ENDOLOGIX INC /DE/
Form 10-K
April 01, 2019

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

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Form 10-K

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(Mark One)
x ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2018
or
o TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transaction period from to .
Commission file number: 000-28440

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

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Delaware	68-0328265
(State or other jurisdiction of incorporation or organization)	(IRS Employer Identification No.)

2 Musick, Irvine, California 92618
(Address of principal executive offices, including zip code)
Registrant's telephone number, including area code: (949) 595-7200

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

Title of each class	Name of each exchange on which registered
Common Stock, $0.001 par value	The Nasdaq Stock Market, LLC

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

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Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes o No x
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 o No x
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 x No o
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 x No o
Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. o

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

Large accelerated filer	o	Accelerated filer	x
Non-accelerated filer	o (Do not check if a smaller reporting company)	Smaller reporting company	o
		Emerging growth company	o

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. o

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes o No x

As of June 29, 2018, the aggregate market value of the voting stock held by non-affiliates of the Registrant was $479,442,894 (based upon the $56.60 closing price for shares of the Registrant’s Common Stock as reported by the Nasdaq Global Select Market on June 29, 2018, the last trading date of the Registrant’s most recently completed second fiscal quarter).

On March 27, 2019, approximately 10,347,913 shares of the Registrant’s Common Stock, $0.001 par value, were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

In accordance with Instruction G(3) to Form 10-K, certain information required by Part III (Items 10-14) of Form 10-K is incorporated by reference into this Annual Report on Form 10-K by reference to the registrant's definitive proxy statement on Schedule 14A relating to the registrant's 2019 Annual Meeting of Stockholders (the "Proxy Statement"), or an amendment to this Annual Report on Form 10-K, which shall, in either case, be filed not later than 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K. Except for the portions of the Proxy Statement that may be specifically incorporated by reference in this Annual Report on Form 10-K, the Proxy Statement shall not be deemed to be filed as part hereof.

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Special Note Regarding Forward-Looking Statements

In addition to historical information, this Annual Report on Form 10-K contains “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These forward-looking statements are intended to qualify for the safe harbor established by the Private Securities Litigation Reform Act of 1995. You can identify forward-looking statements by the use of forward-looking terminology such as “anticipates,” “believes,” “can,” “continue,” “could,” “estimates,” “expects,” “intends,” “plans,” “potential,” “predicts,” “projects,” “should,” or “will” or the negative of these terms or other comparable terminology, by discussions of strategies, opportunities, plans or intentions. Forward-looking statements also include the assumptions underlying or relating to such statements. In addition, any statements that refer to, among other things, projections of our future or assumed financial performance, results of operations, liquidity, business forecasts and plans, research and development plans, manufacturing plans, strategic plans and objectives, capital needs and financing plans, product launches, regulatory approvals, the impact of changes in the competitive environment and other trends in our businesses, the application of accounting guidance or other characterizations of future events or circumstances are forward-looking statements. We caution you that the foregoing list may not include all of the forward-looking statements made in this Annual Report on Form 10-K.

We have based these forward-looking statements largely on our current expectations based on information currently available to us and projections about future events and trends affecting the financial condition of our businesses. Although we do not make forward-looking statements unless we believe we have a reasonable basis for doing so, we cannot guarantee their accuracy. These forward-looking statements are subject to risks, uncertainties and other factors that could cause actual results and the timing of certain events to differ materially from future results expressed or implied by such forward-looking statements. The risks, uncertainties and other factors that could cause actual results and the timing of certain events to differ materially from future results expressed or implied by such forward-looking statements are set forth in the risk factors listed from time to time in our filings with the Securities and Exchange Commission and those set forth in Item 1A, “Risk Factors.”

You are urged to carefully review and consider the various disclosures made by us, which attempt to advise you of the risks, uncertainties, and other factors that may affect our business, operating results and financial condition, for a discussion of other important factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking statements. As a result of these factors, the forward-looking statements herein may not prove to be accurate. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all.

Our forward-looking statements speak only as of the date each such statement is made. We expressly disclaim any intention or obligation to update or revise any financial projections or forward-looking statements after the date hereof to conform such statements to actual results or to changes in our opinions or expectations, except as required by applicable law or the rules and regulations of the Securities and Exchange Commission and the Nasdaq Global Select Market.

The industry and market data contained in this Annual Report on Form 10-K are based either on our management’s own estimates or on independent industry publications, reports by market research firms, or other published independent sources. Although we believe that these sources are reliable as of their respective dates, we have not independently verified the information and cannot guarantee its accuracy and completeness, as industry and market data are subject to change and cannot always be verified with complete certainty due to limits on the availability and reliability of raw data, the voluntary nature of the data gathering process, and other limitations and uncertainties inherent in any statistical survey of market shares. Accordingly, you should be aware that the industry and market data contained in this Annual Report on Form 10-K, and estimates and beliefs based on such data, may not be reliable.

PART I

Item 1. Business

Company Overview

We develop, manufacture, market and sell innovative medical devices for the treatment of aortic disorders. Our products are intended for the minimally invasive endovascular treatment of abdominal aortic aneurysms ("AAA"). Our AAA products are built on one of two platforms:

- Traditional minimally-invasive endovascular aneurysm repair ("EVAR"); or
- Endovascular aneurysm sealing ("EVAS"), our innovative solution for sealing the aneurysm sac while maintaining blood flow.

Our current EVAR products include the AFX® Endovascular AAA System (the "AFX System"), the VELA® Proximal Endograft ("VELA") and the Ovation® Abdominal Stent Graft System (the "Ovation System"). Our current EVAS product is the Nellix® Endovascular Aneurysm Sealing System (the "Nellix EVAS System"). We sell our products through a direct sales force in the United States and internationally through a combination of direct sales and a network of third party distributors and agents.

When used in this report, "we," "our," "us" or "Endologix" refer to Endologix, Inc. and our consolidated subsidiaries, unless otherwise expressly stated or the context otherwise requires. Endologix®, AFX®, Duraply®, VELA®, IntuiTrak®, ActiveSeal®, Nellix®, Ovation®, Ovation Prime®, Ovation Alto®, and CustomSeal® are registered trademarks of Endologix, Inc. or its subsidiaries.

The Nellix EVAS System and Ovation Alto® Abdominal Stent Graft System (the "Ovation Alto"), our next generation Ovation System device, are approved as investigational devices only and are not currently approved for commercial purposes in any market.

Our Mission

Our mission is to be the leading innovator of medical devices to treat aortic disorders. The key elements of our strategy to accomplish this mission are as follows:

- Focus exclusively on the aorta for the commercialization of innovative products;
- Design and manufacture EVAR and EVAS products that are easy to use and deliver excellent clinical outcomes, backed by robust, high-quality clinical evidence;
- Design EVAR and EVAS products which generate compelling clinical evidence, supporting expansion into additional aortic indications;
- Offer physicians and hospitals the best clinical options for each individual patient; and
- Provide exceptional clinical and technical support to physicians through an experienced and knowledgeable sales and clinical organization.

Market Overview and Opportunity

AAA Background

Aneurysms are commonly diagnosed in the aorta, which is the body's largest artery, extending from the chest to the abdomen. The abdominal aorta is the segment between the diaphragm and the area where the aorta divides into the two iliac arteries which travel down the legs. AAAs occur when a portion of the abdominal aorta bulges into an aneurysm because of a weakening of the vessel wall, which may result in life-threatening internal bleeding upon rupture. AAA is more common in men than women.

Although AAA is one of the most serious cardiovascular diseases, many AAAs are never detected. Most AAA patients do not have symptoms at the time of their initial diagnosis. AAAs generally are discovered coincidentally through targeted screening or during procedures to treat or diagnose unrelated medical conditions.

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According to a paper titled "Elective Versus Ruptured Abdominal Aortic Aneurysm Repair: A 1-Year Cost-Effectiveness Analysis," the overall patient mortality rate for ruptured AAA is approximately 80%, making it among the leading causes of death in the United States. Once diagnosed and dependent on the size and rate of growth of the AAA, patients with AAA require either non-invasive monitoring, endovascular repair consisting of EVAR or EVAS, or open surgical repair.

EVAR and EVAS Versus Open Surgical Repair

Our EVAR and EVAS products are used exclusively for minimally-invasive procedures, as opposed to open surgical repair of AAA. Open surgical repair is a highly invasive procedure requiring: (i) a large incision in the patient's abdomen; (ii) manipulation of the patient's abdominal organs to gain access to the aneurysm; (iii) the cross clamping of the aorta to stop blood flow; and (iv) implantation of a synthetic graft which is sutured to the aorta, connecting one end above the aneurysm to the other end below the aneurysm.

Open surgical repair typically lasts for 2 to 4 hours, while the typical EVAR and EVAS procedure (endovascular repair) lasts for 1 to 2 hours. After receiving open surgical repair, a patient usually requires a few days in the hospital's surgical intensive care unit, and the total hospital stay may be 4 to 10 days. Post-procedure convalescence may take another 4 to 6 weeks due to the invasiveness of the operation. By comparison, patients are often discharged a day or two after their EVAR or EVAS procedure, and once discharged, most patients return to normal activity within 2 weeks.

We estimate that approximately 77% of all treated AAAs in the United States were repaired through EVAR in 2018 and 23% through open surgical repair. Although EVAR and EVAS have many advantages over open surgical repair, many patients are not candidates for endovascular repair with available products when they have more complex AAA anatomies. We are developing new products to address these more complex anatomies.

Market Size

We estimate the global endovascular AAA market potential was $3.2 billion in 2018. Of this amount, we estimate the traditional aneurysm market potential, encompassing aneurysms with aortic neck length greater than or equal to 10mm, was approximately $1.8 billion. The majority of diagnosed aneurysms in this market can be treated with currently available EVAR products. We estimate that an approximately $1.4 billion market opportunity exists for the treatment of complex anatomies, defined as aneurysms with neck lengths less than 10mm. Currently, there are limited options among available EVAR products to treat these short or no neck aortic aneurysms. Below is a table summarizing the market potential and penetration by aneurysm type.

Market Description (in millions)	Penetrated	Unpenetrated	Total
Traditional	$ 1,442	$ 391	$1,833
Complex	424	926	1,350
Total	$ 1,866	$ 1,317	$3,183

We estimate that there were approximately 230,000 AAA (EVAR and open surgical repair) procedures performed across the globe in 2018.

In the United States alone, an estimated 1.2 million to 2.0 million people have an AAA and over 200,000 people are diagnosed with an AAA in the United States annually. Of those diagnosed with an AAA, approximately 63,000 people underwent an AAA repair procedure in the United States in 2018, of which approximately 49,000 were addressed through EVAR.

According to United States Census Bureau estimates, the age 65 and over population in the United States in 2018 was projected to be approximately 52 million, or 16% of the total population, and is expected to grow by 3.4% annually to 56 million by 2020. We believe that AAA treatments will naturally increase over time, given this demographic trend.

Since AAAs generally arise in people over the age of 65 and come with little warning, initiatives have been undertaken to increase screening. The most prominent of these initiatives is the Screening Abdominal Aortic Aneurysms Very Efficiently Act ("SAAAVE"), which was signed into law in the United States on February 8, 2006.

SAAAVE began providing coverage on January 1, 2007 and was updated effective January 1, 2014. SAAAVE provides for a one-time free AAA screening for men who have smoked at some time during their lives and men or women who have a family history of the disease.

Our Products

Our EVAR Platform

AFX System and VELA:

The AFX System, which is comprised of AFX and AFX2 (discussed in further detail below), consists of: (i) a cobalt chromium alloy stent covered by expanded polytetrafluoroethylene (commonly referred to as ePTFE) graft material; and (ii) accompanying delivery systems. Once fixed in its proper position on the abdominal aortic bifurcation, the AFX System provides a conduit for blood flow, thereby relieving pressure within the weakened or "aneurysmal" section of the vessel wall, which greatly reduces the potential for the AAA to rupture. In February 2014, we launched a new proximal extension in the United States, VELA, designed to be used in conjunction with our AFX bifurcated device. VELA features a circumferential graft line marker and controlled delivery system that enable predictable deployment and final positional adjustments. We began a commercial introduction of VELA in Europe in January 2015.

- Anatomical Fixation. The AFX System is unique in that the main body of the device sits on the patient's natural aortoiliac bifurcation (commonly referred to as "anatomical fixation"). This provides a solid foundation for the long-term stability of the device. Alternative EVAR devices rely on hooks, barbs and radial force to anchor within the aorta (commonly referred to as "proximal fixation") near the renal arteries. The data from our clinical studies have demonstrated anatomical fixation can inhibit device migration within the aorta due to the inherent foundational support of the patient's own anatomy.
- Minimally Invasive Delivery System. The AFX System requires 17F introducer access on the ipsilateral side and 7F introducer access on the contralateral side. Comparative endovascular stent grafts for infrarenal repair require between 12F and 22F introducer access on the ipsilateral side and between 10F and 16F introducer access on the contralateral side.
- Preserves Aortic Bifurcation. The AFX System allows for future endovascular procedures when access across the aortic bifurcation is required. Approximately 30% to 40% of AAA patients also have peripheral arterial disease ("PAD"). The AFX System is the only graft presently available that preserves the physician's ability to go back over the aortic bifurcation for future interventions. This is a meaningful feature of the AFX System, as many AAA patients today are living longer and returning to the hospital for PAD procedures.

Ovation System:

The Ovation System consists of: (i) a radiopaque nitinol suprarenal stent with integral anchors; (ii) a low-permeability polytetrafluoroethylene ("PTFE"), aortic body graft that contains a network of inflatable rings filled with a liquid polymer that solidifies during the deployment procedure; (iii) nitinol iliac limb stents encapsulated with PTFE; and (iv) accompanying ultra-low-profile delivery systems, auto injector and fill polymer kit. The Ovation System creates a custom seal that conforms to anatomical irregularities and has a low-profile delivery system allowing for percutaneous access.

- Patient Accessibility. Our United States Food and Drug Administration ("FDA") and CE Mark-approved Instructions for Use ("IFU") allow for the on-label treatment of more patients who otherwise may undergo an off-label EVAR procedure, be subject to open surgical repair or not receive treatment at all. Our differentiated platform expands the pool of patients eligible for EVAR by virtue of its low profile and flexible delivery system that addresses several key anatomical access challenges, while providing a novel sealing mechanism to address many of the difficulties of diseased patient anatomies.
- Ability to Pass through Small Access Vessels. The Ovation System's novel separation and optimization of fixation and seal minimize the overlap between metal and fabric within the catheter, allowing the device to be loaded in a delivery catheter that is smaller than those of conventional EVAR devices. At an outer diameter of 14F, or approximately 4.7mm, the Ovation System is the lowest overall profile FDA-approved stent graft.
- Ability to Pass through Diseased and/or Tortuous Access Vessels. The Ovation System has the lowest profile FDA-approved delivery system. Its characteristics increase flexibility, designed to enable easier passage through access vessels.
- Enables Minimally Invasive Techniques. The Ovation System's low profile and proven safety record offer physicians the opportunity to provide percutaneous endovascular aneurysm repair access ("PEVAR") with regional or local anesthesia to more patients. Studies have shown that the use of smaller profile delivery devices results in fewer access

site complications.

- Treatment of Complex Anatomy. The separation and optimization of the fixation and sealing mechanisms of the Ovation System enable the device to seal with a smaller aortic contact area than conventional EVAR devices.

- Avoiding Aortic Neck Dilatation. The Ovation System's polymer-filled sealing rings do not exert significant chronic, outward pressure at the neck of the aorta. In the Ovation Pivotal Trial, core lab results demonstrated stable neck diameter and durable seal with the Ovation System through 5-year follow-up.

Our EVAS Platform

Nellix EVAS System:

Our Nellix EVAS System is designed to seal the aneurysm and provide blood flow to the legs through two blood flow lumens. The Nellix EVAS System consists of: (i) bilateral covered stents with endobags; (ii) a biocompatible polymer injected into the endobags to seal the aneurysm; and (iii) a delivery system and associated accessories. The Nellix EVAS System is intended to seal the entire aneurysm sac effectively excluding the aneurysm and reducing the likelihood of future aneurysm rupture.

- Potentially Reduce Endoleaks Leading to Secondary Interventions. The Nellix EVAS System seals the entire aneurysm, potentially reducing the likelihood of many causes of secondary intervention in EVAR procedures.
- Low Profile Introducer. The delivery catheter for the Nellix EVAS System has an outer diameter of 17F, which is beneficial for the delivery of the devices in tight access arteries, potentially reducing risk of vascular injuries to the patient.

Our EVAR and EVAS Extensions and Accessories

Aortic Extensions and Limb Extensions. We offer limb extensions for the Ovation System and proximal aortic extensions and limb extensions for the AFX System, which allow physicians to customize the implant to fit the patient's anatomy. In February 2014, we launched a proximal extension in the United States, VELA, designed specifically for the treatment of proximal aortic neck anatomies with the AFX System. VELA features a circumferential graft line marker and controlled delivery system that enable predictable deployment and final positional adjustments. We commenced commercial sales of VELA in 2015.

Accessories. We offer various accessories to facilitate the delivery of our EVAR and EVAS products, including compatible guidewires, inflation devices and snares.

Our Product Evolution

We first commercialized the Powerlink System (the "Powerlink System for AAA") in Europe in 1999 and in the United States in 2004. As our EVAR platform products evolved, we branded them under the names Powerlink System with Visiflex Delivery System, IntuiTrak®, and AFX. We added the Nellix EVAS System through our merger with Nellix, Inc. ("Nellix") in December 2010. We added the Ovation System to our EVAR product portfolio through our merger with TriVascular Technologies, Inc. ("TriVascular") in February 2016.

- Powerlink System for AAA. The Powerlink System for AAA was our original EVAR product.
- IntuiTrak. We received FDA approval for IntuiTrak in October 2008, CE Mark approval for IntuiTrak in March 2010, and Shonin approval from the Japanese Ministry of Health, Labor and Welfare ("MHLW") for IntuiTrak in December 2012. IntuiTrak provided an updated delivery system that enhanced physician ease of use and for manufacturability.
- AFX. In May 2011 and November 2011, we received FDA approval and CE Mark approval, respectively, for the AFX System, and we received Japanese Shonin approval for the AFX System in December 2015. We began a full commercial launch of the AFX System in the United States in August 2011 and in numerous international markets in 2012. In addition, we entered into a distribution arrangement with a Japanese distributor to introduce the AFX System in the Japanese market in the first quarter of 2016.
- AFX2. In October 2015, we received FDA approval for our AFX2 Bifurcated Endograft System ("AFX2").
- Ovation. We received CE mark approval for the Ovation System in August 2010, FDA approval for the Ovation System in October 2012 and Japanese Shonin approval for the Ovation System in February 2019. In February 2015, the FDA approved our next generation Ovation iX Iliac Stent Graft for the Ovation System, and in July 2015, the FDA approved the Ovation iX Abdominal Stent Graft System. In September 2015, the first patients were treated with the Ovation iX Abdominal Stent Graft System in Europe, and in October 2015, we initiated the launch of our Ovation iX Iliac Stent Graft System in the United States.

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Nellix EVAS System. In February 2013, we received CE Mark approval of the Nellix EVAS System, and we commenced a limited market introduction of the Nellix EVAS System in Europe. In December 2013, we received Investigational Device Exemption ("IDE") approval in the United States to begin a clinical trial of the Nellix EVAS System which commenced in January 2014. Enrollment in the IDE study was completed in November 2014. In the fourth quarter of 2014, we obtained IDE continued access approval for additional patients. In April 2016, we announced receipt of CE Mark approval of the next-generation Nellix EVAS System, and in September 2017, we further announced CE Mark approval for the Nellix EVAS System with the refined IFU. In May 2017, we announced that in we would conduct a confirmatory IDE study in the United States, called the EVAS2 IDE Multicenter Safety and Effectiveness Confirmatory Study ("EVAS2"), to further evaluate the next-generation Nellix EVAS System, and in October 2017, we received IDE approval in the United States to commence EVAS2. In early January 2019, we announced that our Nellix EVAS System would for the foreseeable future only be used under clinical protocol with pre-screened patients in procedures that adhere to the current indications for use. In mid-January 2019, we announced that the CE Mark for the Nellix EVAS System had been suspended by our notified body (an organization designated by the European Union ("EU") to regularly assess the conformity of certain products under applicable legislation before being placed on the market, a "Notified Body").

- ChEVAS. ChEVAS is a procedure where the Nellix EVAS System could potentially be used together with aortic branch stent grafts to treat patients with complex AAAs. Physicians initiated a clinical trial called Aneurysm Study for Complex AAA: Evaluation of Nellix Durability ("ASCEND") to evaluate the clinical performance of ChEVAS. We are pursuing FDA approval for this indication.

