \$2.7 million in fiscal 2018 from fiscal 2017 primarily due to tax reform and attribute expiration and utilization.

At September 29, 2018, the Company had \$9.8 million, \$46.9 million, and \$35.9 million in gross federal, state, and foreign net operating losses, respectively, and \$4.6 million, \$9.4 million, and \$1.2 million in federal, state, and foreign credit carryforwards, respectively. These losses and credits expire between 2019 and 2038, except for \$34.5 million in losses and \$2.0

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million in credits that have unlimited carryforward periods. The federal, state, and foreign net operating losses exclude \$4.5 million, \$85.1 million, and \$46.4 million, respectively, in net operating losses, that the Company expects will expire unutilized.

At September 29, 2018, the Company had \$89.5 million in gross unrecognized tax benefits excluding interest, of which \$79.0 million, if recognized, would reduce the Company's effective tax rate. At September 30, 2017, the Company had \$90.3 million in gross unrecognized tax benefits excluding interest, of which \$70.3 million, if recognized, would have reduced the Company's effective tax rate. The gross unrecognized tax benefits decreased by \$0.8 million from fiscal 2017, of which \$10.4 million was the reversal in fiscal 2018 of reserves for uncertain tax positions related to the convertible debt exchange that occurred in fiscal 2013 and \$9.6 million was the net expense recorded to the income tax provision primarily from current year tax positions partially offset by audit settlements and the expiration of statutes of limitations. In the next twelve months it is reasonably possible that the Company will reduce its gross unrecognized tax benefits by up to \$4.8 million due to expiring statutes of limitations.

The Company's unrecognized income tax benefits activity for fiscal 2018 and 2017 was as follows:

	2018	2017
Balance at beginning of fiscal year	\$ 90.3	\$ 163.6
Tax positions related to current year:		
Additions	9.0	21.8
Reductions	—	—
Tax positions related to prior years:		
Additions related to change in estimate	6.6	1.1
Reductions	(15.4)	(77.3)
Payments	—	(1.6)
Lapses in statutes of limitations	(1.4)	(19.9)
Acquired tax positions:		
Additions related to reserves acquired from acquisitions	0.4	2.6
Balance as of the end of the fiscal year	\$ 89.5	\$ 90.3

The Company's policy is to include accrued interest and penalties related to unrecognized tax benefits and income tax liabilities, when applicable, in income tax expense. As of September 29, 2018 and September 30, 2017, gross accrued interest was \$9.0 million and \$5.3 million, respectively. At September 29, 2018, no significant penalties have been accrued.

The Company and its subsidiaries are subject to various federal, state, and foreign income taxes. The Company is undergoing a tax examination in the United Kingdom (fiscal year 2016). The Company's U.S. Federal income tax returns are generally no longer subject to examination prior to tax year 2015; however, one federal income tax examination is ongoing for Cynosure Inc. and subsidiaries (fiscal years 2015-2017). State income tax returns are generally no longer subject to examination prior to fiscal year 2014. The Company is undergoing tax examinations in Massachusetts (fiscal years 2014-2015) and New York (fiscal years 2013-2015).

During fiscal 2017, the Internal Revenue Service completed its audit for fiscal years 2013 and 2014. The Company made a cash payment of \$1.7 million and recorded an income tax benefit of \$10.9 million, including interest, related to the reversal of unrecognized tax benefits.

Transition Tax

The one-time transition tax enacted by the Act is based on the Company's total post-1986 earnings and profits which were previously deferred from U.S. income taxes. The Company recorded an immaterial amount for the one-time transition tax liability related to the deemed repatriation of the earnings of its foreign subsidiaries. The Company has not yet finalized its calculation of the total post-1986 earnings and profits for these foreign subsidiaries. Further, the transition tax is based in part on the amount of those earnings held in cash and other specified assets. This amount may change when the Company finalizes the calculation of its post-1986 foreign earnings and profits previously deferred from U.S. federal taxation and finalizes the amounts held in cash or other specified assets. Prior to the Act, the Company asserted that accumulated earnings of its foreign subsidiaries would be indefinitely reinvested. However, as a result of the Act, the majority of the accumulated earnings of the Company's foreign subsidiaries were subjected to U.S. federal income tax. In light of the Act, the Company provisionally intends to indefinitely reinvest future earnings, however, the Company's analysis is ongoing. During the period prescribed by SAB 118, the Company will continue to evaluate the impact of the Act and its effect on the profitability within and outside the U.S. as well as the effect of withholding

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and other foreign taxes and the ability to offset these taxes with foreign tax credits. No material additional income taxes have been provided for any remaining undistributed foreign earnings not subject to the transition tax and additional outside basis differences in these entities as it is not practicable to estimate the additional taxes that may be payable upon repatriation.

Global Intangible Low Tax Income

The Company continues to analyze the impacts of the Act for provisions that become effective in future years. One such provision is the Global Intangible Low Tax Income (“GILTI”), which is effectively a new minimum tax on certain foreign earnings. U.S. GAAP allows the Company to make an accounting policy election and either treat taxes on GILTI as a current period expense when incurred or factor such amounts into the measurement of deferred taxes. Due to the complexity of these new rules, the Company has not completed its analysis of this provision, and therefore has not made any adjustments in its fiscal 2018 financial statements nor made an accounting policy decision.

Non-Income Tax Matters

The Company is subject to tax examinations for value added, sales-based, payroll and other non-income tax items. A number of these examinations are ongoing in various jurisdictions. The Company takes certain non-income tax positions in the jurisdictions in which it operates pursuant to ASC 450. In the normal course of business, the Company's positions and conclusions related to its non-income tax positions could be challenged, resulting in assessments by governmental authorities.

In fiscal 2017, based on developments in an ongoing state tax audit, the Company determined that it was probable it had incurred a loss related to a non-income tax issue. The Company estimated the most likely amount of loss to be \$35.6 million for all open years and recorded this charge to general and administrative expenses in fiscal 2017. While the Company believes its estimate is reasonable and appropriate, this matter is still ongoing and additional charges could be recorded in the future. In January 2018, the Company settled an ongoing state tax audit for approximately \$11.0 million, resulting in a reversal of \$4.0 million recorded to general and administrative expenses in the first quarter of fiscal 2018.

During fiscal 2017, the Internal Revenue Service approved and paid refund claims submitted in connection with Medical Device Excise Tax filings for the January 1, 2013 through December 31, 2015 periods. As a result, the Company recorded a \$12.4 million gain in fiscal 2017 within general and administrative expenses.

8. Stockholders' Equity and Stock-Based Compensation

Stock Repurchase Program

On November 11, 2013, the Company announced that its Board of Directors authorized the repurchase of up to \$250 million of the Company's outstanding common stock over a three-year period. During fiscal 2016, the Company repurchased 7.3 million shares of its common stock for total consideration of \$250.0 million. This share repurchase authorization was fully utilized.

On June 21, 2016, the Company's Board of Directors authorized the repurchase of up to an additional \$500.0 million of the Company's outstanding common stock over the next five years. During fiscal 2017, the Company repurchased 5.3 million shares of its common stock for total consideration of \$200.1 million, and in fiscal 2018, the Company repurchased an additional 5.0 million shares of its common stock for a total consideration of \$187.3 million under this authorization.

On June 13, 2018, the Board of Directors authorized another share repurchase plan to repurchase up to \$500.0 million of our outstanding common stock. This share repurchase plan, which replaces the prior plan, was effective August 1, 2018 and expires on June 13, 2023. Under this authorization, during the fourth quarter of 2018, the Company repurchased 2.3 million shares of its common stock for a total consideration of \$88.5 million. As of September 29, 2018, \$411.5 million was available under this authorization. Subsequent to September 29, 2018, the Company repurchased 1.5 million shares of its common stock for total consideration of \$60.6 million.

Stock-Based Compensation

Equity Compensation Plans

The Company has one share-based compensation plan pursuant to which awards are currently being issued—the 2008 amended and restated Equity Incentive Plan (“2008 Equity Plan”). The purpose of the 2008 Equity Plan is to provide stock options, restricted stock units and other equity interests in the Company to employees, officers, directors, consultants and advisors of the Company and any other person who is determined by the Board of Directors to have made (or is expected to make) contributions to the Company. The 2008 Equity Plan is administered by the Board of Directors of the Company, and a total of 31.5 million shares were reserved for issuance under this plan. As of September 29, 2018, the Company had 8.6 million shares available for future grant under the 2008 Equity Plan.

The following presents stock-based compensation expense in the Company’s Consolidated Statements of Operations in fiscal 2018, 2017 and 2016 :

	2018	2017	2016
Cost of revenues	\$ 8.3	\$ 10.7	\$ 10.5
Research and development	9.5	11.2	10.8
Selling and marketing	10.3	11.9	10.9
General and administrative	35.6	34.4	32.8
Restructuring and divestiture	1.3	—	0.4
	<u>\$ 65.0</u>	<u>\$ 68.2</u>	<u>\$ 65.4</u>

Grant-Date Fair Value

The Company uses a binomial model to determine the fair value of its stock options. The Company considers a number of factors to determine the fair value of options including the assistance of an outside valuation adviser. Information pertaining to stock options granted during fiscal 2018, 2017 and 2016 and related assumptions are noted in the following table:

	Years ended		
	September 29, 2018	September 30, 2017	September 24, 2016
Options granted (in millions)	1.7	1.0	1.1
Weighted-average exercise price	\$ 40.76	\$ 38.07	\$ 39.32
Weighted-average grant date fair value	\$ 12.98	\$ 12.33	\$ 12.91
Assumptions:			
Risk-free interest rates	2.1%	1.8%	1.6%
Expected life (in years)	4.7	4.7	4.7
Expected volatility	35.3%	36.6%	37.8%
Dividend yield	—	—	—

The risk-free interest rate is based on a treasury instrument whose term is consistent with the expected life of the stock options. In projecting expected stock price volatility, the Company uses a combination of historical stock price volatility and implied volatility from observable market prices of similar equity instruments. The Company estimated the expected life of stock options based on historical experience using employee exercise and option expiration data.