Product Developments and Clinical Trials

Overview

Our focus is to continually develop innovative and cost-effective medical devices for the treatment of aortic disorders. We believe that our ability to develop new technologies is key to our future growth and success. Historically, we have focused on developing our EVAR and EVAS products to treat infrarenal AAA, including initial development of products to treat complex AAA anatomies. However, we expect to devote more resources in the future to developing, enhancing and obtaining expanded indications for our current EVAR and EVAS products and to develop new product indications to treat more complex anatomies. We have the following trials in process to build independent and collective clinical and economic evidence of clinical safety and effectiveness:

Nellix EVAS System

- EVAS FORWARD IDE. We conducted this pivotal clinical trial to evaluate the safety and effectiveness of the Nellix EVAS System. This study is a prospective single arm registry which enrolled 179 patients at 29 centers in the United States and Europe. In November 2014, we completed enrollment in the study, and we submitted the one year results to the FDA in March 2016. In May 2016, we announced the results of the one-year clinical data from the EVAS FORWARD IDE study that demonstrate that the Nellix EVAS System met the study primary endpoints for major adverse events at 30 days (safety) and treatment success at one year (effectiveness). Two-year imaging revealed a signal of migration, leading to a field safety notification issued in October 2016 and a dedicated root cause analysis, resulting in refinements to the IFU. Following the implementation of the refined IFU, the Nellix EVAS system is applicable to treat an estimated 40% of AAA patients with a traditional aneurysm.

Subsequently, the two-year results from the trial were published in the Journal of Vascular Surgery in March 2018. This data was previously announced in June 2017 at the Society of Vascular Surgery Vascular Annual Meeting ("VAM"). Key highlights from the Nellix United States IDE trial two-year clinical data are included below:

- Freedom from all endoleaks (95.1%), rupture (99.4%), and all-cause mortality (93.8%) among all patients.
- Highest freedom of type II endoleaks, of 96.6%, ever reported at two years, among all patients.
- When applying the refined IFUs for Nellix, patients at the two-year follow-up demonstrated 95.9% freedom from Type IA endoleak, migration >10mm, and sac growth.

EVAS2 IDE. In May 2017, we announced the decision to seek FDA approval of the Nellix EVAS System by conducting a confirmatory clinical study with the refined IFU and our next generation Nellix device design, the "Gen2 Nellix EVAS System." The Gen2 Nellix EVAS System incorporates design improvements to enhance ease of use and offers physicians more sizes to treat more patients with AAA. In October 2017, we announced our receipt of IDE approval from the FDA to commence a confirmatory clinical study to evaluate the safety and effectiveness of the Gen2 Nellix EVAS System for the endovascular treatment of infrarenal AAA. EVAS2 will prospectively evaluate the refined IFU and the Gen2 Nellix EVAS System. The study is approved to enroll up to 105 primary patients, with one-year follow-up data required for the pre-market approval ("PMA") application. We commenced EVAS2 patient enrollment in March 2018.

- EVAS FORWARD Global Registry. This registry is designed to provide real world clinical results to demonstrate the effectiveness and applicability of the Nellix EVAS System. The first phase of the registry included 300 patients enrolled in up to 30 international centers. The first patient in the registry was treated in October 2013, and in September 2014, we announced completion of patient enrollment in the EVAS FORWARD Global Registry. In November 2016, we announced positive two-year results on 300 patients from the EVAS FORWARD Global Registry at the Annual Symposium on Vascular and Endovascular Issues (the "VEITH Symposium"). The following outcomes were presented at the VEITH Symposium:
  - 37% of the patients had complex anatomies;
  - 98.1% freedom from any persistent endoleaks at latest follow-up;
  - No secondary interventions for Type II endoleaks;
  - 97.4% freedom from aneurysm-related mortality; and
  - 98.5% freedom from cardiovascular mortality.

  In 2017, we commenced the EVAS FORWARD Global Registry 2, a post-market evaluation of the Gen2 Nellix EVAS System.
- ASCEND Registry. In April 2016, we announced the first data presentation with one-year outcomes from the ASCEND Registry, a physician-initiated registry of the Nellix EVAS System used with aortic branch stent grafts for the treatment of patients with complex AAAs. The results of the study were formally published in the peer-reviewed Journal of Endovascular Therapy in December 2017.

In September 2017, we announced CE Mark approval for the Nellix EVAS System with the refined IFU. The Nellix EVAS System is being studied in the United States under an IDE. Following a thorough review of supporting clinical data, our Notified Body, together with an independent clinical reviewer, determined that the Nellix EVAS System, with the refined IFU, met the applicable safety and clinical performance requirements.

In April 2018, we announced the results of a study, which was presented by Marc Schermerhorn, M.D., Chief of Vascular Surgery at Beth Israel Deaconess Medical Center, at the Late-Breaking Aortic Trials Session during the Charing Cross 40th International Symposium. This retrospective, propensity-weighted study compared long-term survival for the Nellix EVAS System with traditional EVAR. The study reported significantly higher three-year survival for EVAS patients as compared to EVAR patients. Those patients with larger aneurysms (greater than 5.5 cm in diameter) treated with EVAS had half the mortality at three years as compared to those treated with traditional EVAR systems. The retrospective study included 333 EVAS patients from the original Nellix United States IDE Trial and 15,431 patients from the Society for Vascular Surgery Vascular Quality Initiative, all of whom were treated between 2014 and 2016. The patients were propensity weighted for AAA size, patient demographics, and cardiovascular risk factors. The primary outcome was overall survival, with a secondary analysis of overall survival stratified by aneurysm size.

In January 2019, we announced that in order to ensure optimal outcomes for patients, the Nellix EVAS System will, for the foreseeable future, only be available for use at approved centers in a clinical investigation setting with pre-screened patients that adhere to the current indications outside of the United States. All cases will be pre-screened by a physician panel to ensure adherence to protocol and use in accordance with current product indications. Compassionate use requests will be reviewed in accordance with the process established by us and associated national competent authorities. The existing inventory has been voluntarily recalled.

In January 2019, we announced that the CE Mark for the Nellix EVAS System had been suspended by our Notified Body following a voluntary recall and field safety notification issued by us on January 4, 2019. Suspension of the CE Mark means that we may not affix the CE Mark and sell the Nellix EVAS System in the EU during the term of the suspension.

AFX System

In September 2014, we announced a new clinical study called Looking at EVAR Outcomes by Primary Analysis of Randomized Data ("LEOPARD"). This study was designed to compare outcomes of the AFX System versus other commercially available EVAR devices. We designed the LEOPARD study to randomize and enroll at least 400 patients at up to 80 centers throughout the United States and commenced enrollment in the first quarter of 2015. The centers were a mix of our current and new customers, with each investigator selecting one competitive device to randomize against the AFX System. The LEOPARD study is being led by an independent steering committee of leading physicians who are responsible for presenting the results over the 5-year follow-up period.

Positive results from LEOPARD were presented at the VEITH Symposium in November 2018. Based on those who completed follow up, the one-year freedom from Aneurysm Related Complications ("ARC") shows that overall the AFX system has a similar performance to other devices. Analysis of individual clinical outcomes suggests that different EVAR approaches may have advantages in different patient populations. The AFX System remains the only device that preserves the patient's aortic bifurcation. Further analysis is needed to evaluate the benefits of different EVAR designs across patient populations. Based upon the anticipated number of additional patients required to prove superiority, we stopped further randomization in the LEOPARD study and plan to continue to follow the 455 enrolled patients for the planned 5 years.

In December 2015, we announced that the AFX System for the treatment of AAA received Shonin approval from the MHLW.

In February 2016, we announced the completion of the first United States commercial implant of AFX2, which reduces procedure steps for the delivery and deployment of the bifurcated endograft. AFX2 also facilitates PEVAR by providing the lowest profile contralateral access through a 7F introducer. These improvements bring together our ActiveSeal® technology, DuraPly® PTFE graft material and VELA, into an integrated new EVAR system.

In December 2016, we received notice from our Notified Body that the CE Mark for AFX and AFX2 would be suspended due to reports of Type III endoleaks with AFX with Strata graft material ("AFX Strata"), a prior generation of the AFX device. For our current generation of AFX products, we had implemented device and graft material improvements and updated IFUs resulting in a substantial reduction in reported Type III endoleaks. We provided documentation of the foregoing reduction in Type III endoleaks to our Notified Body. In January 2017, we received notice from our Notified Body that the CE Mark for AFX and AFX2 had been reinstated, effective immediately. Additionally, in December 2016, we placed a temporary hold on shipments of AFX and AFX2 to complete an investigation of quality concerns with some sizes of these devices. Subsequently, we removed the temporary hold and resumed shipments of all sizes of AFX and the smaller diameter sizes of AFX2 and initiated a voluntary recall of: (i) the small remaining quantity of original AFX Strata; and (ii) the larger diameter sizes of AFX2. In January 2017, we removed the temporary hold and resumed shipments of the remaining larger diameter sizes of AFX2.

In July 2018, we sent a voluntary safety notice ("Safety Notice") to healthcare professional ("HCP") users of the AFX System to provide updated information on comparative AFX Type III endoleak rates, patient-tailored surveillance recommendations, and recommendations for intervening through an AFX device or re-intervening on an AFX device. No product was removed from the field as part of that safety update action.

In October 2018, the FDA classified the July 2018 Safety Notice as a Class I recall. The FDA defines a Class I recall as including a firm's correction of a marketed product in circumstances where there is a reasonable probability that use of or exposure to the device would cause serious adverse health consequences or death.

The clinical conditions resulting in this Class I recall classification (Type III endoleaks) are principally related to AFX with Strata material. The AFX with Strata material was replaced by AFX incorporating the DuraPly material in both AFX and AFX2 devices. Strata was last manufactured in 2014, last sold in 2016, and removed from global inventories in the first half of 2017. There is no AFX with Strata product remaining in any commercial market.

No product return is required under this recall, and no further action by HCPs is required in addition to the Safety Notice. The guidance provided in the July 2018 Safety Notice remains current.

Ovation System

In May 2011, we initiated a 3-year European Post-Market Registry to enroll 500 patients across 30 European centers. Enrollment ended in December 2013. In January 2017, we announced positive 3-year results from the Ovation EU Post-Market Registry. The data was presented at the 2017 Leipzig Interventional Course ("LINC") meeting and showed that the Ovation System has the broadest range of patient applicability on IFU of all commercially available infrarenal endovascular AAA devices. The resulting outcomes included:

- 99% freedom from aneurysm-related mortality;
- 99% freedom from migration, rupture, and conversion;
- 97% freedom from Type I/III endoleak; and
- Excellent freedom from secondary intervention for occlusion (97%), Type I endoleak (97%) and Type II endoleak (95%).

In October 2014, we initiated the LIFE Study to illustrate the potential advantages of a "Fast-Track" protocol including PEVAR, no general anesthesia, no time in ICU and a one-night stay in the hospital with the Ovation System. In May 2016, we announced the completion of enrollment of 250 patients at 34 sites participating in the LIFE Study. In February 2018, the results of the one-month clinical data from the LIFE Study were published in the Journal of Endovascular Therapy that demonstrate that the Ovation System met the study primary endpoint for major adverse events at 30 days. The following are highlights of the publication, with outcomes covering one-month follow-up:

- Low major adverse event rate of 0.4%;
- No ruptures, conversion, or secondary interventions;
- No Type III endoleaks and low Type I endoleaks (0.4%);
- Fast-Track completed in 216 patients (87%), with positive results compared to non-Fast-Track patients;
- Procedure time of 84 minutes vs. 110 minutes;
- General anesthesia use 0% versus 18%;
- ICU stay 0% versus 32%; and
- Mean hospital stay 1.2 days versus 1.9 days.

In August 2015, we enrolled the first subject in the LUCY Study, a multi-center post-market registry designed to explore the clinical benefits associated with EVAR using the Ovation System in female patients with AAA, as compared to males. This was the first prospective study evaluating EVAR in females, a population that has historically been underrepresented in EVAR clinical trials. We announced completion of enrollment of 225 patients in the LUCY Study in February 2017. The 30-day LUCY data showed that, in women, the ultra-low profile (14F) Ovation System device resulted in:

- At least 28% greater EVAR eligibility for women with AAA;
- 1.3% major adverse events;
- No deaths;
- No proximal endoleaks;
- No limb occlusion;
- Low readmission rate of 3.9%; and
- 100% procedural success.

In June 2018 at the VAM, the 1-year results of the LUCY Study were announced in the late-breaking clinical trial session. Despite having more complex anatomies at the time of the index procedure women continue to demonstrate similar outcomes to men through one year. The 1-year outcomes of freedom from conversion, rupture, AAA-related mortality and device-related reintervention were similar between the two arms.

In February 2015, the FDA approved the next generation Ovation iX Iliac Stent Graft for the Ovation System, and in July 2015, the FDA approved the Ovation iX Abdominal Stent Graft System. In September 2015, the first patients were treated with the Ovation iX Abdominal Stent Graft System in Europe, and in August 2015, we initiated the

launch of the Ovation iX System in the United States.

In November 2016, we announced at the VEITH Symposium that the 5-year results from the Ovation Global Pivotal Trial were positive and showed the following outcomes:

- Broad patient applicability, with 40% of the patients treated outside the labeled indications of other EVAR devices;
- Stable aortic neck diameters with an average expansion of 0.1mm, compared to 5.3mm as reported with other EVAR devices;
- 96.6% freedom from secondary interventions related to Type I endoleak; and
- No migration or conversions.

In August 2016, we announced that the first two patients had been treated with Ovation Alto, which is the newest device in the Ovation System platform of abdominal stent graft systems. Ovation Alto is an investigational device, currently not approved in any market. It expands EVAR to include the treatment of patients with complex AAAs, specifically patients with very short or otherwise complex aortic neck anatomy. This is achieved by the conformable O-rings with CustomSeal® polymer that have been repositioned near the top of the endograft, providing seal just below the renal arteries. In November 2016, we received IDE approval from the FDA to conduct a clinical study with Ovation Alto in the United States.

In March 2017, we announced the enrollment of the first patients in the Expanding Patient Applicability with Polymer Sealing Ovation Alto Stent Graft ("ELEVATE") IDE clinical study, our pivotal clinical trial to evaluate the safety and effectiveness of Ovation Alto for the repair of infrarenal AAAs. The ELEVATE IDE clinical trial is approved to enroll 75 patients at up to 16 centers in the United States. In February 2018, we announced the final patient enrollment in the ELEVATE IDE clinical study.

In April 2018, at the Charing Cross Annual Symposium, the first results from ENCORE, a pooled, global analysis of 6 prospective clinical trials and registries studying polymer endovascular aneurysm repair ("Polymer EVAR") using Ovation System were presented. ENCORE is a pooled retrospective analysis of the 6 prospective clinical trials and registries and encompasses 1,296 patients, 160 centers and 339 investigators in the United States, Europe and Latin America. Median patient follow-up across all ENCORE trials and registries was 1,034 days (range 30 days to 5 years) at the time of analysis. At 5 years, the ENCORE analysis included the following results for the Ovation System based on the available data:

- 99% freedom from AAA-related mortality;
- 99% freedom from conversion;
- 99% freedom from rupture;
- 98% freedom from reintervention for Type Ia endoleak; and
- 93% freedom from all device-related reintervention.

In February 2019, we announced that the Ovation System for the treatment of AAA received Shonin approval from the MHLW.

Manufacturing and Supply

Most of our commercial products are manufactured, assembled, and packaged at our 129,000 square foot leased facilities in Irvine, California and our 110,000 square foot leased facilities in Santa Rosa, California.

We rely on third parties for the supply of certain components used in our EVAR and EVAS products, such as the wire used to form our cobalt chromium alloy stent, PTFE, and the raw material used in the manufacturing of polymer. While we obtain many of these components from single-source suppliers, we believe there are alternative suppliers for the vast majority of our required components. Many of our third party manufacturers go through a formal qualification and approval process, including periodic renewal to ensure fitness for use and compliance with applicable FDA requirements and International Organization for Standardization ("ISO") 13485 requirements, and/or other required quality standards. Additionally, we actively manage supply risk with our key suppliers through a combination of negotiating favorable terms of supply agreements, maintaining strategic inventory levels, and maintaining communications with our suppliers.

Marketing and Sales

We market and sell our platform of products through a direct sales force in the United States and 6 other countries. In select countries in Europe, Asia Pacific, Latin America and other targeted international geographies, we market and sell our products through a network of third party distributors and agents.

United States. We market and sell our EVAR products in the United States through a direct sales force. The primary customer and decision-maker for our EVAR products is the vascular surgeon, and to a lesser extent, the cardiovascular surgeon, interventional radiologist and the interventional cardiologist. Through our direct sales force, we provide clinical support and service to many of the approximately 1,600 hospitals and approximately 4,000 physicians in the United States that perform EVAR. Approximately 70% of our revenue in the year ended December 31, 2018 was generated from sales of our EVAR products in the United States.

International. We market and sell our products outside of the United States through a direct sales force and through a network of third party distributors and agents. Approximately 30% of our revenue in the year ended December 31, 2018 was generated from sales of our EVAR and EVAS products outside of the United States.

See Note 7 to our Consolidated Financial Statements included in Item 8 of this Annual Report on Form 10-K for a tabular summary of our revenue disaggregation in the years ended December 31, 2018, 2017 and 2016.

Competition

The medical device industry is highly competitive. Any product we develop that achieves regulatory clearance or approval will have to compete for market acceptance and market share. We believe that the primary competitive factors in the AAA device market segment are:

- clinical effectiveness;
- product safety, reliability and durability;
- ease of use;
- sales force experience and relationships; and
- price.

We experience significant competition and we expect that the intensity of competition will increase over time. For example, our major competitors, Medtronic, Inc., W.L. Gore Inc. and Cook Medical Products, Inc., have each obtained full regulatory approval for their EVAR products in the United States and/or other international markets. In addition to these major competitors, we also have smaller competitors, and emerging competitors with active EVAR system development programs.

Our major competitors have substantially greater capital resources than we do and also have greater resources in the areas of research and development, regulatory affairs, manufacturing, marketing and sales. In addition, these competitors have multiple product offerings, which some physicians and hospitals may find more convenient when developing business relationships. We also compete with other medical device companies for clinical trial sites and for the hiring of qualified personnel, including sales representatives and clinical specialists.

Patents and Proprietary Information

We believe that protection of our intellectual property and proprietary information is key to protecting our technology. We continue to build a portfolio of apparatus and method patents covering various aspects of our current and future technology. In the area of aorta treatment systems, our rights include 38 United States patents, 15 pending United States patent applications and 34 issued foreign patents. As a result of our acquisition of Nellix, we added additional patents to our portfolio which have evolved to currently include 23 issued United States patents, 26 pending United States patent applications, and 14 issued foreign patents. As a result of our merger with TriVascular, we added patents to our portfolio which have evolved to currently include 51 issued United States patents, 19 pending United States patent applications, and 96 issued foreign patents. The expiration date of the patents in our combined portfolio ranges from 2019 to 2036. We intend to continue to file patent applications to strengthen our intellectual property position as we continue to develop our technology, while simultaneously avoiding paying unnecessary fees to maintain patents and applications when we believe it is not in our best interest.

Our policy is to protect our proprietary position by, among other methods, filing United States and foreign patent applications to protect technology, inventions and improvements that are important to the development of our business. We also own trademarks to protect our brand. In addition to patents and trademarks, we rely on trade secrets and proprietary know-how protection.

We seek protection of these trade secrets and proprietary know-how, in part, through confidentiality and proprietary information agreements. We make diligent efforts to require our employees, directors, consultants and advisors to execute confidentiality agreements at the beginning of their employment, consulting or other contractual relationships with us. These agreements provide that all confidential information developed or made known to the individual or entity during the course of the relationship is to be kept confidential and not be disclosed to third parties, except in specific circumstances. In the case of employees and certain other parties, the agreements also provide that all inventions conceived by the individual will be our exclusive property.

Third Party Reimbursement

In the United States, hospitals are the primary purchasers of our EVAR and EVAS products. Hospitals, in turn, bill various third party payors, such as Medicare, Medicaid and private health insurance plans, for the total healthcare services required to treat patients' AAA. Government agencies, private insurers and other payors determine whether to provide coverage for a particular procedure and to reimburse hospitals for medical treatment. While hospitals are often reimbursed at a fixed rate based on the diagnosis-related group ("DRG") established by the United States Centers for Medicare and Medicaid Service ("CMS"), other insurers may negotiate differing approaches with hospitals. The fixed rate of reimbursement is based on the procedure performed and is unrelated to the specific medical devices used in that procedure.

Reimbursement of procedures utilizing our EVAR and EVAS products is currently available. Some payors may deny reimbursement if they determine that the device used in a treatment was unnecessary, not cost-effective or used for a non-approved indication.