In connection with appointing Stephen P. MacMillan as the new President and Chief Executive Officer in December 2013, per the terms of his employment agreement, the Company granted 0.2 million restricted stock units ("RSUs") to match Mr. MacMillan’s purchase of 0.2 million shares of the Company’s common stock on the open market in the second quarter of fiscal 2014. The RSUs cliff vest three years from the date of grant, and the Company accounted for this grant as a liability award pursuant to ASC 718 because this RSU award contained an additional vesting condition (the requirement that Mr. MacMillan retain the matching shares during the vesting period) that was not service, performance or market based. As such, this award was marked-to-market at each reporting period and vested during fiscal 2017 at which time the liability of \$7.8 million was reclassified to additional paid-in-capital.

Stock-Based Compensation Expense Attribution

The Company uses the straight-line attribution method to recognize stock-based compensation expense for stock options and RSUs. The vesting term of stock options is generally four or five years with annual vesting of 25% and 20% per year,

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respectively, on the anniversary of the grant date, and RSUs generally vest over three or four years with annual vesting at 33% and 25% per year, respectively, on the anniversary of the grant date.

The amount of stock-based compensation recognized during a period is based on the value of the portion of the awards that are ultimately expected to vest. Under ASC 718, the Company has made an accounting policy to estimate forfeitures at the time awards are granted and revises, if necessary, in subsequent periods if actual forfeitures differ from those estimates. Based on an analysis of historical forfeitures, the Company has determined a specific forfeiture rate for certain employee groups and has applied forfeiture rates ranging from 0% to 7.0% as of September 29, 2018 depending on the specific employee group. This analysis is re-evaluated annually and the forfeiture rate will be adjusted as necessary. Ultimately, the actual stock-based compensation expense recognized will only be for those stock options and RSUs that vest.

Stock-based compensation expense related to stock options was \$14.3 million, \$12.2 million, and \$10.9 million in fiscal 2018, 2017 and 2016, respectively. Stock compensation expense related to stock units, including RSUs, performance stock units ("PSUs") and market stock units ("MSUs") was \$46.5 million, \$51.6 million, and \$50.5 million in fiscal 2018, 2017 and 2016, respectively. The related tax benefit recorded in the Consolidated Statements of Operations was \$11.7 million, \$22.6 million and \$23.1 million in fiscal 2018, 2017 and 2016, respectively. At September 29, 2018, there was \$25.4 million and \$58.7 million of unrecognized compensation expense related to stock options and RSUs, respectively, to be recognized over a weighted average period of 2.6 years and 1.9 years, respectively.

Share Based Payment Activity

The following table summarizes all stock option activity under the Company's stock option plans for the year ended September 29, 2018 :

	Number of Shares (in millions)	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Life (in Years)	Aggregate Intrinsic Value (in millions)
Options outstanding at September 30, 2017	5.5	\$ 28.15	5.4	\$ 50.3
Granted	1.7	40.76		
Canceled/ forfeited	(0.4)	36.22		
Exercised	(0.8)	21.72		15.2
Options outstanding at September 29, 2018	6.0	\$ 32.13	5.9	\$ 53.3
Options exercisable at September 29, 2018	2.8	\$ 26.47	3.7	\$ 40.8
Options vested and expected to vest at September 29, 2018 (1)	5.9	\$ 32.08	5.9	\$ 52.8

(1) This represents the number of vested stock options as of September 29, 2018 plus the unvested outstanding options at September 29, 2018 expected to vest in the future, adjusted for estimated forfeitures.

During fiscal 2017 and 2016, the total intrinsic value of options exercised (i.e., the difference between the market price on the date of exercise and the price paid by the employee to exercise the options) was \$25.9 million and \$21.6 million, respectively.

A summary of the Company's RSU, PSU and MSU activity during the year ended September 29, 2018 is presented below:

Non-vested Shares	Number of Shares (in millions)	Weighted-Average Grant-Date Fair Value
Non-vested at September 30, 2017	3.0	\$ 34.58
Granted	1.7	42.49
Vested	(1.6)	34.10
Forfeited	(0.4)	38.28
Non-vested at September 29, 2018	2.7	\$ 40.02

The number of RSUs vested includes shares withheld on behalf of employees to satisfy minimum statutory tax withholding requirements. The Company pays the minimum statutory tax withholding requirement on behalf of its employees.

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During fiscal 2018 , 2017 and 2016 the total fair value of RSUs and PSUs vested was \$38.9 million , \$39.5 million and \$28.4 million , respectively.

Included in the above chart, the Company granted 0.6 million and 0.2 million and 0.3 million PSUs during fiscal 2018 , 2017 , and 2015, respectively, to members of the Company's senior management team, which includes additional shares issued upon achieving metrics within the performance criteria. Each recipient of the PSUs is eligible to receive between zero and 200% of the target number of shares of the Company's common stock at the end of three year performance period provided the Company's defined Return on Invested Capital metrics are achieved. These awards cliff-vest three years from the date of grant, and the Company recognizes compensation expense ratably over the required service period based on its estimate of the number of shares will vest upon achieving the measurement criteria. If there is a change in the estimate of the number of shares that are probable of vesting, the Company will cumulatively adjust compensation expense in the period that the change in estimate is made. The Company also granted 0.3 million and 0.1 million MSUs during fiscal 2018 and 2017, respectively, to its senior management team. Each recipient of MSUs is eligible to receive between zero and 200% of the target number of shares of the Company's common stock at the end of three year performance period based upon achieving a certain total shareholder return relative to a defined peer group. The MSUs were valued at \$49.44 and \$48.98 per share using the Monte Carlo simulation model in fiscal 2018 and 2017, respectively. These awards cliff-vest three years from the date of grant, and the Company recognizes compensation expense for the MSUs ratably over the service period.

Employee Stock Purchase Plan

The Hologic, Inc. 2012 Employee Stock Purchase Plan ("2012 ESPP") provides for the granting of up to 2.5 million shares of the Company's common stock to eligible employees. The 2012 ESPP plan period is semi-annual and allows participants to purchase the Company's common stock at 85% of the lower of (i) the market value per share of the common stock on the first day of the offering period or (ii) the market value per share of the common stock on the purchase date. Stock-based compensation expense in fiscal 2018 , 2017 and 2016 was \$4.0 million , \$4.4 million and \$4.0 million , respectively.

The Company uses the Black-Scholes model to estimate the fair value of shares to be issued as of the grant date using the following weighted average assumptions:

	<u>September 29, 2018</u>	<u>September 30, 2017</u>	<u>September 24, 2016</u>
Assumptions:			
Risk-free interest rates	1.62%	0.72%	0.34%
Expected life (in years)	0.5	0.5	0.5
Expected volatility	25.0%	24.9%	27.2%
Dividend yield	—	—	—

9. Profit Sharing 401(k) Plan

The Company has a qualified profit sharing plan covering substantially all of its employees. The Company made contributions of \$18.6 million , \$20.2 million and \$16.2 million for fiscal 2018 , 2017 and 2016 , respectively.

10. Deferred Compensation Plans

Nonqualified Deferred Compensation Plan

Effective March 15, 2006, the Company adopted its DCP to provide non-qualified retirement benefits to a select group of executive officers, senior management and highly compensated employees of the Company. Eligible employees may elect to contribute up to 75% of their annual base salary and 100% of their annual bonus to the DCP and such employee contributions are 100% vested. In addition, the Company may elect to make annual discretionary contributions on behalf of participants in the DCP. Each Company contribution is subject to a three -year vesting schedule, such that each contribution vests one third annually. Employee contributions are recorded within accrued expenses.

Upon enrollment into the DCP, employees make investment elections for both their voluntary contributions and discretionary contributions, if any, made by the Company. Earnings and losses on contributions based on these investment elections are recorded as a component of compensation expense in the period earned.

Annually, the Compensation Committee of the Board of Directors has approved a discretionary cash contribution to the DCP for each year. Discretionary contributions by the Company to the DCP are held in a Rabbi Trust. The Company is recording compensation expense for the DCP discretionary contributions ratably over the three -year vesting period of each annual contribution, unless the participant meets the plan retirement provision of reaching a certain age and years of service criteria in which case the expense is accelerated to match the required service period to receive such benefit. Under the DCP, the Company recorded compensation expense related to Company contributions of \$2.9 million , \$3.4 million and \$3.1 million in fiscal 2018 , 2017 and 2016 , respectively. The full amount of the discretionary contribution, net of forfeitures, along with employee deferrals is recorded within accrued expenses and totaled \$49.8 million and \$43.2 million at September 29, 2018 and September 30, 2017 , respectively.

The Company has purchased Company-owned group life insurance contracts, in which both voluntary and discretionary Company DCP contributions are invested, to partially fund payment of the Company's obligation to the DCP participants. The total amount invested at September 29, 2018 and September 30, 2017 was \$44.2 million and \$41.0 million , respectively. The values of these life insurance contracts are recorded in other long-term assets. Changes in the cash surrender value of life insurance contracts, which were not significant in fiscal 2018 , 2017 and 2016 , are recorded within other income (expense), net.

Deferred Equity Plan

Effective September 17, 2015, the Company adopted the Hologic, Inc. Deferred Equity Plan (the "DEP"). The DEP is designed to allow executives and non-employee Directors to accumulate Company stock in a tax-efficient manner to meet their long-term equity accumulation goals and shareholder ownership guidelines. Under the DEP, eligible participants may elect to defer the settlement of RSUs and PSUs granted under the 2008 Equity Plan until separation from service or separation from service plus a fixed number of years. Participants may defer settlement by vesting tranche. Although the equity will vest on schedule, if deferral of settlement is elected, no shares will be issued until the settlement date. The settlement date will be the earlier of death, disability, change in control of the Company or separation from service plus the number of years of deferral elected by the participant. While these shares upon vesting are not distributed to the individuals and are not outstanding, these shares will be included in basic weighted average shares outstanding used to calculate earnings per share.