Beginning on October 1, 2015, CMS started requiring those who make claims for reimbursement to use ICD-10 codes to designate diagnosis and treatment of Medicare beneficiaries. The following are the ICD-10-PCS codes associated with the endovascular treatment of abdominal aneurysms utilizing our devices indicated for that treatment.

ICD-10-PCS	Description
Abdominal Aorta	
04V03DZ	Restriction of Abdominal Aorta, with Intraluminal Device, Percutaneous Approach
04V04DZ	Restriction of Abdominal Aorta, with Intraluminal Device, Percutaneous Endoscopic Approach
04V03DJ	Restriction of Abdominal Aorta, with Intraluminal Device, Temporary, Percutaneous Approach
04V04DJ	Restriction of Abdominal Aorta, with Intraluminal Device, Temporary, Percutaneous Endoscopic Approach
04U03JZ	Supplement of Abdominal Aorta with Synthetic Substitute, Percutaneous Approach
04U04JZ	Supplement of Abdominal Aorta with Synthetic Substitute, Percutaneous Endoscopic Approach

CMS reimburses these hospital inpatient procedures utilizing the following MS-DRGs. National average reimbursement values for 2018 are shown.

Aortic and Heart Assist Procedures Except Pulsation Balloon with MCC	$39,334
Aortic and Heart Assist Procedures Except Pulsation Balloon without MCC	$25,044

Outside of the United States, market acceptance of medical devices, including EVAR and EVAS systems, depends partly upon the availability of reimbursement within the prevailing healthcare payment system. Reimbursement levels vary significantly by country, and by region within some countries. Reimbursement is obtained from a variety of sources, including government sponsored healthcare and private health insurance plans.

Presently, the EU is updating regulations for the sale and reimbursement of medical devices in EU countries. The current directives on active implantable medical devices (90/385/EEC) and on medical devices (93/42/EEC) will be replaced by a regulation on medical devices. The legislation will harmonize such regulations throughout all EU countries. It is expected that the new regulations will require: (i) stricter guidelines for clinical evidence supporting device efficacy; (ii) more powers for regulatory assessment bodies; (iii) stronger supervision of manufacturers, importers and distributors; and (iv) an extended database for medical devices and better traceability throughout the supply chain. The European Commission proposals have been discussed in the European Parliament and in the European Council, and a final text was agreed upon on June 15, 2016. Work is currently ongoing to translate the final texts in all the EU official languages and to correct technical inconsistencies. Final formal adoption was expected both

on the Council and the Parliament sides during the first semester 2017. Regulation would then gradually come into effect by 2020.

Government Regulation — Medical Devices

Our medical devices are subject to regulation by various government agencies, including the FDA and similar agencies within governments outside of the United States. Each of these agencies requires us to comply with laws and regulations governing the development, qualification, manufacturing, labeling, marketing and distribution of our medical devices.

United States

In the United States, medical devices are regulated by the FDA under the Federal Food, Drug and Cosmetic Act. The FDA classifies medical devices into one of three classes based upon controls the FDA considers necessary to reasonably ensure their safety and effectiveness. Class I devices are subject to general controls such as labeling, adherence to good manufacturing practices and maintenance of product complaint records, but are usually exempt from pre-market notification requirements. Class II devices are subject to the same general controls and are also subject to special controls such as performance standards, FDA guidelines, and may also require clinical testing prior to approval. Class III devices are subject to the highest level of controls because they are life-sustaining or life-supporting devices. Class III devices require rigorous clinical testing prior to their approval and generally require a PMA or PMA supplement approval prior to marketing for sale.

Authorization to commercially distribute a medical device in the United States is generally received in one of two ways. The first, known as pre-market notification (i.e., the 510(k) process), requires us to submit data to the FDA to demonstrate that our medical device is substantially equivalent to another medical device that is legally marketed in the United States. The FDA must issue a finding of substantial equivalence before we can commercially distribute our medical device. Devices that receive a finding of substantial equivalence are referred to as 510(k)-cleared devices. Modifications to medical devices cleared under the 510(k) process can be made under the 510(k) process or without the 510(k) process if the changes do not significantly affect safety or effectiveness.

The second process, known as pre-market approval (i.e., the PMA process), requires us to collect and submit nonclinical and human clinical data on the medical device for its intended use to demonstrate that it is safe and effective. Human clinical data must be collected in compliance with FDA IDE regulations. The IDE application must be supported by data, typically including the results of animal and engineering testing of the device. If the IDE application is approved by the FDA, human clinical studies may begin at a specific number of investigational sites with a maximum number of patients. The clinical studies must be conducted under the review of an independent institutional review board to ensure the protection of the patients' rights. In the PMA process, the FDA will approve the medical device and thereby authorize its commercial distribution in the United States if it determines that the probable benefits outweigh the risks for the intended patient population, and, therefore, makes a determination of reasonable assurances of safety and effectiveness. The PMA process takes longer and is more expensive than the 510(k) process. Our Powerlink, IntuiTrak AFX, AFX2 and Ovation Systems were approved through this PMA process. The Nellix EVAS System is currently engaged in the PMA process and we anticipate will be made commercially available in the United States following PMA approval.

We are required to register as a medical device manufacturer with the FDA. Additionally, the California Department of Health Services ("CDHS") requires us to register as a medical device manufacturer. Because of this, the FDA and the CDHS routinely inspect us for compliance with "Quality System" regulations. These regulations require that we manufacture our products and maintain related documentation in a prescribed manner with respect to manufacturing, testing and control activities. We have undergone and expect to continue to undergo regular Quality System inspections in connection with the manufacture of our products at our facilities. Further, the FDA requires us to comply with various regulations regarding labeling. The Medical Device Reporting ("MDR") laws and regulations require us to provide information to the FDA on deaths or serious injuries alleged to have been associated with the use of our devices, as well as product malfunctions that likely would cause or contribute to death or serious injury if the malfunction were to recur. Although physicians are permitted to use their medical judgment to apply medical devices to indications other than those cleared or approved by the FDA, we are prohibited from promoting products for such "off-label" uses and can only market our products for the 510(k)-cleared or PMA-approved indications for use.

International

Internationally, our medical devices are subject to regulatory requirements in the countries in which they are sold. The requirements and regulatory approval processes vary from country to country. The regulatory requirements of select countries are set forth below.

In the EU, one regulatory approval process exists. We must comply with the requirements of the Medical Devices Directive ("MDD") and appropriately affix the CE Mark on our products to attest to such compliance. To obtain a CE Mark, our products must meet minimum standards of safety, performance and quality ("Essential Requirements"), and then comply with defined conformity assessment routes. A Notified Body, selected by us, assesses our Quality Management System ("QMS") and our product conformity to the Essential Requirements and the requirements of the MDD. The Notified Body must perform regular inspections to verify compliance. The EU government ministries of health ("Competent Authorities") oversee human clinical studies and post-market surveillance of approved products, referred to as Vigilance Reporting. We are required to report device failures and serious adverse events potentially related to product use to responsible Competent Authorities. We also must comply with additional requirements of individual countries in which our products are marketed. Our Powerlink, AFX, and Ovation System and Nellix EVAS System were approved through the CE marking process, though the CE Mark for the Nellix EVAS System has been suspended by our Notified Body.

To be sold in Japan, most medical devices must undergo thorough safety examinations and demonstrate medical efficacy before they are granted approval, known as "Shonin." In Japan, the MHLW, with administration by the Pharmaceutical and Medical Devices Agency, regulates medical devices under the Pharmaceuticals and Medical Device Law ("PMD"). Our QMS and product conformity to the PMD are overseen by MHLW and the Pharmaceutical and Medical Devices Agency. Our Powerlink System, AFX System, and Ovation System were approved through the Shonin process. The Nellix EVAS System requires future approval through the foregoing process in order to be commercially available in Japan.

To be sold in China, all medical devices are required to have licenses from the China Food and Drug Administration ("CFDA") (formerly State Food & Drug Administration or SFDA). Quality system, pre-market testing and clinical investigation are required for Class II and III devices. CFDA released a new regulation on Innovative Medical Device Registration Applications in March 2014, which we may utilize to register our products in China in the future. Class II and III submissions will have a full application review conducted; this will include a technical and administrative review. Novel and high-risk products may also be subject to an Expert Panel Meeting (which may add 4 to 6 months to the review process), and the CFDA may conduct an on-site QMS audit of manufacturing facilities. The AFX System and the Ovation System, as well as the Nellix EVAS System, require future approval through the foregoing process in order to be commercially available in China.

We are also subject to other local, state, federal and international regulations relating to a variety of areas including laboratory practices, manufacturing practices, medical device export, quality system practices, as well as healthcare reimbursement and delivery of products and services.

Government Regulation — Healthcare Fraud and Abuse and Privacy Laws

Healthcare Fraud and Abuse

We are subject to various United States and foreign governmental laws and regulations relating to the manufacturing, labeling, marketing and selling of our products, non-compliance with which could adversely affect our business, financial condition and results of operations. We have implemented and maintain a comprehensive compliance program that includes ongoing risk assessment, development of relevant policies, monitoring and training of our employees to ensure compliance with United States and foreign laws and regulations.

Various United States federal and state laws and regulations pertaining to healthcare fraud and abuse govern how we can and cannot do business in the United States and globally, including the federal False Claims Act, which prohibits the submission of false or otherwise improper claims for payment to a federally-funded healthcare program, the federal Anti-Kickback Statute, which prohibits offers to pay or receive remuneration of any kind for the purpose of inducing or rewarding referrals of items or services reimbursable by a federal healthcare program, and similar state false claims and anti-kickback laws and regulations that apply to state funded healthcare programs. Violations of these laws and regulations are punishable by criminal and/or civil sanctions, including, in some instances, fines, imprisonment and, within the United States, exclusion from participation in federal and/or state healthcare programs, including Medicare and Medicaid. The interpretation and enforcement of these laws and regulations are uncertain and subject to rapid change.

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We conduct a significant amount of sales activity outside of the United States. We intend to continue to pursue growth opportunities internationally, including in emerging markets. Our international operations are, and will continue to be, subject to a complex set of laws and regulations, including:

- Foreign medical reimbursement policies and programs;
- Complex data privacy requirements and laws;
- Ever-changing and contradictory country-specific guidelines, transparency requirements and laws;
- The Foreign Corrupt Practices Act, a United States law, which prosecutes United States companies which engage in bribery when doing business with physicians, distributors, agents, and other third parties outside of the United States. Many physicians outside of the United States are considered government officials, and United States companies, together with individuals who engaged in the bribery, face civil and criminal sanctions both in the United States and any country where bribery of a government official violates the law of that country;
- Foreign anti-corruption laws, such as the UK Bribery Act; and
- Trade protection measures, including import or export restrictions or sanctions, that may restrict us from doing business in and/or shipping products to certain parts of the world.

The foregoing are subject to change and evolving interpretations and any violation thereof could subject us to financial or other penalties.

United States and Foreign Privacy Laws

We are subject to various United States federal and state privacy and security laws and regulations that protect the security and privacy of individually identifiable health information. We are mindful that our systems require significant resources and oversight to protect employee, patient, physician and customer information. If we fail to maintain or protect our information systems and data integrity effectively, we could lose existing customers, have difficulty preventing, detecting, and controlling fraud, have disputes with customers, physicians, and other healthcare professionals, have regulatory sanctions or other penalties imposed on us, have increases in operating expenses, incur expenses or lose revenue as a result of a data privacy breach, or suffer other adverse consequences.

We are also impacted by the privacy and security requirements of countries outside of the United States. Privacy standards in Europe and Asia have become stricter. Enforcement actions and financial penalties related to privacy in the EU are growing, and foreign governmental authorities have passed new laws and restrictions relating to privacy requirements and standards. The management of cross-border transfers of information among and outside of EU member countries is becoming more complex, which may affect our consulting arrangements with physicians or our clinical research activities, as well as product offerings that involve transmission or use of clinical data.

The EU published the EU General Data Protection Regulation (“GDPR”) in April 2016, which became effective in all EU member countries as of May 2018. This major piece of legislation represents the most significant change in EU data protection law since 1995. The GDPR mandates a baseline set of data privacy standards that will continue to have a significant impact on us as we are involved in the processing of personal data outside the EU. The GDPR also increases the penalties for noncompliance, with fines of up to €20 million or 4% of annual worldwide revenue.

Any significant breakdown, intrusion, interruption, corruption, or destruction of our systems or information could have a material adverse effect on our business, results of operations and financial condition. Thus, we will continue our efforts to comply with all applicable privacy and security laws and regulations. To the best of our knowledge at this time, we do not expect that the ongoing cost and impact of assuring compliance with applicable privacy and security laws and regulations will have a material impact on our business, results of operations or financial condition.

Product Liability

The manufacture and marketing of medical devices carries the significant risk of financial exposure to product liability claims. Our products are used in situations in which there is a high risk of serious injury or death. Such risks will exist even with respect to those products that have received, or in the future may receive, regulatory approval for commercial sale. We are currently covered under a product liability insurance policy with coverage limits of $20 million per occurrence and $20 million per year in the aggregate, subject to a customary deductible of $150,000.

Employees

As of December 31, 2018, we had 528 employees (as compared to 675 employees as of December 31, 2017), including 189 in manufacturing, 27 in research and development, 34 in clinical and regulatory affairs, 59 in quality, 159 in sales and marketing, and 60 in administration. We believe that the success of our business will depend on our ability to attract and retain qualified personnel. Our employees are not subject to a collective bargaining agreement, and we believe that we have good relations with our employees.

General Information

We were incorporated in California in March 1992 under the name Cardiovascular Dynamics, Inc. and reincorporated in Delaware in June 1993. In January 1999, Cardiovascular Dynamics, Inc. (by then a publicly-traded company) merged with privately-held Radiance Medical Systems, Inc., and we changed our name to Radiance Medical Systems, Inc. In May 2002, we merged with then privately-held Endologix, Inc., and we changed our name to Endologix, Inc. Our principal executive office is located at 2 Musick, Irvine, California and our telephone number is (949) 595-7200. Our website is located at www.endologix.com. The information on, or that can be accessed through, our website is not incorporated by reference into this Annual Report on Form 10-K and should not be considered to be a part hereof. We make our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and related amendments to these reports, as applicable, available on our website, at www.endologix.com, free of charge as soon as practicable after filing or furnishing such reports with the United States Securities and Exchange Commission ("SEC").

All such reports are also available free of charge via EDGAR through the SEC website at www.sec.gov.

Item 1A. Risk Factors

Before deciding to invest in our company, or to maintain or increase your investment, you should carefully consider the risks described below, in addition to the other information contained in this Annual Report on Form 10-K and other reports we have filed with the SEC. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not presently known to us, or that we currently deem immaterial, may also affect our business operations. If any of these risks are realized, our business, financial condition, or results of operations could be seriously harmed and, in that event, the market price for our common stock could decline and you may lose all or part of your investment.

These risk factors should be considered in connection with evaluating the forward-looking statements contained in this Annual Report on Form 10-K. These factors could cause actual results and conditions to differ materially from those projected in our forward-looking statements.

Risks Related to Our Business

All of our revenue is generated from a limited number of products, and any decline in the sales of these products, including as a result of negative perceptions regarding our financial stability, or any material departure in expected revenues from our products as against forecasts, will negatively impact our business.

We have focused heavily on the development and commercialization of a limited number of products for the treatment of AAA. If we are unable to continue to achieve and maintain market acceptance of these products and do not achieve sustained positive cash flow from operations, we will be constrained in our ability to fund development and commercialization of improvements and other product lines. In addition, if we are unable to market our products as a result of a manufacturing or quality problem or failure to maintain regulatory approvals, we would lose our only source of revenue and our business would be negatively affected. For example, we recently engaged in a voluntary commercial withdrawal of our Nellix EVAS System, which resulted in the removal of 2019 Nellix-related revenue from our financial forecasts. We currently anticipate that the Nellix EVAS System will only be available at approved centers in a clinical investigation setting with all cases pre-screened by a physician panel to ensure adherence to protocol and use in accordance with current product indications.

We may not succeed in commercializing our products for several reasons, including:

- physicians and hospitals may continue relying on (or revert back to) open surgical repair, or use the other approved EVAR devices available for patients;
- our direct sales force may not be large enough, or effective enough in its efforts, to train and educate physicians and hospitals about the benefits of our products so as to drive adoption and continued use of our products;
- coverage and reimbursement for our products may not be sufficient for customers to choose our devices when in need of an EVAR device;
- challenges in the manufacturing, validation and testing of our products may require us to take actions that delay or otherwise hinder new product introductions or that impact currently available products;
- new technologies, or improved products by competitors, may limit or reduce adoption and use of our products;
- clinical results associated with our products may not be deemed sufficient by us or applicable regulatory authorities to support the approval or commercial use of such products, or may not be sufficiently robust to drive widespread adoption or use;
- adverse regulatory or other governmental statements, findings or reports regarding our products, specifically, our EVAR or EVAS technology and products may adversely affect the regulatory status and market for our products generally; and
- negative publicity about, or actual or perceived problems with our products or with EVAR or EVAS devices and technologies generally, could discourage physician and hospital adoption or use of our products.

If we are unable to educate physicians and hospitals about the advantages of our products, do not achieve significantly greater market acceptance of our products, do not obtain or maintain required regulatory approvals for our products, do not regain momentum in our sales activities, or fail to significantly grow our market share, we will not be able to grow our revenue and our business and financial condition will be adversely affected.

Furthermore, sales of our products may be adversely impacted by negative perceptions regarding our financial stability relative to that of our competitors and our ability to sustain our business operations on a long-term basis. We have entered into certain material agreements to consummate a substantial equity financing and to restructure our unsecured convertible indebtedness and secured term loan indebtedness that would materially address negative perceptions of our stability, but we cannot assure that these transactions will be consummated on terms currently stated, or at all. If we are unable to access substantial additional capital or restructure our indebtedness, we may continue to suffer from negative perceptions as to our financial stability and prospects. Further, our technical, human and other resources and capabilities, as well as our revenues and market share, are considerably smaller than those of our principal competitors. Negative perceptions of our financial stability, and resources and market share limitations, may cause our customers, suppliers and strategic partners, as well as independent distributors and third party payors, to question our ability to continue to sell our products, provide customer service, support our commercial organization and fulfill our strategic objectives. These concerns may arise from a number of factors, including our recent and projected financial results, our recent and projected cash positions, recent changes in and volatility of our stock price, perceptions about the dilutive impact of our financing transactions, our current level of indebtedness and debt service costs, the competitive environment in our industry, and uncertainties regarding the regulatory environment. Any such concerns, whether actual or perceived, could cause customers to delay the purchase of our products or purchase our competitors' products.

If we fail to develop and retain our direct sales force, our business could suffer.

We have a direct sales force in the United States and in certain European countries. As we launch new products and increase our marketing efforts with respect to existing products, we will need to retain and develop our direct sales personnel to build upon their experience with our products and their relationships with customers. There is significant competition for sales personnel with experience in relevant medical device sales, and departure of high-performing sales personnel can lead to loss of revenue. If we are unable to attract, motivate and develop qualified sales personnel and thereby grow our sales force, we may not be able to maintain or increase our revenue. Further, if we are unable to retain the high-performing members of our sales force, we may suffer loss of revenues that may not be recoverable in the near-term or at all. Also, if our sales personnel are not sufficiently trained or qualified to successfully market and sell our products in our targeted markets and accounts, our sales results and financial condition will be adversely

affected.

We are in a highly competitive market segment, which is subject to rapid technological change. If our competitors are better able to develop and market products that are safer, more effective, less costly, easier to use, or otherwise more attractive than the products that we may develop, our business will be adversely impacted.

Our industry is highly competitive and subject to rapid technological change. Our success depends, in part, upon our ability to maintain a competitive position in the development of technologies and products for use in the treatment of AAA. We face competition from both established and development stage companies. Many of the companies developing or marketing competing products enjoy several advantages over us, including:

- greater financial and human resources for product development, sales and marketing and patent litigation;
- greater name recognition;
- long established relationships with physicians, customers, and third party payors;
- additional lines of products, and the ability to offer rebates or bundle products to offer greater discounts or incentives;
- more established sales and marketing programs, and distribution networks;
- greater experience in conducting research and development, manufacturing, clinical trials, preparing regulatory submissions, and obtaining regulatory clearance or approval for products and marketing approved products; and
- greater buying power and influence with suppliers.

Our competitors may develop and patent processes or products earlier than us, obtain regulatory clearance or approvals for competing products more rapidly than us, and develop more effective or less expensive products or technologies that render our technology or products obsolete or less competitive. We also face fierce competition in recruiting and retaining qualified scientific, sales, and management personnel, establishing clinical trial sites and patient enrollment in clinical trials, as well as in acquiring technologies and technology licenses complementary to our products or advantageous to our business. If our competitors are more successful than us in these matters, our business may be harmed.

If third party payors do not provide reimbursement for the use of our products, our revenue may be negatively impacted.

Our success in marketing our products depends in large part on whether domestic and international government health administrative authorities, private health insurers and other organizations will reimburse customers for the cost of our products. Reimbursement systems in international markets vary significantly by country and by region within some countries, and reimbursement approvals must be obtained on a country-by-country basis. Further, many international markets have government-managed healthcare systems that control reimbursement for new devices and procedures. In most markets, there are private insurance systems as well as government-managed systems. In the United States, the healthcare industry is increasingly focused on cost containment as government and private health insurers seek to control healthcare costs by imposing lower payment rates and negotiating reduced contract rates with third-party payors. If sufficient reimbursement is not available for our current or future products, in either the United States or internationally, the demand for our products may be adversely affected or we may decide to cease commercial activities in any such region.

We are currently engaging in certain restructuring efforts which we may be unsuccessful in executing and, even if successful, may lead to undesirable outcomes.

We are currently restructuring certain aspects of our business and operations to reprioritize our sales and marketing efforts, rationalize our international presence and related expenses, streamline our workforce and take other measures to increase efficiencies, facilitate access to capital to fund operations as needed, decrease our cash consumption and decrease our cost to serve, while refocusing our business on strong execution of our core strategies. These restructuring plans reflect assumptions and analyses based on our experience and perception of historical trends, current conditions and expected future developments, as well as other factors that we consider appropriate under the circumstances. Whether our restructuring efforts will prove successful depends on a number of factors, including, but not limited to: (i) our ability to raise substantial additional capital on terms acceptable to us or at all, and to maintain adequate liquidity to satisfy our debt covenants and to allow us to execute our business plans, (ii) our ability to service or refinance our existing indebtedness and pay off such indebtedness as it comes due, (iii) our ability to maintain suppliers', hospitals', medical facilities' and practitioners' confidence in our products, (iv) our ability to obtain regulatory approvals for our new products and product iterations and to maintain our material product approvals, (v) our ability

to efficiently reduce our operational expenditures, while retaining key employees and programs, and (vi) the overall success of our business. In addition, as long as these cost restructuring efforts continue, and for a substantial time afterwards, our employees may face considerable distraction and uncertainty and we may experience increased levels of employee attrition. The implementation of these restructuring efforts has occupied and will continue to occupy a substantial portion of the time and attention of our management and will impact our business, including revenue.

We may never realize the expected benefits of our business combination transactions.

In addition to developing new products and growing our business internally, we have sought to grow through combinations with complementary businesses. Examples include our merger with TriVascular in 2016 and our merger with Nellix in 2010. Such business combination transactions involve risks, including the risk that we may fail to realize some or all of the anticipated benefits of the transaction. For example, the success of our business combination transactions largely depends on our ability to achieve anticipated regulatory approvals and growth opportunities for existing products and potential new products. Our ability to realize these benefits, and the timing of this realization, depend upon a number of factors and future events, many of which we cannot control. With respect to the acquired products and technologies, these factors and events include, without limitation, the results of clinical trials, the receipt and maintenance of applicable regulatory approvals, obtaining and maintaining intellectual property rights and further developing an effective sales and marketing organization in global markets. Although we carefully plan our business combination transactions, we may be unable to realize the expected benefits of such transactions.

Our success depends on the growth in the number of AAA patients treated with endovascular devices and the general support for EVAR and EVAS technologies in the medical community.

We estimate that over 200,000 people a year are diagnosed with AAA in the United States, and that in 2018 approximately 63,000 people underwent aneurysm repair, either via EVAR or open surgical repair. Our growth will depend upon an increasing percentage of patients with AAA being diagnosed, and an increasing percentage of those diagnosed receiving EVAR, as opposed to undergoing open surgical repair. Initiatives to increase screening for AAA include SAAAVE, which was signed into law on February 8, 2006 in the United States. SAAAVE provides for one-time AAA screenings for men who have smoked at some time in their lives, and men or women who have a family history of the disease. Beginning January 1, 2007, screening has also been provided as part of the “Welcome to Medicare” physical. Such general screening programs may never gain wide acceptance. The failure to diagnose more patients with AAA could negatively impact our revenue growth.

Furthermore, certain recent industry guidance in the EU has questioned the safety and effectiveness of EVAR and EVAS. In May 2018, the United Kingdom’s National Institute for Health and Care Excellence (“NICE”) issued draft guidance on AAA diagnosis and management that, among other things, states that patients should not be offered EVAR if open surgical repair is suitable. In November 2018, the European Society for Vascular Surgery (the “ESVS”) presented its updated guidelines on the treatment of AAA which included a strong negative recommendation regarding the use of EVAS in clinical practice outside of studies approved by research ethics committees and only with informed consent from the patients, until adequately evaluated. These recommendations and guidelines may adversely affect the growth in the number of AAA patients that are treated with endovascular devices, and adversely affect the commercial availability and customer adoption of our EVAS products, which in turn could have a material adverse effect on our financial condition.

Our success depends on convincing physicians to use, and continue to use, our products in more endovascular AAA procedures and to assist us in development of new products.

If we are unable to continue to educate physicians on the use of our products to drive use of our products and to use our products in more endovascular AAA procedures, our business could be negatively impacted. Further, we rely on these professionals to provide us with considerable knowledge and experience regarding the research, development, marketing and sale of our products. Physicians assist us as researchers, marketing and product consultants, inventors, and public speakers. If we are unable to maintain our strong relationships with the professionals who use and support our products and continue to receive their advice and input, many of our products may not be developed and marketed in line with the needs and expectations of such professionals, which could have a material adverse effect on our consolidated earnings, financial condition, and/or cash flows.

Manufacturing and quality problems with our products could harm our reputation and erode our competitive advantage, sales and market share.

The manufacture of many of our products is highly complex and subject to strict quality controls, due in part to rigorous regulatory requirements. In addition, quality is extremely important due to the serious and costly consequences of a product failure. Problems can arise during the manufacturing process for a number of reasons, including equipment malfunction, failure to maintain or follow necessary protocols and procedures, raw material

problems or human error. If these problems arise or if we otherwise fail to meet our internal quality standards or those of the FDA or other applicable regulatory bodies, which include detailed record-keeping requirements, our reputation could be damaged, we could become subject to a safety alert or recall, we could incur product liability and other costs, product approvals could be delayed, suspended or revoked and our business could otherwise be adversely affected.

If we or our third party suppliers fail to comply with extensive FDA regulations relating to the manufacturing of our products or any component part, or otherwise encounter manufacturing problems, this could harm our reputation, we may be subject to fines, injunctions and penalties, and our ability to commercially distribute and sell our products may be harmed.

Our manufacturing facilities and the manufacturing facilities of any of our third party component manufacturers, critical suppliers or third party sterilization facilities are required to comply with the FDA's Quality System Regulation ("QSR") which sets forth minimum standards for the procedures, execution and documentation of the design, testing, production, control, quality assurance, labeling, packaging, sterilization, storage and shipping of the products we sell. The FDA may evaluate our compliance with the QSR, in a variety of ways, including through periodic announced or unannounced inspections, which could disrupt our operations and interrupt our manufacturing. If, in conducting an inspection of our manufacturing facilities or the manufacturing facilities of any of our third party component manufacturers, critical suppliers or third party sterilization facilities, FDA investigators observe conditions or practices that are believed to violate the QSR, the FDA may take administrative or enforcement actions, including a corporate warning letter, consent decree, product seizure, injunction and criminal prosecution, which could result in total or partial suspension of a facility's production and/or distribution activities, product recalls, fines, civil penalties, suspension of the FDA's review of product applications and the FDA's issuance of adverse publicity. Thus, an adverse inspection could force a shutdown of our manufacturing operations or a recall of our products. Adverse inspections could also delay or lead to revocation of FDA approval of our products and could have an adverse effect on our production, sales and profitability.

We and any of our third party suppliers may also encounter other problems during manufacturing including failure to maintain or follow specific protocols and procedures, equipment malfunction, component or raw materials shortages and environmental factors, any of which could delay or impede our ability to meet demand. The manufacture of our products also subjects us to risks that could harm our business, including problems relating to the sterilization of our products, errors in manufacturing processes and defects in components that could negatively affect the efficacy or safety of our products or cause delays in shipment of our products. Any interruption or delay in the manufacture of the product or any of its components could impair our ability to meet the demand of our customers and cause them to cancel orders or switch to competitive products and could, therefore, have a material adverse effect on our business, financial condition and results of operations.

Our international operations involve operating risks, which could adversely impact our net sales, results of operations and financial condition.

Sales of our products outside of the United States represented approximately 30% of our revenue in 2018. In select countries in Europe, Asia Pacific, Latin America and other targeted international geographies, we market and sell our products through a network of third party distributors and agents. The sale and shipment of our products across international borders, as well as the purchase of components and products from international sources, subject us to extensive United States and foreign governmental trade, import and export, and custom regulations and laws.

Pursuant to the SEC rules regarding disclosure of the use of certain minerals in our products, known as "conflict minerals," which are mined from the Democratic Republic of the Congo and adjoining countries, we are now required to disclose the procedures we employ to determine the sourcing of such minerals, and metals produced from those minerals. The implementation of these rules could adversely affect the sourcing, supply and pricing of materials used in our products. Although we intend to disclose that we utilized certain of the four conflict minerals in our products in our conflict minerals report for the 2018 calendar year, we have been unable in all instances to determine that our sources of these minerals have been certified as "conflict free." We may continue to face difficulties in gathering this information in the future.

Compliance with these regulations is costly and exposes us to penalties for non-compliance. Other laws and regulations that can significantly impact us include various anti-bribery laws, including the United States Foreign Corrupt Practices Act, UK Bribery Act 2010, import/export regulations and requirements such as those imposed by the U.S. Department of Treasury's Office of Foreign Assets Control and U.S. Department of Commerce's Bureau of Industry and Security, and anti-boycott laws and similar laws in foreign jurisdictions. Any failure to comply with applicable legal and regulatory obligations could impact us in a variety of ways that include, but are not limited to, significant criminal, civil and administrative penalties, including imprisonment of individuals, fines and penalties, denial of export privileges, seizure of shipments, restrictions on certain business activities, and exclusion or debarment from government contracting. Also, the failure to comply with applicable legal and regulatory obligations could result in the disruption of our shipping and sales activities, including as the result of the loss of one or more of our product registrations in these foreign jurisdictions. We may determine not to renew one or more of our product registrations in foreign jurisdictions at this time given the meaningful costs of renewing such registrations, including opportunity costs of allocating necessary resources to these renewals, when measured against the potential market opportunities. We and our distributors are required to expend considerable resources to comply with the laws of foreign jurisdictions in which our products are sold. These legal, regulatory and other requirements, individually and in the aggregate, may impact our decisions regarding where to obtain or maintain our product registrations, and the determination not to obtain or maintain a product registration in a certain country or territory may have a negative impact on our relationship with our distributors.

A significant portion of our sales outside of the United States are denominated in local currencies and not in United States dollars. Measured in local currency, a substantial portion of our international sales was generated in Europe (and primarily denominated in the Euro) and in Japan. The United States dollar value of our international sales varies with currency exchange rate fluctuations. Decreases in the value of the United States dollar relative to the Euro or the British Pound Sterling, as well as other currencies, have the effect of increasing our reported revenue even when the volume of international sales has remained constant. Increases in the value of the United States dollar relative to the Euro or the British Pound Sterling, as well as other currencies, have the opposite effect and, if significant, could have a material adverse effect on our reported revenue and results of operations.

Our international operations expose us and our distributors to risks inherent in operating in foreign jurisdictions. The risks associated with international operations include the following:

- difficulties in enforcing or defending intellectual property rights;
- pricing pressure that we may experience internationally;
- a shortage of high-quality sales people and distributors;
- changes in third party reimbursement policies that may require some of the patients who receive our products to directly absorb medical costs or that may necessitate the reduction of the selling prices of our products;
- rulings, findings, reports, recommendations or guidance from governmental or industry entities that are adverse to our products or to EVAR/EVAS products and technologies generally;
- the imposition of additional United States and foreign governmental controls or regulations;
- political, economic and social instability;
- changes in duties and tariffs, license obligations and other non-tariff barriers to trade;
- the imposition of restrictions on the activities of foreign agents, representatives and distributors;
- scrutiny of foreign tax authorities which could result in significant fines, penalties and additional taxes being imposed on us;
- laws and business practices favoring local companies;
- longer payment cycles;
- difficulties in maintaining consistency with our internal guidelines;
- difficulties in enforcing agreements and collecting receivables through certain foreign legal systems;
- the imposition of costly and lengthy new export licensing requirements;
- the imposition of United States or international sanctions against a country, company, person or entity with whom we do business that would restrict or prohibit continued business with the sanctioned country, company, person or entity; and

- the imposition of new trade restrictions.

If we experience any of these risks, our sales in international countries may be harmed and our results of operations would suffer.

We depend on our officers and other skilled and experienced personnel to operate our business effectively. If we are not able to retain our current employees or recruit additional qualified personnel, our business will suffer and our future revenue and profitability will be impaired.

We are highly dependent on the skills and experience of our executive officers and key employees. We do not have any insurance in the event of the death or disability of our key personnel. In most cases, our officers and key employees may terminate their employment and work elsewhere without notice and without cause or good reason. Due to the specialized knowledge of each of our officers with respect to our products and operations, and the limited pool of people with relevant experience in the medical device field, the loss of service of one or more of these individuals could significantly affect our ability to operate and manage our business. The announcement of the loss of one or more of our key personnel could negatively affect our stock price. In particular, we believe that the skills and experience of Mr. Onopchenko, our Chief Executive Officer, are important to our success. The loss of Mr. Onopchenko's services could significantly affect our ability to operate and manage our business and could negatively affect our stock price.

Under Mr. Onopchenko's leadership, we determined to streamline and restructure certain of our operations and implement certain management changes. These plans resulted in significant changes in the composition of the senior management team. Our Vice Presidents of Regulatory, Clinical, Quality, Manufacturing, Research and Development, and U.S. Sales (as of the beginning of 2018) separated from us during 2018. In addition, our previous Chief Human Resources Officer retired in February 2019. The loss of these members of senior management, and any future attrition resulting from or arising during planned restructuring efforts (whether such attrition is expected or unexpected), could significantly impact our ability to operate and manage our business and could negatively impact our financial results. Further, pursuant to our restructuring plan, we have materially augmented our leadership team, including through the additions of a Chief Quality Officer, Chief Operations Officer and Vice President of Global Clinical and Regulatory Affairs during 2018, as well as a Chief Human Resources Officer and Chief Commercial Officer in the first quarter of 2019, and also promoted certain existing employees to Vice President to lead certain functional departments. We anticipate that we may further augment our leadership team as we deem necessary or advisable. There is no assurance that the new members of our executive team (i) will be successful in implementing our restructuring efforts and executing our long-term strategies, or (ii) will remain with us over the longer-term.

We depend on our scientific and technical personnel for successful product development and innovation, which are critical to the success of our business. In addition, to succeed in the implementation of our business strategy, our management team must rapidly execute our sales strategy, obtain anticipated FDA clearances and approvals, achieve market acceptance of our products and further develop products, while addressing our strategic objectives through the implementation and enhancement of effective planning, manufacturing and operating processes. We compete for talented personnel against companies with more expansive product offerings and greater technical and financial resources. Successfully managing our business will require us to attract and retain talented and experienced management and technical personnel, but there is no guaranty that we will be able to hire or retain such personnel.

If we are unable to provide meaningful equity incentives to our key employees, it could adversely affect our ability to retain these key employees, which in turn could affect our ability to implement our business strategies.

We are highly dependent upon the members of our management team, as well as high-performing sales representatives and other key employees. Many of these individuals have been employed by us for many years, have played integral roles in the growth of our business, and will continue to provide value to us. In our industry, it is common to attract and retain executive talent and other employees with compensation packages that include a significant equity component. At this time, the vast majority of our outstanding equity awards, which are generally issued in the form of stock options, are significantly out-of-the-money, are unlikely to be exercised in the future, and as a result, provide little value to employees holding such awards. Further, despite the recent approval by our stockholders in December 2018 of an increase in the total number of shares of our common stock reserved for issuance under our Amended and Restated 2015 Stock Incentive Plan, as amended (the "2015 Plan"), we do not currently have sufficient available shares under the 2015 Plan to offer meaningful equity incentives to our existing employees, and we believe that we will be required to ask our stockholders to approve another increase in the number of shares reserved for issuance under the 2015 Plan in the near future. If our stockholders do not approve any proposal

by us to increase the share reserve under the 2015 Plan as we deem necessary, we may be materially limited in our ability to offer equity incentives to our existing employees, which could meaningfully affect our ability to retain our key employees and to execute on our business strategies. Even if we do issue significant additional equity incentives, whether or not these incentives are subject to certain conditions precedent including the availability of sufficient shares for issuance under our 2015 Plan, there can be no assurance that we will be able to attract and retain key executive talent. A loss of any of our key personnel may have a material adverse effect on our ability to execute our business strategy.

The actions and omissions of our third party distributors may subject us to revenue, compliance and other risk.

We depend in part on medical device distributors and strategic relationships for the marketing and sale of our products outside of the United States and outside of certain countries in Europe. We depend on these distributors' efforts to market our products effectively and in accordance with all applicable laws, rules and regulations, yet we are unable to control their efforts completely. For instance, if our distributors fail to provide us or applicable governmental authorities with timely quality, regulatory or other required notifications, including with respect to adverse events or other matters potentially affecting patient safety, then we could incur risk, including the risk of non-compliance with applicable FDA regulations or the regulations of the foreign jurisdiction(s) in which the distributors sell our products, and our business could suffer. In addition, we are unable to ensure that our distributors comply with all applicable laws regarding the sale of our products, including marketing and promotion of our products in accordance with applicable laws and regulations. If our distributors fail to effectively market and sell our products, or to do so in full compliance with applicable laws, our operating results and business may suffer.

If clinical trials of our current or future products do not produce the results necessary to support regulatory clearance or approval in the United States or elsewhere, we will be unable to commercialize these products.

We are currently conducting clinical trials. We will likely need to conduct additional clinical trials in the future to support new product approvals, for approval for new indications for the use of our products, or to support the use of existing products. Clinical testing is expensive, and typically takes many years, and carries uncertain outcomes. The initiation and completion of any of these studies may be prevented, delayed, or halted for numerous reasons, including, but not limited to, the following:

- the FDA, institutional review boards or other regulatory authorities do not approve a clinical study protocol, force us to modify a previously-approved protocol, or place a clinical study on hold;
- patients do not enroll in, do not enroll at the rate we expect, or do not complete a clinical study;
- patients or investigators do not comply with study protocols;
- patients do not return for post-treatment follow-up at the rate we expect;
- patients experience serious or unexpected adverse side effects for a variety of reasons that may or may not be related to our products, such as the advanced stage of co-morbidities that may exist at the time of treatment, causing a clinical study to be put on hold or terminated;
- sites participating in an ongoing clinical study may withdraw, requiring us to engage new sites;
- difficulties or delays associated with establishing additional clinical sites;
- third party clinical investigators decline to participate in our clinical studies, do not perform the clinical studies on the anticipated schedule, or are inconsistent with the investigator agreement, clinical study protocol, good clinical practices, and other FDA and Institutional Review Board requirements;
- failure to complete data collection analysis in a timely or accurate manner;
- regulatory inspections of our clinical studies require us to undertake corrective action or suspend or terminate our clinical studies;
- changes in federal, state, or foreign governmental statutes, regulations or policies;
- interim results are inconclusive or unfavorable as to immediate and long-term safety or efficacy of our products;
- the study design is inadequate to demonstrate safety and efficacy of our products; or
- the results of the study do not meet the study endpoints.

Clinical failure can occur at any stage of the testing. Our clinical trials may produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct additional clinical and/or non-clinical testing in addition to those we have planned. For example, in 2017, the FDA required us to undergo a confirmatory trial, called EVAS2, of our Nellix EVAS System because it deemed the results of our EVAS1 trial insufficient to support regulatory clearance. Our failure to adequately demonstrate the efficacy and safety of any of our devices would prevent receipt of regulatory clearance or approval and, ultimately, the commercialization of that device or indication for use.

We depend on a limited number of third party suppliers, including single sourced suppliers that supply several components for our product lines, and any disruption in the supply of such materials could impair our ability to manufacture our products or meet customer demand for our products in a timely and cost effective manner.

We currently rely, and expect to continue to rely, on third party suppliers to supply components of our current products and our potential future products. Our reliance on these third party suppliers, and especially our single source suppliers, exposes our operations to disruptions in supply, including disruptions caused by:

- failure of our suppliers to comply with regulatory requirements;
- contractual or other disputes with any such supplier;
- change of ownership of a supplier through acquisition or sale of a business
- any strike or work stoppage;
- disruptions in shipping;
- manufacturing limitations or other restrictions on availability or use of raw materials or components necessary for the development, testing, manufacture or sale of our products;
- a natural disaster caused by fire, flood or earthquakes; or
- a supply shortage experienced by a single source supplier.