11. Commitments and Contingencies

Finance Lease Obligations

The Company has two non-cancelable lease agreements for buildings that are primarily used for manufacturing. The Company was responsible for a significant portion of the construction costs, and in accordance with ASC 840, *Leases*, Subsection 40-15-5, the Company was deemed to be the owner of the respective buildings during the construction period. At the completion of the construction period, the Company reviewed the lease for potential sale-leaseback treatment in accordance with ASC 840, Subsection 40, *Sale-Leaseback Transactions*. Based on its analysis, the Company determined that the lease did not qualify for sale-leaseback treatment. Therefore, the building, leasehold improvements and associated liabilities remain on the Company's financial statements throughout the lease term, and the building and leasehold improvements are being depreciated on a straight line basis over their estimated useful lives of 35 years. The Company recorded the fair market value of the buildings and land aggregating \$28.3 million within property and equipment on its Consolidated Balance Sheets. Depreciation expense related to the buildings and land is recorded within depreciation in the Company's Consolidated Statements of Cash Flows. During fiscal 2018, the Company executed an amendment to one of the leases extending the term to 2028. During fiscal 2016, the Company executed an amendment to other leases extending the term to 2024 , and a renewal option was removed. There were no other significant provisions to the terms of the lease agreements. At September 29, 2018 , the Company has recorded \$1.6 million in accrued expenses and \$34.7 million in other long-term liabilities related to these

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obligations. The current term of the leases is for a period of approximately 10 and 6 years, respectively, with the option to extend for one lease for two consecutive 5 -year terms and the other for one 5 -year term.

Future minimum lease payments, including principal and interest, under these leases were as follows at September 29, 2018 :

Fiscal 2019	\$	2.9
Fiscal 2020		3.0
Fiscal 2021		3.0
Fiscal 2022		3.1
Fiscal 2023		3.2
Thereafter		10.6
Total minimum payments		25.8
Less-amount representing interest		(14.4)
Total	\$	11.4

As a result of the Cynosure acquisition, the Company has capital leases the for the buildings at its primary U.S. operating facility and certain equipment and vehicles with payments due through May 2028. Future minimum lease payments, including principal and interest, under these leases were as follows at September 29, 2018 :

Fiscal 2019	\$	2.8
Fiscal 2020		2.8
Fiscal 2021		2.8
Fiscal 2022		3.0
Fiscal 2023		3.0
Thereafter		14.4
Total minimum lease payments	\$	28.8
Less-amount representing interest		(6.2)
Present value of obligations under capital lease	\$	22.6
Current portion of capital lease obligations		1.7
Capital lease obligations, net of current portion	\$	20.9

Non-cancelable Purchase and Royalty Commitments

The Company has certain non-cancelable purchase obligations primarily related to inventory purchases and diagnostics instruments, primarily Panther systems, and to a lesser extent other operating expense commitments. These obligations are not recorded in the Consolidated Balance Sheets. For reasons of quality assurance, sole source availability or cost effectiveness, certain key components and raw materials and instruments are available only from a sole supplier and the Company has certain long-term supply contracts to assure continuity of supply. At September 29, 2018 , non-cancelable purchase commitments are as follows:

Fiscal 2019	\$	341.7
Fiscal 2020		3.1
Fiscal 2021		0.9
Total	\$	345.7

Concentration of Suppliers

The Company purchases certain components of its products from a single or small number of suppliers. A change in or loss of these suppliers could cause a delay in filling customer orders and a possible loss of sales, which could adversely affect results of operations; however, management believes that suitable replacement suppliers could be obtained in such an event.

Operating Leases

The Company conducts its operations in leased facilities under operating lease agreements that expire through fiscal 2035. Substantially all of the Company's lease agreements require the Company to maintain the facilities during the term of the lease and to pay all taxes, insurance, utilities and other costs associated with those facilities. The Company makes customary representations and warranties and agrees to certain financial covenants and indemnities. In the event the Company defaults on a lease, typically the landlord may terminate the lease, accelerate payments and collect liquidated damages. As of September 29, 2018, the Company was not in default of any covenants contained in its lease agreements. Certain of the Company's lease agreements provide for renewal options. Such renewal options are at rates similar to the current rates under the agreements.

Future minimum lease payments under all of the Company's operating leases at September 29, 2018 are as follows:

Fiscal 2019	\$	21.0
Fiscal 2020		16.9
Fiscal 2021		13.9
Fiscal 2022		11.2
Fiscal 2023		6.7
Thereafter		17.9
Total	\$	<u>87.6</u>

Rent expense, net of sublease income from these locations, was \$23.1 million, \$19.3 million, and \$17.9 million for fiscal 2018, 2017 and 2016, respectively.

The Company subleases a portion of a building it owns and some of its rented facilities and has received aggregate rental income of \$2.6 million, \$2.3 million and \$2.4 million in fiscal 2018, 2017 and 2016, respectively, which has been recorded as an offset to rent expense. The future minimum annual rental income payments under these sublease agreements at September 29, 2018 are as follows:

Fiscal 2019	\$	2.5
Fiscal 2020		1.8
Fiscal 2021		0.6
Fiscal 2022		0.6
Fiscal 2023		0.6
Thereafter		1.2
Total	\$	<u>7.3</u>

12. Litigation and Related Matters

On June 9, 2010, Smith & Nephew, Inc. ("Smith & Nephew") filed suit against Interlace Medical, Inc. ("Interlace"), which the Company acquired on January 6, 2011, in the United States District Court for the District of Massachusetts, alleging that the Interlace MyoSure hysteroscopic tissue removal device infringed U.S. Patent 7,226,459 (the '459 patent). On November 22, 2011, Smith & Nephew filed suit against the Company in the United States District Court for the District of Massachusetts alleging that use of the MyoSure tissue removal system infringed U.S. Patent 8,061,359 (the '359 patent). Both complaints sought preliminary and permanent injunctive relief and unspecified damages. On September 4, 2012, following a two-week trial, the jury returned a verdict of infringement of both the '459 and '359 patents and assessed \$4.0 million in damages. On June 27, 2013, the Court denied the Company's motions related to inequitable conduct and allowed Smith & Nephew's request for an injunction, but ordered that enforcement of the injunction be stayed until final resolution, including appeal, of the current re-examinations of both patents at the United States Patent and Trademark Office ("USPTO"). The Court also rejected the jury's damage award and ordered the parties to identify a mechanism for resolving the damages issue. The

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USPTO issued final decisions that the claims of the '459 and the '359 patents asserted as part of the litigation are not patentable, which decisions Smith & Nephew appealed to the U.S. Patent Trial and Appeal Board ("PTAB"). In 2016, the PTAB (i) affirmed the USPTO decision with respect to the '459 patent, holding that the claims at issue are invalid, and (ii) reversed the USPTO decision with respect to the '359 patent, holding that the claims at issue are not invalid. On January 30, 2018, the United States Court of Appeals for the Federal Circuit ("Court of Appeals") issued a decision in the '459 patent appeal that affirmed as invalid the claims at issue and remanded the matter to the PTAB for further proceedings. On March 14, 2018, the Court of Appeals issued a decision in the '359 patent appeal that affirmed the PTAB ruling, holding that the claims at issue are not invalid. In a status report filed on June 18, 2018, Smith & Nephew notified the Court that it would not seek injunctive relief. On July 11, 2018, during a status conference, the Court invited the parties to file a supplemental briefing to address the impact of the '359 patent reexamination on liability issues and whether there is a need for a new trial on damages. On October 26, 2018, the parties entered into a Settlement and License Agreement to resolve the litigation. Under the agreement, in consideration of licenses, releases, non-asserts and other immunities granted by Smith & Nephew, the Company agreed to pay Smith & Nephew \$34.8 million related to sales of the MyoSure tissue removal system through September 30, 2018, plus an ongoing royalty of 1% for such sales through September 26, 2020. The Company accrued the \$34.8 million payment as a charge within general and administrative expenses in the fourth quarter of fiscal 2018, and the payment was made in the first quarter of fiscal 2019.

On November 6, 2015, the Company filed a suit against Minerva Surgical, Inc. ("Minerva") in the United States District Court for the District of Delaware, alleging that Minerva's endometrial ablation device infringes U.S. Patents 6,872,183 (the '183 patent), 8,998,898 (the '898 patent) and 9,095,348 (the '348 patent). On January 25, 2016, the Company amended the complaint to include claims against Minerva for unfair competition, deceptive trade practices and tortious interference with business relationships. On February 5, 2016, the Company filed a second amended complaint to additionally allege that Minerva's endometrial ablation device infringes U.S. Patent 9,247,989 (the '989 patent). On March 4, 2016, Minerva filed an answer and counterclaims against the Company, seeking declaratory judgment on the Company's claims and asserting claims against the Company for unfair competition, deceptive trade practices, interference with contractual relationships, breach of contract and trade libel. On June 2, 2016, the Court denied the Company's motion for a preliminary injunction on its patent claims and denied Minerva's request for preliminary injunction related to the Company's alleged false and deceptive statements regarding the Minerva product. On June 28, 2018, the Court granted the Company's summary judgment motions on infringement and no invalidity with respect to the '183 and '348 patents. The Court also granted the Company's motion for summary judgment on assignor estoppel, which bars Minerva's invalidity defenses or any reliance on collateral findings regarding invalidity from *inter partes* review proceedings. The Court also denied all of Minerva's defenses, including its motions for summary judgment on invalidity, non-infringement, no willfulness, and no unfair competition. On July 27, 2018, after a two-week trial, a jury returned a verdict that: (1) awarded the Company \$4.8 million in damages for Minerva's infringement of the '183 and '348 patents; (2) found that Minerva's infringement was not willful; and (3) found for the Company regarding Minerva's counterclaims. Damages will continue to accrue until Minerva ceases its infringing conduct. Further, the Company will seek a permanent injunction prohibiting Minerva from selling infringing devices. On March 4, 2016, Minerva filed two petitions at the USPTO for *inter partes* review of the '348 patent. On September 12, 2016, the PTAB declined both petitions to review patentability of the '348 patent. On April 11, 2016, Minerva filed a petition for *inter partes* review of the '183 patent. On October 6, 2016, the PTAB granted the petition and instituted a review of the '183 patent. On December 15, 2017, the PTAB issued a final written decision invalidating all claims of the '183 patent. On February 9, 2018 the Company appealed this decision to the United States Court of Appeals for the Federal Circuit ("Court of Appeals"), which appeal is pending. On November 2, 2016, Minerva filed a petition for post-grant review of the '989 patent. On May 10, 2017, the PTAB granted the petition and instituted a review of the '989 patent. On May 8, 2018, the PTAB issued a final written decision invalidating all claims of the '989 patent. On July 10, 2018 the Company appealed this decision to the Court of Appeals.