For our business strategy to be successful, our suppliers must be able to provide us with components in sufficient quantities, in compliance with regulatory requirements and quality control standards, in accordance with agreed-upon specifications, at acceptable costs and on a timely basis.

We do not have long-term supply agreements with many of our suppliers and, in many cases, we make our purchases on a purchase order basis. As a result, our ability to purchase adequate quantities of our components or products may be limited. Additionally, our suppliers may encounter problems that limit their abilities to manufacture components or products for us, including financial difficulties, change in ownership or damage to their manufacturing equipment or facilities. If we fail to obtain sufficient quantities of high quality components to meet demand on a timely basis, we could lose customer orders, our reputation may be harmed and our business could suffer. Furthermore, negative perceptions among our suppliers regarding our financial stability, and our ability to sustain our business operations on a long-term basis, may cause one or more of our suppliers to terminate their relationships with us, or to claim that our financial condition causes them to demand different payment terms.

Depending on a limited number of suppliers exposes us to risks, including limited control over pricing, availability, quality and delivery schedules. Moreover, in some cases, we do not have long-standing relationships with our suppliers and the limited size of our order quantities for certain components may not be sufficient to convince suppliers to continue to make components available to us unless there is demand for such components from their other customers. As a result, there is a risk that certain components could be discontinued and no longer available to us. We have in the past been, and we may in the future be, required to make significant “last time” purchases of component inventory that is being discontinued by the manufacturer to ensure supply continuity. If any one or more of our suppliers cease to provide us with sufficient quantities of components in a timely manner or on terms acceptable to us, we would have to seek alternative sources of supply. Because of factors such as the proprietary nature of our products, our quality control standards and applicable regulatory requirements, we cannot quickly engage additional or replacement suppliers for some of our critical components. Failure of any of our suppliers to deliver products at the level our business requires would limit our ability to meet, or possibly prevent us from meeting, our sales commitments, which could harm our reputation and have a material adverse effect on our business, financial condition, and results of operations.

We may also have difficulty obtaining similar components from other suppliers that are acceptable to meet our own quality requirements, the FDA or other regulatory agencies, and the failure of our suppliers to comply with regulatory requirements could expose us to regulatory action including warning letters, product recalls, termination of distribution, product seizures or civil penalties. Such a failure by our suppliers could also require us to cease using the components, seek alternative components or technologies, and modify our products to incorporate alternative components or technologies, which could necessitate additional regulatory approvals. Any disruption of this nature, or any increased expenses associated with any such disruption, could negatively impact our ability to manufacture our products on a timely basis, in sufficient quantities, or at all, which could harm our commercialization efforts and have

a material adverse impact on our operating results.

If we are unable to protect our intellectual property, our business may be negatively affected.

Our success depends significantly on our ability to protect our intellectual property and proprietary technologies. We rely on patent protection, as well as a combination of copyright, trade secret and trademark laws, and nondisclosure, confidentiality

and other contractual restrictions, to protect our proprietary technology. However, these legal means afford only limited protection and may not adequately protect our rights or permit us to gain or keep any competitive advantage. Our pending United States and foreign patent applications may not issue as patents or may not issue in a form that will be advantageous to us. Any patents we have obtained, or will obtain, may be challenged by re-examination, inter partes review, opposition or other administrative proceeding, or in litigation. Such challenges could result in a determination that the patent is invalid. In addition, competitors may be able to design alternative methods or devices that avoid infringement of our patents. To the extent our intellectual property protection is inadequate, or is found to be invalid, we are exposed to a greater risk of direct competition. If our intellectual property does not provide adequate protection against our competitors' products, our competitive position could be adversely affected, as could our business. Both the patent application process and the process of managing patent disputes can be time consuming and expensive. Furthermore, the laws of some foreign countries may not protect our intellectual property rights to the same extent as the laws of the United States, if at all. In addition, changes in United States patent laws could prevent or limit us from filing patent applications or patent claims to protect our products and/or technologies or limit the exclusivity periods that are available to patent holders.

We also own trade secrets and confidential information that we try to protect by entering into confidentiality agreements and intellectual property assignment agreements with our employees, consultants and other parties. However, such agreements may not be honored or, if breached, we may not have sufficient remedies to protect our confidential information. Further, our competitors may independently learn our trade secrets or develop similar or superior technologies. To the extent that our employees, consultants or others apply technological information to our projects that they develop independently or others develop, disputes may arise regarding the ownership of proprietary rights to such information, and such disputes may not be resolved in our favor. If we are unable to protect our intellectual property adequately, our business and commercial prospects will likely suffer.

The medical device industry is subject to extensive patent litigation, and if our products or processes infringe upon the intellectual property of third parties, the sale of our products may be challenged and we may have to defend costly and time-consuming infringement claims.

Like other medical device companies, we receive notices of alleged patent infringement from third parties in the ordinary course of our business. We are required to assess each of these claims and then determine appropriate disposition of each claim, which can take significant time, effort and financial resources. We are currently in the process of addressing a small number of these types of matters.

We may need to engage in expensive and prolonged litigation to assert or defend any of our intellectual property rights or to determine the scope and validity of rights claimed by other parties. With no certainty as to the outcome, litigation could be too expensive for us to pursue. Our failure to pursue or prevail in such litigation could result in the loss of our rights, which could substantially hurt our business.

If we elect to settle an infringement claim, any such settlement could be on unfavorable financial or other terms that could affect our revenue, gross margins and other financial results.

Our failure to assert our intellectual property rights, or the potential for intellectual property litigation, could force us to do one or more of the following:

- stop selling, making, or using products that use the disputed intellectual property;
- obtain a license from the intellectual property owner to continue selling, making, licensing, or using products, which license may not be available on reasonable terms, or at all;
- redesign our products, processes or services; or
- subject us to significant liabilities to third parties.

If any of the foregoing occurs, we may be unable to manufacture and sell our products and may suffer severe financial harm. Whether or not an intellectual property claim is valid, the cost of responding to it, in terms of legal fees and expenses and the diversion of management resources, could harm our business.

On May 7, 2018, we received notice from Medtronic, Inc. ("Medtronic") that Medtronic believes that our Ovation product appears to use one or more claims of certain Medtronic patents. We continue to assess this claim and we are engaged in discussions with Medtronic regarding their invitation to obtain a non-exclusive license to these patents. We have a robust patent portfolio at our disposal, and after conducting our analysis, we believe that one or more of Medtronic's products appears to use one or more claims of our patents. Since it is presently not possible to determine the outcome of any discussions with Medtronic in regard to the respective parties' patents, whether or not litigation will ensue, or the outcomes associated with potential litigation, no provision has been made in our financial statements for the ultimate resolution. It is possible that we could incur substantial costs associated with Medtronic's claims and any resolution with Medtronic may result in substantial damages, payment of royalties, result in or be connected to additional claims, and divert management's attention and resources, any of which could harm our business.

We may face product liability claims that could result in costly litigation and significant liabilities.

The manufacture, marketing and sale of our commercial products, and the clinical testing of our products under development, may expose us to significant risk of product liability claims. In the past, we have had a small number of product liability claims relating to our products, none of which either individually, or in the aggregate, have resulted in a material negative impact on our business. As the result of recent field safety notices and related regulatory communications involving our AFX and Ovation systems, as well as commercial withdrawal of our Nellix EVAS System and related regulatory communications, we may see an increase in product liability activity. Any additional product liability claims may have, individually or in the aggregate, a negative impact on our business. Such claims could divert our management from pursuing our business strategy and may be costly to defend. Regardless of the merit or eventual outcome, product liability claims may result in:

- decreased demand for our products;
- injury to our reputation;
- injury to our relationships with our customers;
- significant litigation and other costs;
- substantial monetary awards to or costly settlements with patients;
- product recalls;
- loss of revenue; and
- the inability to commercialize new products or maintain existing product approvals.

Although we have, and intend to maintain, product liability insurance, the coverage limits of our insurance policies may not be adequate to protect us from liabilities that we may incur, and one or more claims brought against us for uninsured liabilities or in excess of our insurance coverage may have a material adverse effect on our business and results of operations. In addition, we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts or scope to protect us against losses. Any claims against us, regardless of their merit, could severely harm our reputation and financial condition, strain our management and other resources and adversely affect or eliminate the prospects for commercialization or sales of a product which is the subject of such claim. In addition, a recall of our products, whether or not as a result of a product liability claim, could result in decreased demand for our products, injury to our reputation, significant litigation and other costs, substantial monetary awards to or costly settlements with patients, loss of revenue and our inability to commercialize new products or product candidates.

We are currently involved in litigation, and may face future claims, that could adversely affect our business and financial condition, divert management's attention from our business, and subject us to significant liabilities.

On January 3, 2017 and January 9, 2017, two stockholders purporting to represent a class of persons who purchased our securities between August 2, 2016 and November 16, 2016, filed lawsuits against us and certain of our officers in the United States District Court for the Central District of California (the "District Court"). The lawsuits allege that we made materially false and misleading statements and failed to disclose material adverse facts about our business, operational and financial performance, in violation of federal securities laws, relating to FDA PMA for our Nellix EVAS System. On May 26, 2017, the plaintiffs filed an amended complaint extending the class period to include persons who purchased our securities between May 5, 2016 and May 18, 2017 and adding certain factual assertions and allegations regarding the Nellix EVAS System. The plaintiffs sought unspecified monetary damages on behalf of the alleged class, interest, and attorney's fees and costs of litigation. The first lawsuit, Nguyen v. Endologix, Inc. et al., Case No. 2:17-cv-0017 AB (PLAx) (C.D. Cal.), was consolidated with the second lawsuit, Ahmed v. Endologix, Inc. et al, Case No. 8:17-cv-00061 AB (PLAx) (C.D. Cal.), and lead Nguyen plaintiff filed a consolidated First Amended Complaint. On December 5, 2017, the District Court granted our motion to dismiss lead plaintiff's First Amended Complaint, with leave to amend. On January 9, 2018, lead plaintiff filed a Second Amended Complaint, and on March 12, 2018, we filed our Motion to Dismiss this Second Amended Complaint with prejudice. On September 6, 2018, the District Court dismissed the Second Amended Complaint with prejudice. On October 5, 2018, lead plaintiff filed a notice of appeal, and on March 15, 2019, lead plaintiff filed its opening brief with the appellate court.

As of June 11, 2017, four stockholders have filed derivative lawsuits seeking unspecified monetary damages on behalf of Endologix, the nominal plaintiff, based on allegations substantially similar to those alleged by lead plaintiff in Nguyen. Those actions consist of: Sindlinger v. McDermott et al., Case No. BC662280 (Los Angeles Superior Court); Abraham v. McDermott et al., Case No. 30-2018-00968971-CU-BT-CSC (Orange County Superior Court); and Green v. McDermott et al., Case No. 8:17-cv-01155-AB (PLAx), which has been consolidated with Cocco v. McDermott et al., Case No. 8:17-cv-01183-AB (PLAx) (C.D. Cal.).

Although we believe that these lawsuits are without merit and intend to defend ourselves vigorously, we are not able to predict the ultimate outcome of these lawsuits. It is possible that they could cause us to incur substantial costs and that they could be resolved adversely to us, result in substantial damages, result in or be connected to additional claims, and divert management's attention and resources, any of which could harm our business. While we maintain director and officer liability insurance, the amount of insurance coverage may not be sufficient to cover these claims and other claims to which we may become subject, and the continued availability of this insurance cannot be assured. Protracted litigation, including any adverse outcomes, may have an adverse impact on our business, results of operations or financial condition and could subject us to adverse publicity and require us to incur significant legal fees.

If our facilities or systems are damaged or destroyed, we may experience delays that could negatively impact our revenue or have other adverse effects.

Our facilities and systems may be affected by natural or man-made disasters. We currently conduct our manufacturing, development and management activities in Santa Rosa, California and Irvine, California, near known earthquake fault zones and seasonal wildfire activity. Our finished goods inventory is split between our Santa Rosa and Irvine locations, our distribution center in Tilburg, the Netherlands, and other forward stocking locations. We have taken precautions to safeguard our facilities and systems, including insurance, health and safety protocols, and off-site storage of computer data. However, our facilities and systems may be vulnerable to earthquakes, fire, storm, power loss, telecommunications failures, physical and software break-ins, software viruses and similar events which could cause substantial delays in our operations, damage or destroy our equipment or inventory, and cause us to incur additional expenses. In addition, the insurance coverage we maintain may not be adequate to cover our losses in any particular case and may not continue to be available to us on acceptable terms, or at all.

Failure to protect our information technology infrastructure against cyber-based attacks, network security breaches, service interruptions, or data corruption could significantly disrupt our operations and adversely affect our business and operating results.

We rely on information technology and telephone networks and systems, including the Internet, to process and transmit sensitive electronic information and to manage or support a variety of business processes and activities, including sales, billing, customer service, procurement and supply chain, manufacturing, and distribution. We use enterprise information technology systems to record, process, and summarize financial information and results of operations for internal reporting purposes and to comply with regulatory financial reporting, legal and tax requirements. Our information technology systems, some of which are managed by third parties, may be susceptible to damage, disruptions or shutdowns due to computer viruses, attacks by computer hackers, failures during the process of upgrading or replacing software, databases or components thereof, power outages, hardware failures, telecommunication failures, user errors or catastrophic events. Despite the precautionary measures we have taken to prevent breakdowns in our information technology and telephone systems, if our systems suffer severe damage, disruption or shutdown and we are unable to effectively resolve the issues in a timely manner, our business and operating results may suffer. Further, if our information technology systems are compromised by third parties, we may be subject to fines, judgments, sanction or other penalties arising out of the compromising activities.

We are subject to credit risk from our accounts receivable related to our product sales, which include sales within countries that are currently experiencing economic turmoil.

The majority of our accounts receivable arise from product sales in the United States. However, we also have significant receivable balances from customers within the EU, Japan, Brazil and Singapore. Our accounts receivable in the United States are primarily due from public and private hospitals. Our accounts receivable outside of the United States are primarily due from public and private hospitals and independent distributors. Our historical write-offs of accounts receivable have not been significant.

We monitor the financial performance and credit worthiness of our customers so that we can properly assess and respond to changes in their credit profile. Our independent distributors and sub-dealers operate in certain countries where economic conditions continue to present challenges to their businesses and, thus, could place the amounts that they owe to us at risk. These distributors are owed amounts from public hospitals that are funded by their governments. Adverse financial conditions in these countries may continue, negatively affecting the length of time that it will take us to collect associated accounts receivable or impact the likelihood of ultimate collection.

Consolidation in the healthcare industry could have an adverse effect on our revenue and results of operations.

The healthcare industry has been consolidating, and organizations such as GPOs, independent delivery networks, and large single accounts continue to consolidate purchasing decisions for many of our healthcare provider customers. As a result, transactions with customers are larger, more complex, and tend to involve more long-term contracts. The purchasing power of these larger customers has increased, and may continue to increase, causing downward pressure on product pricing. If we are not one of the providers selected by one of these organizations, we may be precluded from making sales to its members or participants. Even if we are one of the selected providers, we may be at a disadvantage relative to other selected providers that are able to offer volume discounts based on purchases of a broader range of medical equipment and supplies. Further, we may be required to commit to pricing that has a material adverse effect on our revenue and profit margins, business, financial condition and results of operations. We expect that market demand, governmental regulation, third party reimbursement policies and societal pressures will continue to change the worldwide healthcare industry, resulting in further business consolidations and alliances, which may exert further downward pressure on the prices of our products and could adversely impact our business, financial condition and results of operations.

If any future acquisitions or business development efforts are unsuccessful, our business may be harmed.

As part of our business strategy to be an innovative leader in the treatment of aortic disorders, we may need to acquire other companies, technologies, and product lines in the future. Acquisitions involve numerous risks, including the following:

- the possibility that we will pay more than the value we derive from the acquisition, which could result in future non-cash impairment charges;

- difficulties in integration of the operations, technologies and products of the acquired companies, which may require significant attention of our management that otherwise would be available for the ongoing development of our business;
- the assumption of certain known and unknown liabilities of the acquired companies; and
- difficulties in retaining key relationships with employees, customers, partners and suppliers of the acquired company.

In addition, we may invest in new technologies that may not succeed in the marketplace. If they are not successful, we may be unable to recover our initial investment, which could include the cost of acquiring the license, funding development efforts, acquiring products, or purchasing inventory. Any of these would negatively impact our future growth and cash reserves.

Risks Related to Our Financial Condition

We have a history of operating losses and may be required to obtain additional funds to pursue our business strategy.

We have a history of operating losses and may need to seek additional capital in the future. We have entered into certain material agreements to consummate an equity financing and to restructure our unsecured convertible indebtedness and secured term loan indebtedness. If we consummate these transactions, we believe that our existing liquidity will be sufficient to meet our anticipated cash needs for at least the next 12 months. If we are unable to consummate these transactions, we will need to find near-term alternative sources of capital and debt relief to continue to fund our operations. Even if we complete the equity financing and debt restructuring, we may need to obtain additional financing to pursue our business strategy, to respond to new competitive pressures or to act on opportunities to acquire or invest in complementary businesses, products or technologies. Our cash requirements in the future may be significantly different from our current estimates and depend on many factors, including:

- the results of our commercialization efforts for our existing and future products;
- the revenue generated by sales of our existing and future products;
- the need for additional capital to fund existing and future development programs;
- the need to adapt to changing technologies and technical requirements, and the costs related thereto;
- the costs involved in obtaining and enforcing patents or any litigation by third parties regarding intellectual property;
- the establishment of high-volume manufacturing and increased sales and marketing capabilities; and
- whether we are successful if we enter into collaborative relationships with other parties.

In addition, we are required to make periodic interest payments to the holders of our senior convertible notes and our senior secured lender under our term loan, and to make payments of principal upon conversion or maturity. Further, under our term loan, we are required to pay certain termination and related fees upon termination of such loan. We may also be required to purchase our senior convertible notes from the holders thereof upon the occurrence of a fundamental change involving our company, or to refinance our senior convertible notes prior to their maturity dates. To finance the foregoing, we may seek funds through borrowings or through additional rounds of financing, including private or public equity or debt offerings and collaborative arrangements with corporate partners. We may be unable to raise funds on favorable terms, or at all.

The sale of additional equity or convertible debt securities could result in additional dilution to our stockholders. If we borrow additional funds or issue debt securities, these securities could have rights superior to holders of our common stock and could contain covenants that will restrict our operations. We might have to obtain funds through arrangements with collaborative partners or others that may require us to relinquish rights to our technologies, product candidates, or products that we otherwise would not relinquish. If we do not obtain additional resources, our ability to capitalize on business opportunities will be limited, and the growth of our business will be harmed.

Changes in the credit environment and covenant restrictions under our financing arrangements may adversely affect our business and financial condition.

Future volatility in the global financial markets could increase borrowing costs or affect our ability to access the capital markets. Further, our ability to enter into or maintain existing financing arrangements on acceptable terms, including our amended and restated facility agreement and credit agreement, dated August 9, 2018, with affiliates of Deerfield Management Company, L.P. (“Deerfield”), as amended (the “Amended Facility Agreement” and the “Credit Agreement,” respectively; collectively the “Deerfield Agreements”), in respect of our $160.5 million term loan facility and $50.0 million revolving loan facility, respectively, could be adversely affected if there is a material decline in the demand for our products or the prices that we can command for our products, our customers become insolvent or decide to reduce or discontinue their purchase of our products, we encounter significant regulatory, quality, manufacturing or compliance issues, or any other material adverse event occurs that impacts our business. Any deterioration in our revenue, key financial ratios, or non-compliance with certain financial, reporting, regulatory,

operational or other covenants or terms in existing or future loan or credit agreements, including the Deerfield Agreements, may result in an event of default under such agreements, which also could adversely affect our business and financial condition.

The occurrence of an event of default under our Deerfield Agreements could result in an increase to the applicable interest rate, an acceleration of all obligations, an inability to access the revolving loan facility under the Credit Agreement, a requirement to repay all obligations in full and a right by Deerfield to exercise all remedies available to them. If we are unable to pay those amounts, Deerfield could proceed against the collateral granted to it pursuant to the Deerfield Agreements and we may in turn lose access to any sources of borrowing availability we may have. Any declaration of an event of default by Deerfield could also trigger an event of default under our outstanding convertible senior notes requiring the repayment of principal and interest outstanding under such notes. Further, if we are unable to repay our indebtedness and Deerfield institutes foreclosure proceedings against our assets, we could be forced into bankruptcy or liquidation and equity holders may lose the entire value of their investment. In any such bankruptcy or liquidation scenario, the value that we receive for our assets could be significantly lower than the values reflected in our financial statements.

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

Our ability to make scheduled payments of the principal of, to pay interest on, to pay any cash due upon conversion of or to refinance our indebtedness, including the senior convertible notes, depends on our future performance, which is subject to economic, financial, competitive and other factors beyond our control. Our business may not generate cash flow from operations in the future sufficient to service our debt and make necessary capital expenditures. If we are unable to generate such cash flow, we may be required to adopt one or more alternatives, such as selling assets, restructuring debt or obtaining additional equity capital on terms that may be onerous or highly dilutive. Our ability to refinance our indebtedness will depend on the capital markets and our financial condition at such time. We have entered into certain material agreements to restructure our current indebtedness, including our 3.25% Senior Convertible Notes, due 2020, and our $160.5 million term loan under our Amended Facility Agreement. We may not successfully consummate this restructuring, or be successful in future negotiation pertaining to our indebtedness, so as to ensure our compliance with and satisfaction of our debt obligations. If we are unable to engage in any of these activities regarding our indebtedness, or engage in these activities on desirable terms, it could result in a default on our debt obligations.

We have limited resources to invest in research and development and to grow our business and may need to raise additional funds in the future for these activities.

We believe that our growth will depend, in significant part, on our ability to develop new technologies for the treatment of AAA and technology complementary to our current products. Our existing resources may not allow us to conduct all of the research and development activities that we believe would be beneficial for our future growth. As a result, we may need to seek funds in the future to finance these activities. If we are unable to raise funds on favorable terms, or at all, we may not be able to increase our research and development activities and the growth of our business may be negatively impacted.

The expense and potential unavailability of insurance coverage for our company may have an adverse effect on our financial position and results of operations.

While we currently have insurance for our business, property, directors and officers, and product liability, such insurance coverage is increasingly costly and the scope of coverage is narrower, and we may be required to assume more risk in the future. If we are subject to claims or suffer a loss or damage in excess of our insurance coverage, we will be required to cover the amounts outside of or in excess of our insurance limits. If we are subject to claims or suffer a loss or damage that is outside of our insurance coverage, we may incur significant costs associated with loss or damage that could have an adverse effect on our financial position and results of operations. Furthermore, any claims made on our insurance policies may impact our ability to obtain or maintain insurance coverage at reasonable costs or at all. We do not have the financial resources to self-insure, and it is unlikely that we will have these financial resources in the foreseeable future. Our product liability insurance covers our products and business operations, but we may need to increase and expand this coverage commensurate with our expanding business.

Risks Related to Regulation of Our Industry

Healthcare policy changes, including recent federal legislation to reform the United States healthcare system, may have a material adverse effect on us.

In response to perceived increases in healthcare costs in recent years, there have been and continue to be proposals by the federal government, state governments, regulators and third party payors to control these costs and, more generally, to reform the United States healthcare system. Certain of these proposals could limit the prices we are able to charge for our products or the amounts of reimbursement available for our products and could limit the acceptance and availability of our products. Moreover, as discussed below, recent federal legislation would impose significant new taxes on medical device makers such as us. The adoption of some or all of these proposals, including the recent federal legislation, could have a material adverse effect on our financial position and results of operations.

On March 23, 2010, President Obama signed the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Affordability Reconciliation Act (the "PPACA"). The total cost imposed on the medical device industry by the PPACA may be up to approximately $20 billion over ten years. The PPACA includes, among other things, a deductible 2.3% excise tax on any entity that manufactures or imports medical devices offered for sale in the United States, with limited exceptions, effective January 1, 2013. This excise tax will result in a significant increase in the tax burden on our industry, and if any efforts we undertake to offset the excise tax are unsuccessful, the increased tax burden could have an adverse effect on our results of operations and cash flows. Other elements of the PPACA, including comparative effectiveness research, an independent payment advisory board, payment system reforms including shared savings pilots and other provisions, may significantly affect the payment for, and the availability of, healthcare services and result in fundamental changes to federal healthcare reimbursement programs, any of which may materially affect numerous aspects of our business.

On December 18, 2015, President Obama signed the Consolidated Appropriations Act of 2016, which imposed a two-year moratorium on the 2.3% excise tax beginning on January 1, 2016 and ending on December 31, 2017. On January 22, 2018, the continuing resolution extended this moratorium for an additional two years, through the 2019 calendar year. The continuing resolution provides that this additional delay applies to sales made after December 31, 2018. Therefore, as a result of both moratoriums, the medical devices tax will not apply to any sales made between January 1, 2016 and December 31, 2019. While there was legislative activity in late December 2018 that proposed an additional 5-year moratorium on the excise tax, the expiration date of the current moratorium remains unchanged, expiring December 31, 2019.

Upon the end of this period we believe the PPACA could continue to have an adverse effect on our results of operations and cash flows.

Our future success depends on our ability to develop, receive regulatory clearance or approval for, and introduce new products or product enhancements that will be accepted by the market in a timely manner.

It is important to our business that we continue to build a more extensive product offering for treatment of AAA. Our success will depend in part on our ability to develop and introduce new products. However, we may not be able to successfully develop and obtain regulatory clearance or approval for product enhancements, or new products, or these products may not be accepted by physicians or the payors who financially support many of the procedures performed with our products. Recent industry guidance from NICE and the ESVS raises concerns regarding the regulatory and commercial prospects for EVAR and EVAS products in Europe. In the United States, the FDA's requirement that we complete the EVAS2 confirmatory trial has delayed the commercial introduction of the Nellix EVAS System in the United States. In the future we may face additional, similar regulatory constraints.

In addition to conforming with an evolving regulatory landscape, the success of any new product offering or enhancement to an existing product will depend on several factors, including our ability to:

- properly identify and anticipate physicians' and patients' needs;
- develop and introduce new products or product enhancements in a timely manner;
- avoid infringing upon the intellectual property rights of third parties;
- demonstrate, if required, the safety and efficacy of new products with data from pre-clinical studies and clinical trials;
- obtain the necessary regulatory clearances or approvals for new products or product enhancements;
- be fully FDA-compliant with marketing of new devices or modified products;

- provide adequate training to potential users of our products;
- receive adequate coverage and reimbursement for procedures performed with our products; and

- develop an effective and regulatory-compliant, dedicated marketing and distribution network.

If we do not develop new products or product enhancements in time to meet market demand or if there is insufficient demand for these products or enhancements, our results of operations will suffer.

Our business is subject to extensive governmental regulation that makes it expensive and time consuming for us to introduce new or improved products.

Our products must comply with complex regulatory requirements imposed by the FDA and corresponding state agencies in the United States and similar agencies in foreign jurisdictions. These requirements involve lengthy and detailed laboratory and clinical testing procedures, sampling activities, extensive agency review processes, and other costly and time-consuming procedures. It often takes a number of years to satisfy these requirements, depending on the complexity and novelty of the product. We also are subject to numerous additional licensing and regulatory requirements relating to safe working conditions, manufacturing practices, environmental protection, fire hazard control, and disposal of hazardous or potentially hazardous substances. Some of the most important requirements we face include:

- FDA Regulations (Title 21 CFR);
- EU CE Mark requirements, including the new Medical Device Regulations and MEDDEV 2.7.1 Rev.4, which implement stricter requirements for clinical data to support new product approvals;
- Other international regulatory approval requirements;
- Medical Device Single Audit Program ("MDSAP");
- Medical Device Quality Management System Requirements (21 CFR 820, ISO 13485:2003, EN ISO 13485:2012, ISO 13485:2016, and other similar international regulations);
- Occupational Safety and Health Administration requirements; and
- California Department of Health Services requirements.

Government regulation may impede our ability to conduct continuing clinical trials and to manufacture our existing and future products. Government regulation also could delay our marketing of new products for a considerable period of time and impose costly procedures on our activities. The FDA and other regulatory agencies may not approve any of our future products on a timely basis, if at all. Any delay in obtaining, or failure to obtain, such approvals could negatively impact our marketing of any proposed products and reduce our product revenue.

Our products remain subject to strict regulatory controls on manufacturing, marketing and use. We may be forced to modify or recall our product after release in response to regulatory action or unanticipated difficulties encountered in general use. Any such action could have a material effect on the reputation of our products and on our business and financial position.

Further, regulations may change, and any additional regulation could limit, delay or restrict our ability to market our products, which could harm our business. We could also be subject to new international, federal, state or local regulations that could affect our research and development programs and harm our business in unforeseen ways. If this happens, we may have to incur significant costs to comply with such laws and regulations, which will harm our results of operations.

The potential off-label promotion and subsequent off-label use of our products may harm our reputation in the marketplace and result in government investigations and/or penalties.

The products we market have been cleared or approved by the FDA and international regulatory authorities for specific indications for use, including in specific AAA anatomies. Physicians have the discretion, however, to use our products outside of those cleared/approved indications for use, a practice known as "off-label" use. Off-label use of our and our competitors' products by physicians is common in the AAA field. We receive substantial revenue from the sale of our products for use by physicians in cases outside of the cleared/approved indications for use. Though physicians in most countries, including the United States, have the discretion to engage in off-label use of our products, FDA laws and regulations prohibit us from promoting our products for an unapproved use.

Our internal policies and procedures are designed to achieve compliance with these and other applicable requirements, but FDA or other regulatory authorities could determine that our sales, marketing and educational activities, when evaluated in connection with the use of our products in off-label procedures, have constituted or may constitute the unlawful promotion of our products for unapproved use. We specifically have a compliance mechanism in place to investigate and address instances of noncompliance with company policies and procedures, with confirmed violations resulting in disciplinary action up to and including termination. If we are deemed by the FDA or other regulatory bodies to have engaged in the promotion of our products for off-label use, we could be subject to prohibitions on the sale or marketing of our products in the United States or other jurisdictions, face significant fines and penalties, and be required to enter into onerous corporate integrity agreements, consent decrees or similar court or agency-imposed agreements. The imposition of any such fines, penalties or sanctions could affect our reputation and position within the industry and could materially and adversely affect our business, financial condition and results of operations. Additionally, the use of our products for indications other than those cleared/approved by the FDA or international regulatory authorities may result in suboptimal outcomes that could harm our reputation in the marketplace among physicians and patients and lead to product liability claims.

Physicians may misuse our products or use improper techniques if they are not adequately trained, potentially leading to injury and an increased risk of product liability and similar claims. If our products are misused or used with improper technique, we may become subject to costly litigation by our customers or their patients. Product liability claims could divert management's attention from our core business, be expensive to defend, and result in sizable damage awards against us that may not be covered by insurance.

Our products may be subject from time to time to product recalls or voluntary market withdrawals that could harm our reputation, business and financial results.

The FDA and similar foreign governmental authorities have the authority to require the recall of commercialized products in the event of material deficiencies or defects in design or manufacture that could affect patient safety. In the case of the FDA, the authority to require a recall must be based on an FDA finding that there is a reasonable probability that the device would cause serious adverse health consequences or death. Manufacturers may, under their own initiative, recall a product if any material deficiency in a device is found or suspected. A government-mandated recall or voluntary recall by us or one of our distributors could occur as a result of component failures, manufacturing errors, design or labeling defects or other issues. We have engaged in product recalls from time to time, including a voluntary Class II recall of our AFX products with Strata graft material and certain larger sizes of our AFX2 product in late 2016 and early 2017, which recall (i) resulted in expenditure of resources and diversion of management time and attention and (ii) was negatively received in the marketplace. In addition, in October 2018, FDA classified a July 2018 safety notice that we issued to users of the AFX Endovascular AAA System as a Class I recall. We may elect to engage, or be required by FDA to engage, in additional recalls in the future. Any future recalls, which include corrections as well as removals, of any of our products would divert managerial and financial resources and could have an adverse effect on our financial condition, harm our reputation with customers, and reduce our ability to achieve expected revenue.

We are required to comply with medical device reporting ("MDR") requirements and must report certain malfunctions, deaths, and serious injuries associated with our products to regulatory agencies, which can result in voluntary corrective actions or agency enforcement actions.

Under the FDA MDR regulations, medical device manufacturers are required to submit information to the FDA when they receive a report or become aware that a device has or may have caused or contributed to a death or serious injury or has or may have a malfunction that would likely cause or contribute to death or serious injury if the malfunction were to recur. All manufacturers placing medical devices on the market in the European Economic Area are legally bound to report any serious or potentially serious incidents involving devices they produce or sell to the regulatory agency ("Competent Authority"), in whose jurisdiction the incident occurred. Material noncompliance with these reporting requirements may subject us to adverse regulatory action, including but not limited to receipt of a Warning Letter from FDA and enforcement action by the relevant Competent Authority.

Malfunction of our products could result in future voluntary corrective actions, including recalls, corrections, or customer notifications, or agency action, such as inspection or enforcement actions. If malfunctions do occur, we may

be unable to correct the malfunctions adequately or prevent further malfunctions, in which case we may need to cease manufacture and distribution of the affected products. Regulatory authorities may also take actions against us, such as ordering recalls, imposing fines, or seizing the affected products. Any corrective action, whether voluntary or involuntary, will require the dedication of our time and capital, distract management from operating our business, and may harm our reputation and financial results.

We are subject to federal, state and foreign healthcare fraud and abuse, transparency and other laws and regulations governing financial dealings with customers, physicians and payors, and a finding of failure to comply with such laws and regulations could have a material adverse effect on our business.

Our operations may be directly or indirectly affected by various broad federal, state or foreign healthcare fraud and abuse laws. The federal Anti-Kickback Statute prohibits any person from knowingly and willfully offering, paying, soliciting or receiving remuneration, directly or indirectly, in return for or to induce the referring, ordering, leasing, purchasing or arranging for or recommending the ordering, purchasing or leasing of an item or service, for which payment may be made under federal healthcare programs, such as the Medicare and Medicaid programs. We are also subject to the federal Health Insurance Portability and Accountability Act ("HIPAA"), which created federal criminal laws that prohibit executing a scheme to defraud any healthcare benefit program or making false statements relating to healthcare matters, and federal "sunshine" laws that require transparency regarding financial arrangements with healthcare providers, such as the reporting and disclosure requirements imposed by PPACA regarding any "transfer of value" made or distributed to prescribers and other healthcare providers.

In addition, the federal False Claims Act prohibits persons from knowingly filing, or causing to be filed, a false claim to, or the knowing use of false statements to obtain payment from the federal government. Suits filed under the False Claims Act, known as "qui tam" actions, can be brought by any individual on behalf of the government and such individuals, commonly known as "whistleblowers," may share in any amounts paid by the entity to the government in fines or settlement. When an entity is determined to have violated the False Claims Act, it may be required to pay up to three times the actual damages sustained by the government, plus civil penalties for each separate false claim. Various states have also enacted laws modeled after the federal False Claims Act.

Many states have also adopted laws similar to each of the above federal laws, such as anti-kickback and false claims laws, which may apply to items or services reimbursed by any third party payor, including commercial insurers as well as laws that restrict our marketing activities with physicians, and require us to report consulting and other payments to physicians. Some states mandate implementation of commercial compliance programs to ensure compliance with these laws. We also are subject to foreign fraud and abuse laws, which vary by country. For instance, in the EU, legislation on inducements offered to physicians and other healthcare workers or hospitals differ from country to country. Breach of the laws relating to such inducements may expose us to the imposition of criminal sanctions.

The risk of our being found in violation of these laws is increased by the fact that many of them have not been fully interpreted by the regulatory authorities or the courts, and their provisions are open to a variety of interpretations. Moreover, recent healthcare reform legislation has strengthened these laws. Further, there may be additional federal and state laws and/or regulations, proposed and implemented, that could impact our operations and business. The extent to which future legislation or regulations, if any, relating to healthcare fraud abuse laws and/or enforcement, may be enacted or what effect such legislation or regulation would have on our business remains uncertain. If our operations are found to be in violation of any of the laws described above or any other governmental regulations that apply to us now or in the future, we may be subject to penalties, including civil and criminal penalties, damages, fines, exclusion from governmental healthcare programs, and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our financial results.

We may be subject to health information privacy and security laws and regulations, and a finding of failure to comply with such laws and regulations could have a material adverse effect on our business.

The HIPAA statute, and its implementing regulations, safeguard the privacy and security of individually-identifiable health information. Certain of our operations may be subject to these requirements. Penalties for noncompliance with these rules include both criminal and civil penalties. In addition, the Health Information Technology for Economic and Clinical Health Act ("HITECH Act") expanded federal health information privacy and security protections. Among other things, HITECH makes certain of HIPAA's privacy and security standards directly applicable to "business associates," such as independent contractors or agents of covered entities that receive or obtain protected health information in connection with providing a service on behalf of a covered entity. HITECH also set forth new notification requirements for health data security breaches, increased the civil and criminal penalties that may be imposed against covered entities, business associates and possibly other persons, and gave state attorneys general new

authority to enforce HIPAA and seek attorney's fees and costs associated with pursuing federal civil actions. In addition, many states have adopted data privacy and protection legislation offering similar or expanded protections to consumers and imposing security, reporting and notification requirements which are in some instances more stringent than those imposed by HIPAA or HITECH.

The global legislative and regulatory landscape for privacy and data protection continues to evolve, and implementation standards and enforcement practices are likely to remain uncertain for the foreseeable future. This evolution may create uncertainty in our business, result in liability or impose additional costs on us. The cost of compliance with these laws, regulations and standards is high and is likely to increase in the future. For example, the EU has adopted the General Data Protection Regulation (the "GDPR"), which introduces strict requirements for processing personal data. The GDPR has imposed additional compliance obligations on us, including by mandating additional documentation requirements and granting certain rights to individuals to control how we collect, use, disclose, retain and leverage information about them. The processing of sensitive personal data, such as physical health condition, may impose heightened compliance burdens under the GDPR and is a topic of active interest among foreign regulators. In addition, the GDPR provides for breach reporting requirements, more robust regulatory enforcement and fines of up to €20 million or up to 4% of the annual global revenue. While companies are afforded some flexibility in determining how to comply with the GDPR's various requirements, it has and will continue to require significant effort and expense to ensure continuing compliance with the GDPR. Moreover, the requirements under the GDPR may change periodically or may be modified by EU national law and could have an effect on our business operations if compliance becomes substantially costlier than under current requirements.

Risks Related to Our Common Stock

We have certain contractual obligations pursuant to which we may be obligated to issue a significant number of additional shares of our common stock, which would result in a substantial amount of dilution to our existing stockholders.

Under the terms of our Amended Facility Agreement, we have issued warrants to Deerfield to purchase up to 1,522,002 shares of our common stock. In addition, (i) we have the right to issue Deerfield up to approximately 253,000 shares of our common stock in lieu of making certain interest payments under the Amended Facility Agreement, and (ii) Deerfield has the right to convert a portion of the indebtedness outstanding under the Amended Facility Agreement into a maximum of approximately 1.43 million shares of our common stock.

Further, if we consummate any equity financing or debt restructuring transactions, we anticipate that we will incur substantial additional dilution, including dilution resulting from:

- issuance of shares of our common stock (or securities convertible into or exercisable for common stock) to investors in an equity offering;
- issuance of equity or equity-linked securities to our lenders in connection with any debt restructuring;
- potential conversion of existing indebtedness held by our lenders into common stock pursuant to agreed-upon conversion formulas.

Any dilution incurred as a result of completion in the near-term of an equity financing or debt restructuring could result in issuance of common stock representing a substantial percentage of the number of shares currently outstanding. In addition, any debt restructuring involving our $160.5 million term loan under our Amended Facility Agreement and the holders of our 3.25% Senior Convertible Notes, due 2020, could result in potential conversion of certain portions of our outstanding indebtedness into common stock, and could also result in issuance to these lenders of common stock or securities convertible into or exercisable for common stock, which actual or potential issuances could result in very material additional dilution.

In addition, under the terms of our merger agreement with Nellix, we agreed to issue additional shares of our common stock to the former stockholders of Nellix as contingent consideration upon our satisfaction of certain milestones related to the Nellix EVAS System, or upon a change of control of our company. In June 2014, we issued 270,000 shares of our common stock upon achievement of a revenue-based milestone. In the event the remaining regulatory-based milestone is achieved, we may be obligated to issue up to approximately 330,000 additional shares of our common stock.

These potential issuances of additional shares of our common stock or securities convertible into or exercisable for our common stock, would result in the immediate dilution of the ownership interests of holders of our common stock on the dates of such issuances.

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The effective increase in the authorized number of shares of our common stock as a result of our reverse stock split could result in further dilution to our existing stockholders and have anti-takeover implications.

In connection with our reverse stock split, which was effective as of March 5, 2019, we conducted a reverse stock split of our issued and outstanding shares of common stock, but maintained the total number of authorized shares of our common stock. The combination of the reverse stock split of our issued and outstanding shares, and maintaining the number of our authorized shares, had the effect of significantly increasing our authorized shares relative to our issued and outstanding shares. This effective increase in the number of authorized shares will allow us to issue additional shares of our common stock (or securities convertible into, or exercisable or exchangeable for, our common stock), which would result in further dilution of our current stockholders.