On April 11, 2017, Minerva filed suit against the Company and Cytoc Surgical Products, LLC ("Cytoc") in the United States District Court for the Northern District of California alleging that the Company's and Cytoc's NovaSure ADVANCED endometrial ablation device infringes Minerva's U.S. Patent 9,186,208. Minerva is seeking a preliminary and permanent injunction against the Company and Cytoc from selling this NovaSure device as well as enhanced damages and interest, including lost profits, price erosion and/or royalty. On January 5, 2018, the Court denied Minerva's motion for a preliminary injunction. On February 2, 2018, at the parties' joint request, this action was transferred to the District of Delaware. Trial is scheduled for July 20, 2020. At this time, based on available information regarding this litigation, the Company is unable to reasonably assess the ultimate outcome of this case or determine an estimate, or a range of estimates, of potential losses.

On January 30, 2012, and on March 6, 2012, Enzo Life Sciences, Inc. ("Enzo") filed suit against the Company and its subsidiary, Gen-Probe Incorporated ("Gen-Probe"), in the United States District Court for the District of Delaware, alleging that certain of Gen-Probe's diagnostics products, including products that incorporate Gen-Probe's hybridization protection assay technology (HPA), infringe Enzo's U.S. Patent 6,992,180 (the '180 patent) and that products based on the Company's

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Invader chemistry platform infringe the '180 patent. On July 16, 2012, Enzo amended its complaint to include additional products that include HPA or TaqMan reagent chemistry. Both complaints sought preliminary and permanent injunctive relief and unspecified damages. On June 28, 2017, in ruling on the Company's motion for summary judgment, the Court held that the '180 patent was invalid for nonenablement. On August 18, 2017, Enzo filed a notice of appeal with the Court of Appeals for the Federal Circuit, which appeal remains pending. At this time, based on available information regarding this litigation, the Company is unable to reasonably assess the ultimate outcome of this case or determine an estimate, or a range of estimates, of potential losses.

On March 27, 2015, Enzo filed an additional suit against the Company in the United States District Court for the District of Delaware, alleging that certain additional Company molecular diagnostic products also infringe the '180 patent. The complaint further alleges that certain of the Company's molecular diagnostic products using target capture technology infringe Enzo's U.S. Patent 7,064,197 (the '197 patent). On June 11, 2015, this matter was stayed pending the resolution of summary judgment motions in the other related suits involving the '197 patent. On March 30, 2016, the Company petitioned *inter partes* review of the '197 patent at the USPTO. The USPTO instituted the two *inter partes* reviews on all challenged claims on October 4, 2016. On September 28 and October 2, 2017, the PTAB issued final written decisions in the two *inter partes* reviews finding that all of the challenged claims of the '197 patent are unpatentable. On November 29, 2017, Enzo appealed the PTAB decisions to the United States Court of Appeals for the Federal Circuit, which appeals remain pending. At this time, based on available information regarding this litigation and the related *inter partes* reviews, the Company is unable to reasonably assess the ultimate outcome of this case or determine an estimate, or a range of estimates, of potential losses.

On October 3, 2016, Enzo filed an additional suit against the Company in the United States District Court for the District of Delaware, alleging that products employing the Company's proprietary target capture technologies infringe U.S. Patent 6,221,581 (the '581 patent). The Court granted Enzo's motion to file an amended complaint adding Grifols Diagnostic Solutions Inc. and Grifols, S.A. ("Grifols") as parties on November 9, 2017. On October 4, 2017, the Company filed for *inter partes* review of the '581 patent with the USPTO based on Enzo's asserted claims. On April 18, 2018, the USPTO denied the Company's petition for *inter partes* review. On May 18, 2018, the Company filed a request for rehearing of the USPTO denial order, which remains pending. On October 15, 2018, the Court issued a Memorandum Opinion and Order regarding claim construction of the '581 patent, ruling in favor of the Company and Grifols on nearly all disputed claim terms. On November 5, 2018, the Court entered final judgment in favor of the Company and Grifols following the filing of a Joint Stipulation of Noninfringement. Enzo intends to appeal the Court's claim construction ruling. At this time, based on available information regarding this litigation and the related *inter partes* reviews, the Company is unable to reasonably assess the ultimate outcome of this case or determine an estimate, or a range of estimates, of potential losses.

On February 3, 2017, bioMérieux, S.A. and bioMérieux, Inc. (collectively "bioMérieux") filed suit against the Company in the United States District Court for the Middle District of North Carolina ("MDNC"), alleging that the Company's HIV products, including blood screening products previously manufactured by the Company for its former blood screening partner Grifols and Grifols Diagnostic Solutions Inc. ("Grifols USA"), infringe U.S. Patents 8,697,352 and 9,074,262. On April 3, 2017, the Company and Grifols USA filed a motion to dismiss asking the Court to dismiss the complaint in its entirety for bioMérieux's failure to state a claim. On June 9, 2017, the Company filed a supplemental motion to dismiss for improper venue. On January 3, 2018, the MDNC Court granted the parties' consent motion to transfer the case to the United States District Court for the District of Delaware. On May 31, 2018, the Company filed a motion to sever and stay their arbitrable license defense. On September 25, 2018, the Court denied the Company's motion to dismiss for failure to state a claim. The Company filed petitions for *inter partes* review of the asserted patents on February 6, 2018. The USPTO denied the Company's petitions for *inter partes* review in August and September, 2018. The Company filed requests for rehearing of the denial orders, which requests are pending. At this time, based on available information regarding this litigation, the Company is unable to reasonably assess the ultimate outcome of this case or determine an estimate, or range of estimates, of potential losses.

On July 27, 2016, plaintiff ARcare, Inc., individually and as putative representative of a purported nationwide class, filed a complaint against Cynosure. The plaintiff alleges that Cynosure violated the Telephone Consumer Protection Act by: (i) sending fax advertisements that did not comply with statutory and Federal Communications Commission requirements that senders provide recipients with certain information about how to opt out from receiving faxed advertisements in the future; and (ii) sending unsolicited fax advertisements. The complaint sought damages, declaratory and injunctive relief, and attorneys' fees on behalf of a purported class of all recipients of purported fax advertisements that the plaintiff alleges did not receive an adequate opt-out notice. On September 30, 2016, Cynosure answered the complaint and denied liability. On September 7, 2016, the plaintiff sent a demand letter seeking a class settlement for statutory damages under Massachusetts General Laws, Chapter 93A § 9 ("Chapter 93A"). On October 7, 2016, Cynosure responded denying any liability under Chapter 93A, but offering the plaintiff statutory damages of \$25 on an individual basis. In March 2017, Cynosure and ARcare entered into a settlement agreement, subject to court approval, which requires Cynosure to pay settlement compensation of \$8.5 million notwithstanding the number of claims filed. If approved, Cynosure would receive a full release from the settlement class concerning the conduct

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alleged in the complaint. As a result of the settlement agreement, Cynosure recorded a charge of \$9.2 million, in the period ended December 31, 2016, which continues to be accrued as of September 28, 2018.

On March 17, 2017, a purported shareholder of Cynosure, Michael Guido, filed an action against Cynosure in the Court of Chancery of the State of Delaware pursuant to Section 220 of the Delaware General Corporation Law seeking the production of certain books and records, including books and records related to the acquisition of Cynosure by the Company. The action follows Cynosure's rejection of Mr. Guido's demand for these books and records on the ground that he had not met the requirements of the statute. In addition to books and records, the complaint seeks reasonable attorneys' fees. On August 24, 2018, following the plaintiff's counsel decision not to pursue the action, the parties filed a Stipulation of Dismissal with Prejudice to conclude the case.

On June 26 and 28, 2017, the Company filed suit against FUJIFILM Corp., FUJIFILM Medical Systems USA, Inc., and FUJIFILM Techno Products Co., Ltd. (collectively "Fujifilm") in the United States District Court for the District of Connecticut and the United States International Trade Commission ("ITC"), respectively, alleging that Fujifilm's Aspire Cristalle mammography system infringes U.S. Patent Nos. 7,831,296; 8,452,379; 7,688,940; and 7,986,765. The Company seeks preliminary and permanent injunctions and an exclusion order against Fujifilm from making, using, selling, offering for sale, or importing into the United States allegedly infringing product and also seeks enhanced damages and interest. A hearing was held at the ITC before an Administrative Law Judge ("ALJ") from April 9, 2018 to April 13, 2018. On July 26, 2018, the ALJ issued an initial determination finding that Fujifilm infringed all of the patents brought to trial and rejected Fujifilm's defenses against these patents. The ALJ recommended an exclusion order that prevents the importation of infringing Fujifilm products into the United States, as well as a cease-and-desist order preventing the further sale and marketing of infringing Fujifilm products in the United States. A final determination by the ITC is scheduled to issue by January 25, 2019.

On March 2, 2018, FUJIFILM Corporation and FUJIFILM Medical Systems U.S.A., Inc. (collectively "Fujifilm2") filed suit against the Company in the United States District Court for the District of Delaware alleging that certain of the Company's mammography systems infringe U.S. Patent Nos. 7,453,979; 7,639,779; RE44,367; and 8,684,948. Fujifilm2 further alleges that the Company violated United States antitrust laws and Delaware competition laws regarding the sale of certain of the Company's mammography systems. Fujifilm2 seeks injunctive relief and unspecified monetary damages including statutory treble damages for certain claims. At this time, based on available information regarding this litigation, the Company is unable to reasonably assess the ultimate outcome of this case or determine an estimate, or range of estimates, of potential losses.

The Company is a party to various other legal proceedings and claims arising out of the ordinary course of its business. The Company believes that except for those matters described above there are no other proceedings or claims pending against it the ultimate resolution of which could have a material adverse effect on its financial condition or results of operations. In all cases, at each reporting period, the Company evaluates whether or not a potential loss amount or a potential range of loss is probable and reasonably estimable under ASC 450, Contingencies. Legal costs are expensed as incurred.

13. Disposition

Blood Screening Business

On December 14, 2016, the Company entered into a definitive agreement to sell the assets of its blood screening business to its long-time commercial partner, Grifols for a sales price of \$1.85 billion in cash, subject to adjustment based on an estimated closing amount of inventory. The divestiture was completed on January 31, 2017, and the Company received \$1.865 billion. The sale resulted in a gain of \$899.7 million recorded in the second quarter of fiscal 2017 within operations in the Consolidated Statements of Operations. As a result of this disposition and proceeds received, the Company recorded a tax obligation of \$649.5 million, which was paid in fiscal 2017. Upon the closing of the transaction, the Company's existing collaboration agreement with Grifols terminated, and a new collaboration agreement was executed as part of this transaction pursuant to which the Company provides certain research and development services to Grifols. In addition, the Company agreed to provide transition services to Grifols over the following two to three years depending on the nature of the respective service, including the manufacture of inventory. The Company has also agreed to sell Panther instrumentation and certain supplies to Grifols as part of a long term supply agreement. In determining the accounting for the multiple elements of the overall arrangement, the Company allocated \$13.1 million of the proceeds to these elements based on their estimated fair values.