In addition, the effective increase in the number of authorized shares could, under certain circumstances, have anti-takeover implications. For example, the additional shares of common stock that would become available for issuance could be used by us to oppose a hostile takeover attempt or to delay or prevent changes in control or our management. Although our reverse stock split proposal was prompted by business and financial considerations and not by the threat of any hostile takeover attempt, stockholders should be aware that the approval of the reverse stock split proposal could facilitate future efforts by us to deter or prevent changes in control, including transactions in which our stockholders might otherwise receive a premium for their shares over then-current market prices.

The price of our common stock has declined significantly and may continue to fluctuate in future periods.

The trading price of our common stock has declined significantly in the past 12 months. We believe our stock price has been, and will continue to be, subject to wide fluctuations in response to a variety of factors, including the following:

- actual or anticipated fluctuations in our financial and operating results from period to period;
- our actual or perceived need for additional capital to fund our operations, and perceptions about the potential dilutive impact of future financing or restructuring transactions;
- perceptions regarding the intentions of Deerfield with respect to the exercise of its warrants;
- perceptions about our financial stability generally, and relative to our competitors, including our ability to sustain our business operations, execute on our strategic plans and achieve profitability;
- market acceptance of our products;
- introduction of proposed products, technologies or treatment techniques by us or our competitors;
- announcements of significant contracts, acquisitions or divestitures by us or our competitors;
- regulatory approval of our products or the products of our competitors, the loss of regulatory approvals or clearances, or the failure to obtain regulatory approvals or clearances in a timely manner or at all;
- product recalls involving our products or the products of our competitors;
- perceptions regarding the effectiveness of our product quality systems;
- speculative trading practices of market participants;
- issuance of securities analysts' reports or recommendations;
- the failure of our operating results to meet expectations of securities analysts and investors, or to be consistent with our financial guidance;
- threatened or actual litigation, government investigations or enforcement actions; and
- changes in healthcare laws or policies in the United States or other countries in which we conduct business; and
- general political or economic conditions and other factors unrelated to our operating performance.

These and other factors might cause the market price of our common stock to fluctuate substantially and to decline even further. Fluctuations in our stock price may negatively affect the liquidity of our common stock, which could further adversely impact our stock price.

In recent years, the stock market has experienced significant price and volume fluctuations. This volatility has had a significant impact on the market price of securities issued by many companies across many industries. These changes may occur without regard to the financial condition or operating performance of the affected companies. Accordingly, the price of our common stock could fluctuate based upon factors that have little or nothing to do with our company,

and these fluctuations could materially reduce the market price of our common stock.

Trading in our stock over the past 12 months has been limited, which may increase the volatility of the trading price of our stock.

The average daily trading volume in our common stock in the year ended December 31, 2018 was approximately 74,000 shares. If limited trading in our stock continues, it may be difficult for investors to sell their shares in the public market at any given time at prevailing prices. Moreover, the market price for shares of our common stock may be more volatile because of the relatively low volume of trading in our common stock. When trading volume is low, significant price movement can be caused by the trading of a relatively small number of shares. Volatility in our common stock may result in further downward pressure on the market price of our common stock.

Our operating results may fluctuate significantly from quarter to quarter.

There has been and may continue to be meaningful variability in our operating results from quarter to quarter, as well as within each quarter, especially around the time of anticipated new product launches or regulatory approvals by us or our competitors. Our operating results, and the variability of these operating results, will be affected by numerous factors, including:

- our ability to increase sales from our current products, and to commercialize and sell our future products;
- introduction of proposed products, technologies or treatment techniques by us or our competitors;
- the number and mix of our products sold in each quarter;
- changes in our pricing policies or in the pricing policies of our competitors or suppliers;
- changes in third party payors' reimbursement policies;
- our ability to maintain and motivate our sales force;
- our ability to manufacture products that meet quality and regulatory requirements;
- results of clinical research and trials on our existing and future products;
- the timing and expense associated with obtaining regulatory approval of our products;
- product recalls involving our products or the products of our competitors;
- the timing of revenue and expense recognition associated with our product sales pursuant to applicable accounting standards.

Because of these and possibly other factors, it is possible that in future periods our operating results will not meet investor expectations or those of securities analysts.

In addition, we expect our operating expenses will continue to increase as we execute our strategy and expand our business, which may exacerbate the quarterly fluctuations in our operating results. If our quarterly or annual operating results fall below the expectation of securities analysts or other market participants, or below the results expressed or implied by our financial guidance, the price of our common stock could decline substantially. Further, any quarterly or annual fluctuations in our operating results may, in turn, cause the price of our common stock to fluctuate substantially, and these price fluctuations could result in further pressure on our stock price. We believe quarterly comparisons of our financial results are not necessarily meaningful and should not be relied upon as an indication of our future performance.

Any unanticipated change in revenue or other operating results is likely to cause our stock price to fluctuate since such changes reflect new information available to investors and analysts. New information may cause investors and analysts to revalue our business, which could cause a decline in the trading price of our stock.

We may not achieve the projections set forth in our financial guidance, or certain other anticipated goals and objectives that we announce publicly from time to time, which could have a material adverse effect on our business and cause the market price of our shares to decline.

We typically provide financial guidance based on management's then current expectations, which is subject to the risks and uncertainties inherent in all financial forecasting. The failure to achieve our financial guidance, or the projections of securities analysts or other market participants, could have a material adverse effect on our results of operations, and disappoint analysts and investors, which could cause the market price of our common stock to decline.

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In addition, we regularly make public announcements relating to our expected achievement of certain goals and objectives regarding our business, such as the timing of commercialization of new products, clinical trials, and regulatory approvals. The actual timing of these events can vary significantly due to a number of factors, including the various risks and uncertainties described in this Annual Report. As a result, we may be unable to achieve our projected goals and objectives in the time periods that we anticipate or at all. The failure to achieve such projected goals and objectives in the time periods that we anticipate could have a material adverse effect on our business, financial condition and results of operations.

Anti-takeover provisions in our organizational documents and Delaware law may discourage or prevent a change of control, even if an acquisition would be beneficial to our stockholders, which could reduce our stock price and prevent our stockholders from replacing or removing our current management.

Our amended and restated certificate of incorporation and bylaws contain provisions that could delay or prevent a change of control of our company or changes in our board of directors that our stockholders might consider favorable. Some of these provisions:

- authorize the issuance of preferred stock with powers, preferences and rights that may be senior to our common stock, which can be created and issued by the board of directors without prior stockholder approval;
- provide for the adoption of a staggered board of directors whereby the board is divided into three classes each of which has a different three-year term;
- provide that the number of directors shall be fixed by the board of directors;
- prohibit our stockholders from filling board vacancies;
- prohibit stockholders from calling special stockholder meetings; and
- require advance written notice of stockholder proposals and director nominations.

We are subject to the provisions of Section 203 of the Delaware General Corporation Law, which may prohibit certain business combinations with stockholders owning 15% or more of our outstanding voting stock. These and other provisions in our amended and restated certificate of incorporation, bylaws and Delaware law could make it more difficult for stockholders or potential acquirers to obtain control of our board of directors or initiate actions that are opposed by our then-current board of directors, including a merger, tender offer or proxy contest involving our company. Any delay or prevention of a change of control transaction or changes in our board of directors could cause the market price of our common stock to decline.

Our board of directors is authorized to issue and designate shares of our preferred stock in additional series without stockholder approval.

Our amended and restated certificate of incorporation authorizes our board of directors, without the approval of our stockholders, to issue shares of our preferred stock, subject to limitations prescribed by applicable law, rules and regulations and the provisions of our amended and restated certificate of incorporation, as shares of preferred stock in series, and to establish from time to time the number of shares to be included in each such series, and to fix the designation, powers, preferences and rights of the shares of each such series and the qualifications, limitations or restrictions thereof. The powers, preferences and rights of these additional series of preferred stock may be senior to or on parity with our common stock, and the issuance of such shares in the future may reduce the value of our common stock.

We may be at increased risk of securities class action litigation.

In the past, securities class action litigation has been instituted against companies following periods of volatility in the overall market and in the price of a company’s securities. We believe this risk may be particularly relevant to us as we have experienced a significant stock price decline in the past 12 months and may experience significant stock price volatility in the future. If we face such litigation, it could result in substantial costs and a diversion of management’s attention and resources, which could harm our business, financial condition and results of operations.

If we fail to maintain an effective system of internal control over financial reporting, we may not be able to accurately report our financial results or prevent fraud, which could cause investors to lose confidence in our reported financial information and have a negative impact on the trading price of our common stock.

Effective internal control over financial reporting is necessary for us to provide reliable financial reports and, together with adequate disclosure controls and procedures, is designed to prevent fraud. Any failure to implement required new or improved controls, or difficulties encountered in their implementation, could cause us to fail to meet our reporting obligations. In addition, any testing by us conducted in connection with Section 404(a) of the Sarbanes-Oxley Act, or the testing by our independent registered public accounting firm conducted in connection with Section 404(b) of the Sarbanes-Oxley Act, may reveal deficiencies in our internal controls over financial reporting that are deemed to be material weaknesses or that may require prospective or retroactive changes to our financial statements or identify other areas for further attention or improvement. Undetected material weaknesses in our internal controls could lead to financial statement restatements and require us to incur the expense of remediation. In addition, deficiencies in our internal controls could result in enforcement actions by the SEC or other regulatory bodies, which could cause us to incur defense costs and pay penalties or other costs. Furthermore, deficiencies in our internal controls may cause investors to lose confidence in our reported financial information, which could have a negative effect on the trading price of our common stock.

We do not intend to pay cash dividends.

We have never declared or paid cash dividends on our common stock and do not intend to pay cash dividends for the foreseeable future. Our current policy is to retain all funds and any earnings for use in the operation and expansion of our business. Our revolving credit facility and term loan contain restrictions prohibiting us from paying any cash dividends without the lender's prior approval. Accordingly, investors may have to sell some or all of their shares of our common stock in order to generate cash flow from their investment.

United States federal income tax reform could adversely affect us and our stockholders.

On December 22, 2017, President Trump signed into law the Tax Cuts and Jobs Act (the "TCJA"), which significantly reforms the Internal Revenue Code of 1986, as amended. The TCJA, among other things, includes changes to United States federal tax rates, imposes significant additional limitations on the deductibility of interest, allows for the expensing of capital expenditures, and puts into effect the migration from a "worldwide" system of taxation to a territorial system. We do not expect tax reform to have a material impact on our projection of minimal cash taxes. Our net deferred tax assets and liabilities were revalued at the newly-enacted U.S. corporate rate, and the impact was recognized in our tax expense, offset by a full valuation allowance, in the year of enactment. We continue to examine the impact that this tax reform legislation may have on our business. The impact of this tax reform on holders of our common stock is uncertain and could be adverse.

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.

The SEC adopted a rule requiring disclosures by public companies of specified minerals, known as conflict minerals, that are necessary to the functionality or production of products manufactured or contracted to be manufactured. The rule requires companies to perform due diligence, disclose and annually report to the SEC whether or not such minerals originate from the Democratic Republic of Congo or an adjoining country. The rule could affect sourcing at competitive prices and availability in sufficient quantities of certain minerals used in the manufacture of our products, which could increase our expenses. 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.

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

The trading market for our common stock depends, in part, on the research and reports that securities or industry analysts publish about us or our business. If one or more of the analysts who cover us downgrade our stock or publish inaccurate or unfavorable research about our business, our stock price would likely decline. In addition, if our

operating results fail to meet the forecasts of analysts or other market participants, our stock price would likely decline. In addition, if one or more analysts cease coverage of our company or fail to publish reports on us regularly, demand for our common stock could decrease, which might cause our stock price and trading volume to decline. We believe we are currently at greater risk that analysts may cease coverage of our company due to the recent decline in our stock price and market capitalization.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

On June 12, 2013, we entered into a lease agreement for 2 adjacent office, research and development, and manufacturing facilities in Irvine, California. The premises consist of approximately 129,000 combined square feet. The lease has a 15-year term beginning January 1, 2014 and provides for an optional 5-year extension. The initial base rent under the lease is $1.9 million per year, payable in monthly installments, and escalates by 3% per year for 2015 through 2019, and 4% per year for 2020 and beyond. We received a rent abatement for the first 9 months of the lease.

Our facility in Rosmalen, the Netherlands is an administrative office consisting of approximately 2,900 square feet under an operating lease scheduled to expire in January 2020, which may be renewed for an additional year.

In connection with our merger with TriVascular, we assumed the lease for TriVascular's facility in Santa Rosa, California. We use the Santa Rosa facility for manufacturing, research and development, and administrative purposes, and the facility consists of 110,000 square feet under an operating lease scheduled to expire in February 2023, which may be renewed for an additional 5 years.

We believe that all of our facilities and equipment are in good condition, suitable and adequate for their purposes, and are maintained on a consistent basis for sound operations.

Item 3. Legal Proceedings

Refer to Note 8 to our Consolidated Financial Statements included in Item 8 of this Annual Report on Form 10-K for a discussion of legal proceedings.

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

Our common stock trades on the Nasdaq Global Select Market under the symbol "ELGX."

On March 27, 2019, there were 67 holders of record of our common stock.

The following chart compares the annual percentage change in the cumulative total stockholder return on our common stock for the period from December 31, 2013 through December 31, 2018, with the cumulative total return on the Nasdaq Composite Index and the Nasdaq Medical Equipment Index for the same period. The comparison assumes $100 was invested on December 31, 2013 in our common stock at the then closing price of $174.40 per share.

Comparison of 5 Year Cumulative Total Return*
Among Endologix, Inc., the Nasdaq Composite Index, and the Nasdaq Medical Equipment Index
*$100 invested on December 31, 2013 in stock or index, including reinvestment of dividends.

Unregistered Sales of Equity Securities

None.

Repurchases of Equity Securities

None.

Item 6. Selected Financial Data

The following selected consolidated financial data have been derived from our audited Consolidated Financial Statements. The audited Consolidated Financial Statements for the fiscal years ended December 31, 2018, 2017 and 2016 are included elsewhere in this Annual Report on Form 10-K. The information set forth below should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained in Item 7 of this Annual Report on Form 10-K and the Consolidated Financial Statements and the accompanying notes included in Item 8 of this Annual Report on Form 10-K.

	Year Ended December 31,				
(In thousands, except per share data)	2018	2017	2016	2015	2014
Consolidated Statements of Operations Data:					
Revenue	$156,473	$181,157	$192,925	$153,612	$147,588
Cost of goods sold	64,550	59,828	69,133	51,821	41,801
Gross profit	91,923	121,329	123,792	101,791	105,787
Operating expenses:					
Research and development	20,793	21,019	32,337	26,421	21,616
Clinical and regulatory affairs	13,851	12,952	16,215	15,418	13,243
Marketing and sales	76,855	92,400	107,759	78,213	73,411
General and administrative	43,477	35,301	41,044	29,581	26,663
Restructuring costs	3,270	1,477	11,093	—	—
Contract termination, product withdrawal and business acquisition expenses	1,869	—	5,768	5,071	—
Settlement costs	—	—	4,650	—	—
Total operating expenses	160,115	163,149	218,866	154,704	134,933
Loss from operations	(68,192)	(41,820)	(95,074)	(52,913)	(29,146)
Total other expense, net	(11,238)	(25,039)	(59,105)	(6,848)	(3,334)
Net loss before income taxes	(79,430)	(66,859)	(154,179)	(59,761)	(32,480)
Income tax (expense) benefit	(284)	459	(498)	9,337	62
Net loss	$(79,714)	$(66,400)	$(154,677)	$(50,424)	$(32,418)
Basic and diluted net loss per share	$(9.07)	$(7.97)	$(19.10)	$(7.45)	$(4.97)
Shares used in computing basic and diluted loss per share	8,790	8,333	8,098	6,767	6,523

	December 31,				
(In thousands)	2018	2017	2016	2015	2014
Consolidated Balance Sheet Data:					
Cash, cash equivalents and marketable securities	$23,531	$57,991	$47,108	$177,321	$86,669
Accounts receivable, net	20,651	32,294	34,430	28,531	26,113
Total assets	293,070	365,047	359,684	331,050	248,209
Debt	198,078	208,253	177,178	167,748	70,407
Total liabilities	253,424	289,985	246,891	227,743	124,059
Accumulated deficit	599,715	520,001	453,601	298,924	248,500
Total stockholders' equity	39,646	75,062	112,793	103,307	124,150

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 "Selected Financial Data" and our audited Consolidated Financial Statements and the accompanying notes included in this Annual Report on Form 10-K. This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in the forward-looking statements as a result of various factors including the risks we discuss in Item 1A of Part I, "Risk Factors," and elsewhere in this Annual Report on Form 10-K.

Overview

Our Business

Our corporate headquarters are located in Irvine, California and manufacturing facilities are located in Irvine, California and Santa Rosa, California. We develop, manufacture, market and sell innovative medical devices for the treatment of aortic disorders. Our products are intended for the minimally-invasive endovascular treatment of abdominal aortic aneurysms ("AAA"). Our AAA products are built on one of two platforms: (i) traditional minimally-invasive endovascular aneurysm repair ("EVAR"); or (ii) endovascular aneurysm sealing ("EVAS"), our innovative solution for sealing the aneurysm sac while maintaining blood flow.

We sell our products through our direct sales force in the United States and internationally through a combination of direct sales and a network of third party distributors and agents.

For an overview of our business, products, product development initiatives and clinical trials, see Item 1, "Business."

Recent Developments

Nasdaq Continued Listing Deficiency and Plan of Compliance

On January 8, 2019, we received a letter (the "Letter") from the Nasdaq Stock Market LLC ("Nasdaq") indicating that Nasdaq has determined that we no longer meet the minimum bid price requirement of Nasdaq Listing Rule 5450(a)(1), as the minimum closing bid price for our common stock was less than $1.00 per share for the previous 30 consecutive business days.

The receipt of the Letter has no immediate effect on the listing of our common stock on the Nasdaq Global Select Market. Under Nasdaq Listing Rule 5810(c)(3)(A), we have a 180 calendar day grace period to regain compliance by meeting the continued listing standard. The continued listing standard will be met if our common stock has a minimum closing bid price of at least $1.00 per share for a minimum of 10 consecutive business days during the 180 calendar day grace period.

We regained compliance with the $1.00 minimum bid price for our common stock.

Reverse Split

At a special meeting of our stockholders held on February 22, 2019, our stockholders approved a proposal to amend our Amended and Restated Certificate of Incorporation, as amended, to effect a reverse stock split of our issued and outstanding common stock at a ratio not less than 1-for-5 and not greater than 1-for-10 (inclusive), with the exact ratio to be set as a whole number within that range at the discretion of our board of directors before February 22, 2020 without further approval or authorization of our stockholders. On February 26, 2019, our board of directors approved the reverse stock split at a ratio of 1-for-10. On March 5, 2019, we filed a Certificate of Amendment of Amended and Restated Certificate of Incorporation, as Amended (the "Certificate of Amendment"), with the Secretary of State of the State of Delaware to effect the reverse stock split. Unless stated otherwise, all share and per share amounts in this Annual Report on Form 10-K have been retroactively adjusted to reflect the reverse stock split.

The primary reason for effecting the reverse stock split was to increase the per share trading price of our common stock so as to: (i) maintain the listing of our common stock on the Nasdaq Global Select Market, and seek to avoid the delisting of our common stock from that market in the future; (ii) broaden the pool of investors that may be interested in investing in our common stock by attracting investors who may prefer to invest in shares that trade at higher share prices; (iii) improve the marketability of our common stock and thus improve the liquidity of our shares and lower average transaction costs for our stockholders; and (iv) provide a greater number of authorized shares available for issuance for corporate purposes including, without limitation, restructuring our existing indebtedness, paying monthly interest payments under our current credit facility in shares of common stock (to the extent permitted by the terms of our credit facility), raising additional capital, selling securities convertible into or exercisable for shares of our common stock, acquiring companies or assets, or entering into strategic partnerships or collaborations.

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Equity Financing and Debt Restructuring

The Company has entered into certain material agreements to consummate an equity financing and debt restructuring (see Note 15 to our Consolidated Financial Statements included in Item 8 of this Annual Report on Form 10-K for additional details). If the Company consummates these transactions on substantially the terms as described below, including generating $52.15 million in cash from the sale of common stock, the Company believes that the existing liquidity will be sufficient to meet anticipated cash needs for at least the next 12 months from the date of filing of this Annual Report on Form 10-K.

International Expansion

We are continuing to assess discrete international expansion opportunities that are consistent with our business strategy, including entry into certain markets, such as China, through established distributor partners.