The Company determined this disposal did not qualify to be reported as a discontinued operation as the blood screening business was deemed not to be strategic to the Company and has not had and will not have a major effect on the Company's operations and financial results. Under the previous collaboration agreement, the Company performed research and development activities and manufacturing, while Grifols performed the commercial and distribution activities. The blood screening business was embedded within the Company's molecular diagnostics business, and the Company retains ownership and will continue to use the intellectual property for the underlying technology of its molecular diagnostics assays and instrumentation.

Income from operations of the disposed business noted below represents the pretax profit of the business as it was operated prior to the date of disposition. The operating expenses include only those that were incurred directly by and were retained by the disposed business and are now incurred by Grifols. As noted above, the Company is performing a number of transition services and the financial impact from these services are not included in income from operations presented below. The Company is in effect serving as a contract manufacturer of assays for Grifols for a 2 to 3 year period from the date of disposal. Income from operations of the disposed business prior to the divestiture for the years ended September 30, 2017 and September 24, 2016 was as follows:

	Years Ended	
	September 30, 2017	September 24, 2016
Income from operations	\$ 45.8	\$ 99.1

Under the long term supply agreement, transition services agreement to manufacture assays and research and development services, the Company recognized revenue of \$55.4 million and \$44.0 million, respectively, in fiscal 2018 and 2017.

Prior Collaboration Agreement with Grifols

Under its prior collaboration agreement with Grifols, the Company manufactured blood screening products, while Grifols was responsible for marketing, sales and service of those products, which Grifols sold under its trademarks. The Company was entitled to recover 50% of its manufacturing costs incurred in connection with the collaboration and received a percentage of the blood screening assay revenue generated under the collaboration. The Company's share of revenue from assays it sold to Grifols was 50%. The Company recognized product revenue, and collaborative research and license revenue, which is included within services and other revenues, under the prior collaboration agreement. The Company recognized revenue of \$96.5 million and \$235.4 million under this collaboration agreement in fiscal 2017 and 2016, respectively.

14. Business Segments and Geographic Information

The Company reports segment information in accordance with ASC 280, *Segment Reporting*. Operating segments are identified as components of an enterprise about which separate, discrete financial information is available for evaluation by the chief operating decision maker, or decision-making group, in making decisions about how to allocate resources and assess performance. The Company's chief operating decision maker is its chief executive officer, and the Company's reportable segments have been identified based on the types of products manufactured and the end markets to which the products are sold.

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Each reportable segment generates revenue from either the sale of medical equipment and related services and/or sale of disposable supplies, primarily used for diagnostic testing and surgical procedures. The Company has five reportable segments: Diagnostics, Breast Health, Medical Aesthetics, GYN Surgical and Skeletal Health. Certain reportable segments represent an aggregation of operating units within each segment. The Company measures and evaluates its reportable segments based on segment revenues and operating income adjusted to exclude the effect of non-cash charges, such as intangible asset amortization expense, goodwill and intangible asset impairment charges, transaction and integration expenses for acquisitions, restructuring, consolidation and divestiture charges, litigation charges, and other one-time or unusual items.

Identifiable assets for the five reportable segments consist of inventories, intangible assets, goodwill, and property, plant and equipment. The Company fully allocates depreciation expense to its five reportable segments. The Company has presented all other identifiable assets as corporate assets. There were no intersegment revenues. Segment information for fiscal 2018, 2017, and 2016 was as follows:

	Years ended		
	September 29, 2018	September 30, 2017	September 24, 2016
Total revenues:			
Diagnostics	\$ 1,147.4	\$ 1,197.1	\$ 1,236.9
Breast Health	1,218.2	1,138.3	1,112.8
Medical Aesthetics	339.1	207.5	—
GYN Surgical	422.0	427.1	393.1
Skeletal Health	91.2	88.8	89.9
	<u>\$ 3,217.9</u>	<u>\$ 3,058.8</u>	<u>\$ 2,832.7</u>
Operating (loss) income:			
Diagnostics	\$ 145.5	\$ 1,054.2	\$ 126.0
Breast Health	399.7	373.4	350.5
Medical Aesthetics	(844.7)	(115.9)	—
GYN Surgical	58.3	65.0	69.1
Skeletal Health	3.3	(6.5)	3.0
	<u>\$ (237.9)</u>	<u>\$ 1,370.2</u>	<u>\$ 548.6</u>
Depreciation and amortization:			
Diagnostics	\$ 257.3	\$ 278.9	\$ 341.8
Breast Health	22.7	19.7	22.6
Medical Aesthetics	108.1	54.2	—
GYN Surgical	91.6	95.7	99.9
Skeletal Health	0.6	0.7	1.1
	<u>\$ 480.3</u>	<u>\$ 449.2</u>	<u>\$ 465.4</u>
Capital expenditures:			
Diagnostics	\$ 57.7	\$ 50.9	\$ 53.5
Breast Health	14.8	12.0	10.6
Medical Aesthetics	9.4	7.3	—
GYN Surgical	13.1	15.2	17.7
Skeletal Health	3.3	1.2	0.4
Corporate	7.3	21.0	12.3
	<u>\$ 105.6</u>	<u>\$ 107.6</u>	<u>\$ 94.5</u>

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	September 29, 2018	September 30, 2017	September 24, 2016
Identifiable assets:			
Diagnostics	\$ 2,442.9	\$ 2,621.6	\$ 3,771.9
Breast Health	972.4	824.0	809.1
Medical Aesthetics	913.3	1,751.2	—
GYN Surgical	1,414.9	1,494.6	1,570.7
Skeletal Health	30.3	25.5	30.9
Corporate	1,457.1	1,262.7	1,134.4
	<u>\$ 7,230.9</u>	<u>\$ 7,979.6</u>	<u>\$ 7,317.0</u>

The Company operates in the following major geographic areas as noted in the below chart. Revenue data is based upon customer location. Other than the United States, no single country accounted for more than 10% of consolidated revenues. The Company's sales in Europe are predominantly derived from France, the United Kingdom and Germany. The Company's sales in Asia-Pacific are predominantly derived from China, Australia and Japan. The "Rest of world" designation includes Canada, Latin America and the Middle East.

Revenues by geography as a percentage of total revenues were as follows:

	Years ended		
	September 29, 2018	September 30, 2017	September 24, 2016
United States	75.1%	77.6%	78.9%
Europe	11.7%	10.0%	10.2%
Asia-Pacific	8.6%	8.1%	7.6%
Rest of world	4.6%	4.3%	3.3%
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

The Company's property, plant and equipment, net are geographically located as follows:

	September 29, 2018	September 30, 2017	September 24, 2016
United States	\$ 366.5	\$ 368.1	\$ 362.4
Costa Rica	30.9	30.1	28.1
Europe	62.0	57.1	49.2
Rest of world	18.8	17.5	12.2
	<u>\$ 478.2</u>	<u>\$ 472.8</u>	<u>\$ 451.9</u>

15. Accrued Expenses and Other Long-Term Liabilities

Accrued expenses and other long-term liabilities consisted of the following:

	September 29, 2018	September 30, 2017
Accrued Expenses		
Compensation and employee benefits	\$ 196.0	\$ 176.7
Income and other taxes	57.2	66.9
Other	182.9	131.7
	<u>\$ 436.1</u>	<u>\$ 375.3</u>
Other Long-Term Liabilities		
Reserve for income tax uncertainties	\$ 92.6	\$ 88.3
Accrued lease obligation—long-term	35.5	34.1
Pension liabilities	9.9	10.0
Other	19.6	7.8
	<u>\$ 157.6</u>	<u>\$ 140.2</u>

16. Pension and Other Employee Benefits

The Company has certain defined benefit pension plans covering the employees of its Hitec Imaging German subsidiary (the “Pension Benefits”). As of September 29, 2018 and September 30, 2017, the Company’s pension liability was \$9.7 million and \$9.9 million, respectively, which is primarily recorded as a component of long-term liabilities in the Consolidated Balance Sheets. Under German law, there are no rules governing investment or statutory supervision of the pension plan. As such, there is no minimum funding requirement imposed on employers. Pension benefits are safeguarded by the Pension Guaranty Fund, a form of compulsory reinsurance that guarantees an employee will receive vested pension benefits in the event of insolvency. The pension plans were closed on December 31, 1997 and only eligible employees at that date could participate in the plans prior to closing to new participants.

The tables below provide a reconciliation of benefit obligations, plan assets, funded status, and related actuarial assumptions of the Company’s German Pension Benefits.

Change in Benefit Obligation	Years ended		
	September 29, 2018	September 30, 2017	September 24, 2016
Benefit obligation at beginning of year	\$ (9.9)	\$ (11.0)	\$ (10.0)
Service cost	—	—	—
Interest cost	(0.2)	(0.1)	(0.2)
Plan participants’ contributions	—	—	—
Actuarial gain (loss)	(0.1)	1.5	(1.2)
Foreign exchange gain	0.2	(0.6)	0.1
Benefits paid	0.3	0.3	0.3
Benefit obligation at end of year	<u>(9.7)</u>	<u>(9.9)</u>	<u>(11.0)</u>
Plan assets	—	—	—
Benefit obligation at end of year	<u>\$ (9.7)</u>	<u>\$ (9.9)</u>	<u>\$ (11.0)</u>

The tables below outline the components of the net periodic benefit cost and related actuarial assumptions of the Company’s German Pension Benefits.

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Components of Net Periodic Benefit Cost	Years ended		
	September 29, 2018	September 30, 2017	September 24, 2016
Service cost	\$ —	\$ —	\$ —
Interest cost	0.2	0.1	0.4
Expected return on plan assets	—	—	—
Amortization of prior service cost	—	—	—
Recognized net actuarial gain	0.1	0.4	(0.2)
Net periodic benefit cost	\$ 0.3	\$ 0.5	\$ 0.2

Weighted-Average Net Periodic Benefit Cost Assumptions	2018	2017	2016
Discount rate	1.95%	2.15%	1.30%
Expected return on plan assets	—%	—%	—%
Rate of compensation increase	—%	—%	—%

The projected benefit obligation for the German Pension Benefits with projected benefit obligations in excess of plan assets was \$9.7 million and \$9.9 million at September 29, 2018 and September 30, 2017, respectively, and the accumulated benefit obligation for the German Pension Benefits was \$9.7 million and \$9.9 million at September 29, 2018 and September 30, 2017, respectively.

The Company is also obligated to pay long-term service award benefits under the German Pension Benefits. The projected benefit obligation for long-term service awards was \$0.1 million at both September 29, 2018 and September 30, 2017, respectively.

The table below reflects the total Pension Benefits expected to be paid for the German Pension Benefits each fiscal year as of September 29, 2018 :

2019	\$ 0.4
2020	\$ 0.4
2021	\$ 0.4
2022	\$ 0.4
2023	\$ 0.4
2023 to 2027	\$ 2.1

The Company also maintains additional contractual pension benefits for its top German executive officers in the form of a defined contribution plan. These contributions were insignificant in fiscal 2018, 2017 and 2016. Additionally, the Company has Swiss pension plans, which were insignificant in fiscal 2018, 2017, and 2016.

17. Quarterly Statement of Operations Information (Unaudited)

The following table presents a summary of quarterly results of operations for fiscal 2018 and 2017 :

	2018			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Total revenue	\$ 791.1	\$ 789.3	\$ 824.0	\$ 813.5
Gross profit	424.5	415.1	436.0	421.1
Net income (loss) (1)	406.7	(681.4)	112.9	50.5
Diluted net income (loss) per common share	\$ 1.45	\$ (2.46)	\$ 0.41	\$ 0.18

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2017

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Total revenue	\$ 734.4	\$ 715.4	\$ 806.1	\$ 802.9
Gross profit	404.8	388.7	409.6	417.9
Net income (2)	86.5	526.8	59.5	82.7
Diluted net income per common share	\$ 0.30	\$ 1.84	\$ 0.21	\$ 0.29

- (1) Net income in the first quarter of fiscal 2018 included the impact of implementing tax reform, which resulted in a provisional net tax benefit of \$329.2 million . Net loss in the second quarter of fiscal 2018 included a goodwill impairment charge of \$685.7 million , an in-process research and development intangible asset charge of \$46.0 million and a debt extinguishment loss of \$44.9 million . Net income in the fourth quarter of fiscal 2018 included a litigation settlement charge of \$34.8 million .
- (2) Net income in the second quarter of fiscal 2017 included a gain on the sale of the blood screening business of \$899.7 million and acquisition transaction expenses of \$19.4 million .

**CERTIFICATE OF INCORPORATION
OF
HOLOGIC, INC.**

The undersigned, a natural person, for the purposes of organizing a corporation for conducting the business and promoting the purposes hereinafter stated, under the provisions and subject to the requirements of the laws of the State of Delaware (particularly Chapter 1, Title 8 of the Delaware Code and the acts amendatory thereof and supplemental thereto, and generally known as the "General Corporation Law of the State of Delaware"), hereby certifies that:

FIRST: The name of the corporation (hereinafter called the "Corporation") is Hologic, Inc.

SECOND: The address, including street, number, city, and county, of the registered office of the Corporation in the State of Delaware is 32 Lookerman Square, Suite L-100, Dover, County of Kent, Delaware 19901; and the name of the registered agent of the Corporation in the State of Delaware at such address is Prentice-Hall Corporate Services.

THIRD: The nature of the business and the purposes to be conducted and promoted by the Corporation, shall be (a) to engage in the manufacture, sale, research and development of medical products and (b) any lawful business, to promote any lawful purpose, and to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware.

FOURTH:

(a) The total number of shares of all classes of stock which the Corporation shall have authority to issue is (i) 10,000,000 shares of Common Stock, \$.01 par value per share ("Common Stock"), and (ii) 1,622,685 shares of Preferred Stock, \$.01 par value per share (the "Preferred Stock").

(b) The Preferred Stock may be issued and designated by the Board of Directors, in one or more classes or series and with such rights, powers, preferences and terms and at such times and for such consideration as the Board of Directors shall determine, without further stockholder action. With respect to each class or series of Preferred Stock, prior to issuance, the Board of Directors by resolution shall designate that class or series to distinguish it from other classes and series of stock of the Corporation, shall specify the number of shares to be included in the class or series, and shall fix the rights, powers, preferences and terms of the shares of the class or series, including, but without limitation: (i) the dividend rate, which may be fixed or variable, its preference as to any other class or series of capital stock, and whether dividends will be cumulative or noncumulative; (ii) whether the shares are to be redeemable and, if so, at what times and prices (which price or prices may, but need not, vary according to the time or circumstances of such redemption) and on what other terms and conditions; (iii) the terms and amount of any sinking fund provided for the purchase or redemption of the shares; (iv) whether the shares shall be convertible or exchangeable and, if so, the times, prices, rates, adjustments and other terms of such conversion or exchange; (v) the voting rights, if any, applicable to the shares in addition to those prescribed by law; (vi) the restrictions and conditions, if any, on the issue or reissue of any additional shares of such class or series or of any other class or series of Preferred Stock ranking on a parity with or prior to the shares of such class or series; (vii) whether, and the extent to which, any of the rights, powers, preferences and terms of any such class or series may be made dependent upon facts ascertainable outside of the Certificate of Incorporation or outside the resolution or resolutions providing for the issuance of such class or series by the Board of Directors, provided that the manner in which such facts shall operate is clearly set forth in the resolution or resolutions providing for the issuance of such class or series adopted by the Board of Directors; and (viii) the rights of the holders of such shares upon voluntary or involuntary liquidation, dissolution or winding up of the Corporation.

FIFTH: The name and the mailing address of the incorporator(s) are as follows:

NAME	ADDRESS
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Ann C. Brachman	Brown, Rudnick, Freed & Gesmer One Financial Center Boston, MA 02111
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SIXTH: The name and the mailing address of the directors of the Corporation, each of whom shall serve until the first annual meeting of shareholders and until his or her successor is elected and qualified, are as follows:

NAME	ADDRESS
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S. David Ellenbogen 300 Bear Hill Road
Waltham MA 02154

Jay A. Stein 300 Bear Hill Road
Waltham MA 02154

Esther Sharp One Post Office Square
Suite 3800
Boston MA 02109

SEVENTH: The Corporation shall have perpetual existence.

EIGHTH: Whenever a compromise or arrangement is proposed between this Corporation and its creditors or any class of them and/or between this Corporation and its stockholders or any class of them, any court of equitable jurisdiction within the State of Delaware may, on the application in a summary way of this Corporation or of any creditor or stockholder thereof or on the application of any receiver or receivers appointed for this Corporation under the provisions of Section 291 of Title 8 of the Delaware Code or on the application of trustees in dissolution or of any receiver or receivers appointed for this Corporation under the provisions of Section 279 of Title 8 of the Delaware Code order a meeting of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this Corporation, as the case may be, to be summoned in such manner as the said court directs. If a majority in number representing three-fourths in value of the creditors or class of creditors, and/or of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this Corporation, as the case may be, agrees to any compromise or arrangement and to any reorganization of this Corporation as a consequence of such compromise or arrangement, the said compromise or arrangement and the said reorganization shall, if sanctioned by the court to which the said application has been made, be binding on all the creditors or class of creditors, and/or on all the stockholders or class of stockholders, of this Corporation, as the case may be, and also on this Corporation.

NINTH: For the management of the business and for the conduct of the affairs of the Corporation, and in further definition, limitation and regulation of the powers of the Corporation and of its directors and of its stockholders or any class thereof, as the case may be, it is further provided that:

(a) The business of the Corporation shall be conducted by the officers of the Corporation under the supervision of the Board of Directors.

(b) The number of directors which shall constitute the whole Board of Directors shall be fixed by, or in the manner provided in, the By-Laws. No election of Directors need be by written ballot.

(c) The Board of Directors of the Corporation may adopt, amend or repeal the By-Laws of the Corporation at any time after the original adoption of the By-Laws according to Section 109 of the General Corporation Law of the State of Delaware; provided, however, that any amendment to provide for the classification of directors of the Corporation for staggered terms pursuant to the provisions of subsection (d) of Section 141 of the General Corporation Law of the State of Delaware shall be set forth in an amendment to this Certificate of Incorporation, in an initial By-Law, or in a By-Law adopted by the stockholders of the Corporation entitled to vote.

TENTH:

(a) The Corporation may, to the fullest extent permitted by Section 145 of the General Corporation Law of the State of Delaware, as the same may be amended and supplemented, indemnify any and all persons whom it shall have power to indemnify under said section from and against any and all of the expenses, liabilities or other matters referred to in or covered by said section, and the indemnification provided for herein shall not be deemed exclusive of any other rights to which a person indemnified may be entitled under any By-Law, agreement, vote of stockholders or disinterested Directors or otherwise, both as to action in his official capacity and as to action in another capacity while holding such office, and shall continue as to a person who has ceased to be a Director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such a person.

(b) No director shall be personally liable to the Corporation or its stockholders for monetary damages for any breach of fiduciary duty by such director as a director. Notwithstanding the foregoing sentence, a director shall be liable to the extent provided by applicable law (i) for breach of the Director's duty of loyalty to the Corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) pursuant to Section 174 of

the General Corporation Law of the State of Delaware or (iv) for any transaction from which the director derived an improper personal benefit. No amendment to or repeal of this paragraph (b) of this Article Tenth shall apply to or have any effect on the liability or alleged liability of any director of the Corporation for or with respect to any acts or omissions of such Director occurring prior to such amendment.

ELEVENTH: From time to time, subject to the provisions of this Certificate of Incorporation (including without limitation the provisions of paragraph (d) of Article Twelfth and of Article Fourteenth), any of the provisions of this Certificate of Incorporation may be amended, altered or repealed, and other provisions authorized by the laws of the State of Delaware at the time in force may be added or inserted in the manner and at the time prescribed by said laws, and all rights at any time conferred upon the stockholders of the Corporation by this Certificate of Incorporation are granted subject to the provisions of this Article Eleventh.

TWELFTH:

(a) Any direct or indirect purchase or other acquisition in one or more transactions by the Corporation or any Subsidiary of any of the outstanding Voting Stock of any class from any one or more individuals or entities known by the Corporation to be a Related Person, who has beneficially owned such security or right for less than two years prior to the date of such purchase, at a price in excess of the Fair Market Value shall, except as hereinafter provided, require the affirmative vote of the holders of at least two-thirds of the shares of Voting Stock, voting as a single class, excluding any votes cast with respect to shares of Voting Stock beneficially owned by such Related Person. Such affirmative vote shall be required notwithstanding the fact that no vote may be required, or that a lesser percentage may be specified by law or any agreement with any national securities exchange, or otherwise, but no such affirmative vote shall be required with respect to any purchase or other acquisition of securities made as part of (i) a tender or exchange offer by the Corporation to purchase securities of the same class made on the same terms to all holders of such securities and complying with the applicable requirements of the Exchange Act and the rules and regulations thereunder, or any successor rule or regulation or (ii) pursuant to an open-market purchase program conducted in accordance with the requirements of Rule 10b-18 promulgated by the Securities and Exchange Commission pursuant to the Exchange Act or any successor rule or regulation.

(b) A majority of the Continuing Directors shall have the power and duty to determine, on the basis of information known to them after reasonable inquiry, all facts necessary to determine compliance with this Article Twelfth including, without limitation, (i) whether a person is a Related Person, (ii) the number of shares of Voting Stock beneficially owned by any person and (iii) whether a price is in excess of Fair Market Value.

(c) Nothing contained in this Article Twelfth shall be construed to relieve any Related Person from any fiduciary obligation imposed by law.

(d) Notwithstanding anything contained in this Certificate of Incorporation to the contrary, the affirmative vote of the holders of at least two-thirds of the outstanding shares of Voting Stock, voting together as a single class, shall be required to alter, change, amend, repeal or adopt any provision inconsistent with this Article Twelfth.

THIRTEENTH: The Board of Directors of the Corporation, when evaluating any offer of another Person to (a) purchase or exchange any securities or property for any outstanding equity securities of the Corporation, (b) merge or consolidate the Corporation with another corporation, or (c) purchase or otherwise acquire all or substantially all of the properties and assets of the Corporation, shall in connection with the exercise of its judgment in determining what is in the best interests of the Corporation and its stockholders, give due consideration not only to the price or other consideration being offered, but also to all other relevant factors, including but without limitation, the interests of the Corporation's employees, suppliers, creditors and customers, the economy of the state, region and nation, community and societal considerations, and the long-term and short-term interests of the Corporation and its stockholders, including the possibility that these interests may be best served by the continued independence of the Corporation.

FOURTEENTH: Except as otherwise provided in this Certificate of Incorporation, the By-laws, any designation of terms pursuant to Section 151 of the General Corporation Law of the State of Delaware, any vote required by stockholders pursuant to said General Corporation Law, other than the election of directors (which shall not be affected by this provision), shall be effective if recommended by a majority of the Continuing Directors and the vote of a majority of each class of stock outstanding and entitled to vote thereon; and if not recommended by a majority of the Continuing Directors, then by the vote of 80% of each class of stock outstanding and entitled to vote thereon.

FIFTEENTH: Definitions

The following definitions shall apply for the purpose of Articles Twelfth, Thirteenth and Fourteenth only:

(a) "Affiliate" shall have the meaning given such term in Rule 12b-2 under the Exchange Act.

(b) "Associate" shall have the meaning given such term in Rule 12b-2 under the Exchange Act.

(c) "Continuing Director" shall mean any member of the Board of Directors who is not an Affiliate of any Related Person and who was a member of the Board of Directors prior to the time that any such Related Person became a Related Person, and any successor of a Continuing Director who is unaffiliated with any Related Person and is recommended to succeed a Continuing Director by a majority of the Continuing Directors then on the Board of Directors. Notwithstanding the above, a majority of the then existing Continuing Directors can deem a new director to be a Continuing Director, even though such person is Affiliated with a Related Person.

(d) "Exchange Act" shall mean the Securities Exchange Act of 1934, as amended, from time to time.

(e) "Fair Market Value" shall mean: (i) in the case of stock, the highest closing sale price during the 30-day period immediately preceding the date in question of a share of such stock on the principal United States securities exchange registered under the Exchange Act on which such stock is listed, or, if such stock is not listed on any such exchange, the highest closing bid quotation with respect to a share of such stock during the 30-day period preceding the date in question on the National Association of Securities Dealers, Inc. Automated Quotations System or any system then in use or, if no such quotations are available, the fair market value on the date in question of a share of such stock as determined by the Board of Directors in good faith; and (ii) in the case of property other than cash or stock, the fair market value of such property on the date in question as determined by the Board of Directors in good faith.

(f) "Massachusetts Predecessor" shall mean Hologic, Inc., a Massachusetts corporation.

(g) "Merger Date" shall mean the date upon which the Massachusetts predecessor merges with and into the Corporation.

(h) "Person" shall mean any individual, firm, corporation or other entity.

(i) "Related Person" shall mean any Person (other than the Corporation, any Subsidiary or any individual who was a stockholder of the Corporation's Massachusetts Predecessor on December 31, 1985) which, together with its Affiliates and Associates and with any other Person (other than the Corporation, any Subsidiary or any individual who was a stockholder of the Corporation's Massachusetts Predecessor on December 31, 1985) with which it or they have entered into, after the Merger Date, any agreement, arrangement or understanding with respect to acquiring, holding or disposing of Voting Stock, acquires beneficial ownership (as defined in Rule 13d-3 of the Exchange Act, except that such term shall include any Voting Stock which such person has the right to acquire, whether or not such right may be exercised within 60 days), directly or indirectly of more than 5% of the voting power of the outstanding Voting Stock after the Merger Date.

(j) "Subsidiary" shall mean any corporation in which a majority of the capital stock entitled to vote generally in the election of directors is owned, directly or indirectly, by the Corporation.

(k) "Voting Stock" shall mean all of the then outstanding shares of the capital stock of the Corporation entitled to vote generally in the election of directors.

Signed on the 18th day of January, 1990.

/s/ Ann C. Brachman

Ann C. Brachman, Incorporator

CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION

Hologic, Inc., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware, DOES HEREBY CERTIFY:

FIRST: That at a meeting of the Board of Directors of Hologic, Inc., resolutions were duly adopted setting forth a proposed amendment to the Certificate of Incorporation of said corporation, declaring said amendment to be advisable and calling a meeting of the stockholders of said corporation for consideration thereof. The resolution setting forth the proposed amendment is as follows:

RESOLVED: That it is advisable and in the best interests of the corporation to amend the Certificate of Incorporation of the corporation so that the first paragraph of Article Fourth shall read in its entirety as follows:

(a) The total number of shares of all classes of stock which the Corporation shall have authority to issue is (i) 30,000,000 shares of Common Stock, \$.01 par value per share ("Common Stock"), and (ii) 1,622,685 shares of Preferred Stock, \$.01 par value per share ("Preferred Stock").

SECOND: That thereafter, pursuant to resolution of its Board of Directors, an annual meeting of the stockholders of said corporation was duly called and held, upon notice in accordance with Section 222 of the General Corporation Law of the State of Delaware at which meeting the necessary number of shares as required by statute were voted in favor of the amendment.

THIRD: That said amendment was duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, said Hologic, Inc. has caused this Certificate to be signed by S. David Ellenbogen, its Chairman, this 27th day of February, 1996.

HOLOGIC, INC.

By: /s/ S. David Ellenbogen

Name: S. David Ellenbogen

Title: Chairman

**CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION**

Hologic, Inc., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware, DOES HEREBY CERTIFY:

FIRST: That at a meeting of the Board of Directors of Hologic, Inc., resolutions were duly adopted setting forth a proposed amendment to the Certificate of Incorporation of said corporation, declaring said amendment to be advisable and calling a meeting of the stockholders of said corporation for consideration thereof. The resolution setting forth the proposed amendment is as follows:

RESOLVED : That it is advisable and in the best interests of the corporation to amend the Certificate of Incorporation of the corporation so that the first paragraph of Article Fourth shall read in its entirety as follows:

(a) The total number of shares of all classes of stock which the Corporation shall have authority to issue is (i) 90,000,000 shares of Common Stock, \$.01 par value per share ("Common Stock"), and (ii) 1,622,685 shares of Preferred Stock, \$.01 par value per share ("Preferred Stock"), of which 30,000 shares have been designated Series A Junior Participating Preferred Stock ("Series A Preferred Stock").

SECOND: That thereafter, pursuant to resolution of its Board of Directors, a special meeting of the stockholders of said corporation was duly called and held, upon notice in accordance with Section 222 of the General Corporation Law of the State of Delaware at which meeting the necessary number of shares as required by statute were voted in favor of the amendment.

THIRD: That said amendment was duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

CERTIFICATE OF INCORPORATION

Hologic, Inc., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware, DOES HEREBY CERTIFY:

FIRST: That at a meeting of the Board of Directors of Hologic, Inc. held on January 11, 2008, resolutions were duly adopted setting forth a proposed amendment to the Certificate of Incorporation of said corporation, declaring said amendment to be advisable and calling a meeting of the stockholders of said corporation for consideration thereof. The resolution setting forth the proposed amendment is as follows:

RESOLVED: That it is advisable and in the best interests of the corporation to amend the Certificate of Incorporation of the corporation so that the first paragraph of Article Fourth shall read in its entirety as follows:

- (a) The total number of shares of all classes of stock which the Corporation shall have authority to issue is (i) 750,000,000 shares of Common Stock, \$.01 par value per share ("Common Stock"), and (ii) 1,622,685 shares of Preferred Stock, \$.01 par value per share ("Preferred Stock"), of which 30,000 shares have been designated Series A Junior Participating Preferred Stock ("Series A Preferred Stock").

SECOND: That thereafter, pursuant to resolution of its Board of Directors, a annual meeting of the stockholders of said corporation was duly called and held, on March 11, 2008, upon notice in accordance with Section 222 of the General Corporation Law of the State of Delaware at which meeting the necessary number of shares as required by statute were voted in favor of the amendment.

THIRD: That said amendment was duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, said Hologic, Inc. has caused this Certificate to be signed by Glenn P. Muir, its Executive Vice President, this 11th day of March, 2008.

HOLOGIC, INC.

By: /s/ Glenn P. Muir

Name: Glenn P. Muir

Title: Executive Vice President

Subsidiaries of Hologic	Jurisdiction of Incorporation or Organization
Beijing Century Jinbai Technology Co., Ltd.	China
Beijing Hologic Technology Co., Ltd.	China
Beijing TCT Jinbai Technologies Co., Ltd.	China
Benassar Diagnostica-Equipamentos Medicos Unipessoal, Lda.	Portugal
BioLucent, LLC	Delaware
Bioptics, Inc.	Arizona
Cynosure Australia Holdings Limited	United Kingdom
Cynosure B.V.	Netherlands
Cynosure China Holdings Limited	United Kingdom
Cynosure France Holdings Limited	United Kingdom
Cynosure GmbH	Germany
Cynosure Germany Holdings Limited	United Kingdom
Cynosure, Inc.	Delaware
Cynosure K.K.	Japan
Cynosure Korea Limited	Korea
Cynosure Korea Holdings Limited	United Kingdom
Cynosure Maroc SARL	Morocco
Cynosure Mexico, S. de R.L. de C.V.	Mexico
Cynosure Netherlands Holdings Limited	United Kingdom
Cynosure Portugal, Unipessoal, Limitada	Portugal
Cynosure Pty Ltd	Australia
Cynosure Spain S.L.	Spain
Cynosure Spain Holdings Limited	United Kingdom
Cynosure UK LTD	United Kingdom
Cynosure UK Holdings Limited	United Kingdom
Cytc Cayman Limited	Cayman Islands
Cytc Corporation	Delaware
Cytc Prenatal Products Corp.	Delaware
Cytc Surgical Products, LLC	Massachusetts
Direct Radiography Corp.	Delaware
Emsor, Sociedad de responsabilidad limitada	Spain
Faxitron Bioptics, LLC	Delaware
Focal Therapeutics, Inc.	Delaware
Gen-Probe Australia Pty Ltd.	Australia
Gen-Probe Incorporated	Delaware
Gen-Probe Prodesse, Inc.	Wisconsin
Gen-Probe Sales & Service, Inc.	Delaware
Hangzhou Zuanbai Technology Co., Ltd	China
Hologic (Australia) Pty Ltd.	Australia
Hologic (China) Enterprise Management Consulting Co., Ltd.	China
Hologic (MA), LLC	Massachusetts
Hologic ASE, LLC	Delaware
Hologic Asia, Limited	Hong Kong
Hologic Asia Pacific Limited	Hong Kong

Subsidiaries of Hologic	Jurisdiction of Incorporation or Organization
Hologic Asia Pacific Limited	Hong Kong
Hologic Asia Pacific Holdings Limited	United Kingdom
Hologic Australia Holdings Limited	United Kingdom
Hologic Austria GmbH	Austria
Hologic Austria Holdings Limited	United Kingdom
Hologic Belgium Holdings Limited	United Kingdom
Hologic BVBA	Belgium
Hologic Canada ULC	Canada
Hologic Canada Holdings Limited	United Kingdom
Hologic Caribbean (Barbados) SRL	Barbados
Hologic Denmark ApS	Denmark
Hologic Deutschland GmbH	Germany
Hologic Emsor Holdings Limited	United Kingdom
Hologic Espana S.A.	Spain
Hologic Europe Middle East and Africa, S.A.	Switzerland
Hologic Finance Ltd.	Bermuda
Hologic Foreign Holdings Limited	United Kingdom
Hologic France SARL	France
Hologic GGO 1, LLC	Delaware
Hologic GGO 2, LLC	Delaware
Hologic GGO 3 LLP	United Kingdom
Hologic GGO 4 LTD	United Kingdom
Hologic GGO 5, LLC	Delaware
Hologic Global Holding LTD	United Kingdom
Hologic Hitec-Imaging GmbH	Germany
Hologic Holdings Limited	United Kingdom
Hologic HUB LTD	United Kingdom
Hologic Iberia, S.L.	Spain
Hologic India LLP	India
Hologic International Holdings B.V.	Netherlands
Hologic IP LTD	United Kingdom
Hologic Italia S.r.l.	Italy
Hologic Japan KK	Japan
Hologic Latin America (Servicos Em Marketing E Negocios) Ltda.	Brazil
Hologic Ltd.	United Kingdom
Hologic Malaysia SDN. BHD.	Malaysia
Hologic Manchester Limited	United Kingdom
Hologic Medicor Holdings Limited	United Kingdom
Hologic Medical Technologies (Beijing) Co., Ltd.	China
Hologic Medicor GmbH	Germany
Hologic Medicor Suisse GmbH	Switzerland
Hologic Netherlands B.V.	Netherlands
Hologic Partners Limited	United Kingdom
Hologic SA	France
Hologic Singapore Pte. Ltd	Singapore

Subsidiaries of Hologic	Jurisdiction of Incorporation or Organization
Hologic Suisse SA	Switzerland
Hologic Surgical Products Costa Rica, S.R.L.	Costa Rica
Hologic Sweden AB	Sweden
Hologic Switzerland Holdings Limited	United Kingdom
Hologic UK Finance Ltd.	United Kingdom
Hologic US Finance Co LLC	Delaware
Navigation Three Limited	Hong Kong
Palomar Medical Technologies, LLC	Delaware
S.A.R.L. Cynosure France	France
Sentinel Medical ULC	Canada
Suros Surgical Systems, Inc.	Delaware
Suzhou Cynosure Medical Devices Company Ltd.	China
TCT International Co., Ltd.	British Virgin Islands

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

- (1) Registration Statement (Form S-8 No. 333-79167) pertaining to the Hologic, Inc. 1997 Employee Equity Incentive Plan and the Hologic, Inc. Amended and Restated 1999 Equity Incentive Plan,
- (2) Registration Statement (Form S-8 No. 333-60046) pertaining to the Hologic, Inc. Amended and Restated 1999 Equity Incentive Plan, and the Hologic, Inc. 2000 Acquisition Equity Incentive Plan,
- (3) Registration Statement (Form S-8 No. 333-112222) pertaining to the Hologic, Inc. Amended and Restated 1999 Equity Incentive Plan,
- (4) Registration Statement (Form S-8 No. 333-121111) pertaining to the Hologic, Inc. Amended and Restated 1999 Equity Incentive Plan,
- (5) Registration Statement (Form S-8 No. 333-130170) pertaining to the Hologic, Inc. Amended and Restated 1999 Equity Incentive Plan,
- (6) Registration Statement (Form S-8 No. 333-139341) pertaining to the Hologic, Inc. Second Amended and Restated 1999 Equity Incentive Plan,
- (7) Registration Statement (Form S-3ASR No. 333-214663) pertaining to Hologic, Inc.'s shelf registration statement for common stock, preferred stock, debt securities, rights, warrants, purchase contracts, units or any combination of the foregoing,
- (8) Registration Statement (Form S-8 No. 333-150796) pertaining to the Hologic, Inc. 2008 Equity Incentive Plan, Hologic, Inc.'s two-for-one stock split in the form of a dividend of one share of common stock for each share of common stock outstanding as of March 21, 2008 and the adjustment of shares registered under Hologic, Inc.'s Stock Plans,
- (9) Registration Statement (Form S-8 No. 333-181126) pertaining to the Hologic, Inc. 2012 Employee Stock Purchase Plan, as amended,
- (10) Registration Statement (Form S-8 No. 333-183019) pertaining to the 2003 Incentive Award Plan of Gen-Probe Incorporated,
- (11) Registration Statement (Form S-8 No. 333-188468) pertaining to the Hologic, Inc. Amended and Restated 2008 Equity Incentive Plan,
- (12) Registration Statement (Form S-8 No. 333-224613) pertaining to the Hologic, Inc. Amended and Restated 2008 Equity Incentive Plan,
- (13) Registration Statement (Form S-8 No. 333-210968) pertaining to the Hologic, Inc. 2012 Employee Stock Purchase Plan.

of our reports dated November 20, 2018, with respect to the consolidated financial statements of Hologic, Inc. and the effectiveness of internal control over financial reporting of Hologic, Inc., included in this Annual Report (Form 10-K) of Hologic, Inc. for the year ended September 29, 2018.

/s/ Ernst & Young LLP

Boston, Massachusetts
November 20, 2018

CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Stephen P. MacMillan, certify that:

1. I have reviewed this annual report on Form 10-K of Hologic, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 20, 2018

/s/ Stephen P. MacMillan

Stephen P. MacMillan
Chairman, President and Chief Executive Officer

CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Karleen M. Oberton, certify that:

1. I have reviewed this annual report on Form 10-K of Hologic, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 20, 2018

/s/ Karleen M. Oberton

Karleen M. Oberton
Chief Financial Officer

Certification
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
(Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code)

I, Stephen P. MacMillan, Chief Executive Officer of Hologic, Inc., a Delaware corporation (the "Company"), do hereby certify, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code), that:

- (1) The Annual Report on Form 10-K for the year ended September 29, 2018 (the "Form 10-K") of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Form 10-K fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: November 20, 2018

/s/ Stephen P. MacMillan

Stephen P. MacMillan
Chairman, President and Chief Executive Officer

A SIGNED ORIGINAL OF THIS WRITTEN STATEMENT REQUIRED BY SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002 HAS BEEN PROVIDED TO HOLOGIC, INC. AND WILL BE RETAINED BY HOLOGIC, INC. AND FURNISHED TO THE SECURITIES AND EXCHANGE COMMISSION OR ITS STAFF UPON REQUEST.

Certification
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
(Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code)

I, Karleen M. Oberton, Chief Financial Officer of Hologic, Inc., a Delaware corporation (the "Company"), do hereby certify, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code), that:

- (1) The Annual Report on Form 10-K for the year ended September 29, 2018 (the "Form 10-K") of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Form 10-K fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: November 20, 2018

/s/ Karleen M. Oberton

Karleen M. Oberton
Chief Financial Officer

A SIGNED ORIGINAL OF THIS WRITTEN STATEMENT REQUIRED BY SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002 HAS BEEN PROVIDED TO HOLOGIC, INC. AND WILL BE RETAINED BY HOLOGIC, INC. AND FURNISHED TO THE SECURITIES AND EXCHANGE COMMISSION OR ITS STAFF UPON REQUEST.