Characteristics of Our Revenue and Expenses

Revenue

Revenue is derived from sales of our EVAR and EVAS products (including extensions and accessories) to hospitals upon completion of each AAA repair procedure, or from sales to distributors upon title transfer (which is typically at shipment), provided our other revenue recognition criteria have been met.

Cost of Goods Sold

Cost of goods sold primarily consists of compensation (including stock-based compensation) and benefits for production personnel and production support personnel. Cost of goods sold also includes depreciation expense for production equipment, amortization of developed technology, production materials and supplies expense, allocated facilities-related costs, and certain direct costs such as shipping.

Research and Development

Research and development expenses primarily consist of compensation (including stock-based compensation) and benefits for research and development personnel, materials and supplies, research and development consultants, outsourced and licensed research and development costs, and allocated facilities-related costs. Our research and development activities primarily relate to the development and testing of new devices and methods to treat aortic disorders.

Clinical and Regulatory

Clinical and regulatory expenses primarily consist of compensation (including stock-based compensation) and benefits for clinical and regulatory personnel, regulatory and clinical payments related to studies, regulatory costs related to registration and approval activities, and allocated facilities-related costs. Our clinical and regulatory activities primarily relate to obtaining regulatory approval for the commercialization of our devices.

Marketing and Sales

Marketing and sales expenses primarily consist of compensation (including stock-based compensation) and benefits for our sales force, clinical specialists, internal sales support functions and marketing personnel. Marketing and sales expenses also include costs attributable to marketing our products to our customers and prospective customers.

General and Administrative

General and administrative expenses primarily consist of compensation (including stock-based compensation) and benefits for personnel that support our general operations such as information technology, executive management, financial accounting and human resources. General and administrative expenses also include bad debt expense, patent and legal fees, financial audit fees, insurance, recruiting fees, other professional services, the federal medical device excise tax and allocated facilities-related costs.

Critical Accounting Policies and Estimates

The preparation of financial statements in conformity with generally accepted accounting principles in the United States (“GAAP”) requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, and the disclosure of contingent assets and liabilities as of the date of the financial statements and the reported amounts of revenue and expenses during the periods presented. While management believes these estimates are reasonable and consistent, they are, by their very nature, estimates of amounts that will depend on future events. Accordingly, actual results could differ from these

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estimates. Our audit committee of our board of directors periodically reviews our significant accounting policies. Our critical accounting policies arise in conjunction with the following:

- Revenue recognition and accounts receivable;
- Inventory — lower-of-cost-or-market;
- Business combinations;
- Goodwill and other intangible assets — impairment analysis;
- Stock-based compensation;
- Contingent consideration for business acquisition; and
- Litigation accruals.

Revenue Recognition and Accounts Receivable

We measure revenue based on consideration specified in contracts with customers: hospitals and distributors. We exclude any amounts related to taxes assessed by governmental authorities from this revenue measurement and reduce revenue by any sales incentives offered by us to our customers. We recognize revenue when we satisfy a performance obligation by transferring control of products to customers.

Specifically, we recognize revenue when all of the following criteria are met:

- A contract has been identified with the customer;
- The performance obligations have been identified;
- The transaction price has been determined and allocated to the respective performance obligations; and
- The performance obligations have been satisfied.

Respective performance obligations are satisfied at a point in time for sales made to both hospitals and distributors. Payment terms with customers range from 30 to 180 days which reflects days from the date we satisfy the performance obligations.

For implant-based sales, we recognize revenue when the AAA products are utilized in a procedure or implanted in a patient. For shipment-based sales, we recognize revenue when control over a product has transferred to the customer, which is typically at the time of shipment, without a right of return.

We provide certain sales incentives to customers for meeting certain purchase thresholds and, accordingly, the transaction price is reduced by our best estimate of this variable consideration. We estimate this variable consideration through the most-likely amount method.

We maintain allowances for doubtful accounts for estimated losses resulting from the inability of our customers to pay amounts due. These estimates are based on our review of the aging of customer balances, correspondence with the customer, and the customer’s payment history.

Inventory — Lower-of-cost-or-market

We value our inventory at the lower of the actual cost to purchase or manufacture the inventory or net realizable value for such inventory. Cost is determined using the first-in, first-out method. We regularly review inventory quantities in process and on hand and, when appropriate, record a provision for obsolete and excess inventory. The provision is based on actual loss experience and a forecast of product demand compared to its remaining shelf life.

Business Combinations

In accordance with GAAP, we record the assets acquired and the liabilities assumed in an acquired business at their estimated fair values on the date of acquisition. The difference between the purchase price amount and the net fair value of assets acquired and liabilities assumed is recognized as goodwill if it exceeds the estimated fair value and as a bargain purchase gain if it is below the estimated fair value. Determining fair value of identifiable assets, particularly intangible assets, liabilities acquired and contingent obligations assumed requires us to make estimates. In certain circumstances, the allocations of the purchase price are based upon preliminary estimates and assumptions and are subject to revision when we receive final information, including appraisals and other analyses. Accordingly, the measurement period for such purchase price allocations will end when the information, or the facts and circumstances, becomes available, but will not exceed 12 months. We will recognize measurement-period adjustments during the period of resolution, including the effect on earnings of any amounts that would have been recorded in previous periods if the accounting had been completed at the acquisition date.

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Goodwill and intangible assets often represent a significant portion of the assets acquired in a business combination. We recognize the fair value of an acquired intangible asset apart from goodwill whenever the intangible asset arises from contractual or other legal rights, or when it can be separated or divided from the acquired entity and sold, transferred, licensed, rented or exchanged, either individually or in combination with a related contract, asset or liability. Intangible assets consist primarily of technology, customer relationships, trade name and trademarks acquired in business combinations, and in-process research and development ("IPR&D"). We generally assess the estimated fair values of acquired intangible assets using a combination of valuation techniques. To estimate fair value, we are required to make certain estimates and assumptions, including future economic and market conditions, revenue growth, market share, operating costs and margins, and risk-adjusted discount rates. Our estimates require significant judgment and are based on historical data, various internal estimates and external sources. Our assessment of IPR&D also includes consideration of the risk that the projects may not achieve technological feasibility.

Goodwill and Other Intangible Assets — Impairment Analysis

Goodwill and other intangible assets with indefinite lives are not subject to amortization but are tested for impairment annually or whenever events or changes in business circumstances suggest the potential of an impairment. The evaluation of indefinite-lived intangible assets for impairment allows for a qualitative assessment to be performed. In performing our qualitative assessment, we consider relevant events and conditions including, but not limited to: macroeconomic trends, industry and market conditions, overall financial performance, cost factors, company-specific events, legal and regulatory factors and our market capitalization. We completed our annual impairment test of indefinite-lived intangible assets as of June 30, 2018, with no resulting impairment.

We completed our annual test for impairment of goodwill as of June 30, 2018, with no resulting impairment, as our market capitalization was in substantial excess of the value of our total stockholders' equity (we have one reporting unit for purposes of our goodwill impairment test).

Finite-lived intangible assets are tested for impairment only when impairment indicators are present. Our impairment reviews require significant estimates about fair value, including estimates of future cash flows, selection of appropriate discount rates and estimates of long-term growth rates. If actual results, or the forecasts and estimates used in future impairment analyses, are lower than the original estimates used to assess the recoverability of these assets, we could incur impairment charges.

Stock-based Compensation

We value stock-based awards, including stock options, restricted stock awards ("RSAs") and restricted stock units ("RSUs"), as of the date of grant. The fair value of stock options is estimated at the date of grant using the Black-Scholes option-pricing model. The fair value of RSAs and RSUs is based on the closing market price of our common stock on the grant date.

We recognize stock-based compensation expense (net of estimated forfeitures) using the straight-line method over the requisite or implicit service period, as applicable. Forfeitures of employee awards are estimated at the time of grant, and the forfeiture assumption is periodically adjusted for actual employee vesting behavior.

We use the Black-Scholes option-pricing model, in combination with the discounted employee price, in determining the value of expense related to our Amended and Restated 2006 Employee Stock Purchase Plan, as amended (the "ESPP") to be recognized during each offering period.

Contingent Consideration for Business Acquisition

We determined the fair value of contingently issuable common stock on the date of the Nellix, Inc. ("Nellix") acquisition using a probability-based income approach with an appropriate discount rate (determined using both Level 1 and Level 3 inputs (see Note 2 to our Consolidated Financial Statements for additional details)). Changes in the fair value of the contingently issuable common stock are determined at each period end and are recorded in the other income (expense), net line item of the Consolidated Statements of Operations and Comprehensive Loss and the current and non-current liabilities line items of the Consolidated Balance Sheets. The fair value of the contingent consideration liability could be impacted by changes such as: (i) fluctuations in the price of our common stock or (ii) the timing of achieving the underlining milestones

Litigation Accruals

From time to time we are involved in various claims and legal proceedings of a nature considered normal and incidental to our business. These matters may include product liability, intellectual property, employment and other general claims. We

accrue for contingent liabilities when it is probable that a liability has been incurred and the amount can be reasonably estimated. The accruals are adjusted periodically as assessments change or as additional information becomes available.

Recent Accounting Pronouncements Issued But Not Adopted as of December 31, 2018

In February 2016, the Financial Accounting Standards Board (the "FASB") issued Accounting Standards Update ("ASU") No. 2016-02, which amends the FASB Accounting Standards Codification and creates Topic 842, "Leases." The new topic supersedes Topic 840, "Leases," and increases transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and requires disclosures of key information about leasing arrangements. In July 2018, the FASB made targeted improvements to ASU No. 2016-02, including providing an additional and optional modified retrospective transition method. Under this method, an entity initially applies the standard at the adoption date, including the election of certain transition reliefs and recognizes a cumulative effect adjustment to the opening balance of retained earnings in the period of adoption. The guidance is effective for interim and annual periods beginning after December 15, 2018, with early adoption permitted. We will adopt ASU No. 2016-02 utilizing the modified retrospective transition method through a cumulative-effect adjustment in the first quarter of 2019. We are currently assessing the impact that adoption of this guidance will have on our consolidated financial statements and related disclosures, including the increase in the assets and liabilities on our balance sheet. To facilitate this transition, we are currently designing new processes and controls and evaluating our lease portfolio to assess the significant leases impacted by this guidance.

In February 2018, the FASB issued ASU No. 2018-02, "Income Statement – Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income." ASU No. 2018-02 permits a company to reclassify the income tax effects of the Tax Cuts and Jobs Act of 2017 (the "TCJA") on items within accumulated other comprehensive income to retained earnings. The guidance is effective for annual and interim periods beginning after December 15, 2018, with early adoption permitted. We are currently assessing the impact that adoption of this guidance will have on our consolidated financial statements.

In June 2018, the FASB issued ASU No. 2018-07, "Compensation – Stock Compensation (Topic 718): Improvements to Non-employee Share-based Payment Accounting," which expands the scope of Topic 718 to include share-based payment transactions for acquiring goods and services from non-employees. The guidance is intended to align the accounting for such payments to non-employees with the existing requirements for share-based payments granted to employees. This guidance is effective for annual periods beginning after December 15, 2018 and is to be adopted through a cumulative-effect adjustment to retained earnings as of January 1, 2019 for then outstanding share-based payments to non-employees. We are currently assessing the impact that adoption of this guidance will have on our consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-13, "Fair Value Measurement (Topic 820): Disclosure Framework — Changes to the Disclosure Requirements for Fair Value Measurement," which amends fair value disclosure requirements. ASU No. 2018-13 removes disclosure requirements on the transfers between Level 1 and Level 2 of the fair value hierarchy, the policy for timing of transfers between levels, and the valuation processes for Level 3 fair value measurements. ASU No. 2018-13 clarifies the measurement uncertainty disclosure and adds disclosure requirements for Level 3 unrealized gains and losses and significant unobservable inputs used to develop Level 3 fair value measurements. The guidance is effective for fiscal years beginning after December 15, 2019. Entities are permitted to early-adopt any removed or modified disclosures upon issuance and delay adoption of the additional disclosures until the effective date. We early-adopted ASU No. 2018-13 in the year ended December 31, 2018 as it pertains to removed and modified disclosures, which did not result in any change to our consolidated financial statements. We are currently assessing the impact that adoption of the additional disclosures will have on our consolidated financial statements.

Results of Operations

Operations Overview — 2018, 2017 and 2016

The following table presents our results of continuing operations and the related percentage of the period's revenue (in thousands, except percentages):

	Year Ended December 31,								
	2018			2017			2016		
Revenue	$156,473	100.0	%	$181,157	100.0	%	$192,925	100.0	%
Cost of goods sold	64,550	41.3	%	59,828	33.0	%	69,133	35.8	%
Gross profit	91,923	58.7	%	121,329	67.0	%	123,792	64.2	%
Operating expenses:									
Research and development	20,793	13.3	%	21,019	11.6	%	32,337	16.8	%
Clinical and regulatory affairs	13,851	8.9	%	12,952	7.1	%	16,215	8.4	%
Marketing and sales	76,855	49.1	%	92,400	51.0	%	107,759	55.9	%
General and administrative	43,477	27.8	%	35,301	19.5	%	41,044	21.3	%
Restructuring costs	3,270	2.1	%	1,477	0.8	%	11,093	5.7	%
Contract termination, product withdrawal and business acquisition expenses	1,869	1.2	%	—	—	%	5,768	3.0	%
Settlement costs	—	—	%	—	—	%	4,650	2.4	%
Total operating expenses	160,115	102.3	%	163,149	90.1	%	218,866	113.4	%
Loss from operations	(68,192)	(43.6)%		(41,820)	(23.1)%		(95,074)	(49.3)%	
Total other expense, net	(11,238)	(7.2)%		(25,039)	(13.8)%		(59,105)	(30.6)%	
Net loss before income taxes	(79,430)	(50.8)%		(66,859)	(36.9)%		(154,179)	(79.9)%	
Income tax (expense) benefit	(284)	(0.2)%		459	0.3	%	(498)	(0.3)%	
Net loss	$(79,714)	(50.9)%		$(66,400)	(36.7)%		$(154,677)	(80.2)%	

Year Ended December 31, 2018 versus December 31, 2017

Revenue

(in thousands, except percentages)	Year Ended December 31, 2018	2017	Variance	Percent Change
Revenue	$156,473	$181,157	$(24,684)	(13.6)%

United States Sales. Net sales in the United States totaled $109.1 million in the year ended December 31, 2018, a 11.5% decrease from $123.2 million in the year ended December 31, 2017, driven by the restructuring of the United States sales team and the continued impact of field safety notices on AFX® Endovascular AAA System (the "AFX System") and Ovation® Abdominal Stent Graft System (the "Ovation System").

International Sales. Net sales in our international regions totaled $47.4 million in the year ended December 31, 2018, a 18.2% decrease from $57.9 million in the year ended December 31, 2017, driven by the restructuring of our European sales team and the continued decline in Nellix sales reflecting the narrowed Instructions for Use ("IFU"). Our international sales in the year ended December 31, 2018 included a favorable currency impact of approximately $1.0 million when compared to the net sales in the year ended December 31, 2017, which had a 2.1% favorable impact on growth rate representing a constant currency decrease of 20.0%.

Cost of Goods Sold, Gross Profit and Gross Margin Percentage

(in thousands, except percentages)	Year Ended December 31, 2018	2017	Variance	Percent Change
Cost of goods sold	$64,550	$59,828	$4,722	7.9 %
Gross profit	91,923	121,329	(29,406)	(24.2)%
Gross margin percentage (gross profit as a percent of revenue)	58.7 %	67.0 %	(8.3)%	

Gross margin percentage in the year ended December 31, 2018 decreased to 58.7% from 67.0% in the year ended December 31, 2017. Gross profit in the year ended December 31, 2018 was negatively impacted by $8.7 million of inventory reserves related to our voluntary recall of our Nellix Endovascular Aneurysm Sealing System ("Nellix EVAS System") (see further details included in Note 8 to our Consolidated Financial Statements included in Item 8 of this Annual Report on Form 10-K).

Operating Expenses

(in thousands, except percentages)	Year Ended December 31, 2018	2017	Variance	Percent Change
Research and development	$20,793	$21,019	$ (226)	(1.1)%
Clinical and regulatory affairs	13,851	12,952	899	6.9 %
Marketing and sales	76,855	92,400	(15,545)	(16.8)%
General and administrative	43,477	35,301	8,176	23.2 %
Restructuring costs	3,270	1,477	1,793	>100%
Contract termination, product withdrawal and business acquisition expenses	1,869	—	1,869	100.0 %

Research and development. The $0.2 million decrease in research and development expenses, as compared to the prior year, was primarily attributable to the timing of project spending.

Clinical and regulatory affairs. The $0.9 million increase in clinical and regulatory affairs expenses, as compared to the prior year, was primarily attributable to investments in the EVAS2 IDE trial and higher regulatory outside service spend.

Marketing and sales. The $15.5 million decrease in marketing and sales expenses, as compared to the prior year, was primarily attributable to lower headcount driven by our restructuring and decrease in commissions expense.

General and administrative. The $8.2 million increase in general and administrative expenses, as compared to the prior year, was primarily attributable to increase in the costs related to the transition of our Chief Executive Officer, ongoing litigation expenses, and expenses associated with the changes to our credit facilities. For further details regarding our credit facilities, see Note 6 to our Consolidated Financial Statements included in Item 8 of this Annual Report on Form 10-K.

Restructuring costs. The $1.8 million increase in restructuring costs, as compared to the prior year, was attributable to the continuation of our restructuring activities initiated to improve efficiencies and re-align resources to allow for continued investment in strategic areas and drive growth.

Contract termination, product withdrawal and business acquisition expenses. The $1.9 million incurred in contract termination, product withdrawal and business acquisition expenses in the year ended December 31, 2018 was primarily a result of our voluntary recall of our Nellix EVAS System (see further details included in Note 8 to our Consolidated Financial Statements included in Item 8 of this Annual Report on Form 10-K).

Other Expense, Net

(in thousands, except percentages)	Year Ended December 31, 2018	2017	Variance	Percent Change
Other expense, net	$(11,238)	$(25,039)	$13,801	(55.1)%

Other expense, net in the year ended December 31, 2018 consisted mainly of interest expense of $27.7 million and loss on debt extinguishment of $2.3 million, partially offset by favorable changes in the fair values of derivative liabilities of $12.1 million and Nellix contingent consideration of $7.1 million. Other expense, net in the year ended December 31, 2017 consisted mainly of interest expense of $22.1 million and loss on debt extinguishment of $6.5 million, partially offset by a favorable change in the fair value of Nellix contingent consideration of $2.9 million and a foreign currency gain of $0.7 million.

Income Tax (Expense) Benefit

(in thousands, except percentages)	Year Ended December 31, 2018	2017	Variance	Percent Change
Income tax (expense) benefit	$ (284)	$ 459	$ (743)	>100%

Our income tax expense was $0.3 million and our effective tax rate was 0.4% in the year ended December 31, 2018 due to our tax positions in various jurisdictions and the impact of the TCJA. Our income tax benefit was $0.5 million and our effective tax rate was (0.7)% in the year ended December 31, 2017 due to our tax positions in various jurisdictions and the impact of the TCJA. In the years ended December 31, 2018 and 2017, we had legal entities operating in the United States, Italy, New Zealand, Poland, Singapore, and the Netherlands, as well as registered sales branches in certain countries in Europe.

Year Ended December 31, 2017 versus December 31, 2016

Revenue

(in thousands, except percentages)	Year Ended December 31, 2017	2016	Variance	Percent Change
Revenue	$181,157	$192,925	$(11,768)	(6.1)%

United States Sales. Net sales in the United States totaled $123.2 million in the year ended December 31, 2017, a 9.5% decrease from $136.1 million in the year ended December 31, 2016. This decrease was driven by AFX product due to slower than expected customer recapture and sales force attrition, partially offset by strong sales growth for the Ovation System.

International Sales. Net sales in our international regions totaled $57.9 million in the year ended December 31, 2017, a 2.0% increase from $56.8 million in the year ended December 31, 2016. Both the AFX and Ovation Systems posted strong growth, which was offset by a decline in Nellix sales reflecting the narrowed IFU. Our international sales in the year ended December 31, 2017 included a favorable currency impact of approximately $0.4 million when compared to the net sales in the year ended December 31, 2016, which had a 0.8% favorable impact on growth rate, representing a constant currency increase of 1.2%.

Cost of Goods Sold, Gross Profit, and Gross Margin Percentage

(in thousands, except percentages)	Year Ended December 31, 2017	2016	Variance	Percent Change
Cost of goods sold	$59,828	$69,133	$(9,305)	(13.5)%
Gross profit	121,329	123,792	(2,463)	(2.0)%

Gross margin percentage (gross profit as a percent of revenue)	67.0	%	64.2	%	2.8	%

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Gross margin percentage in the year ended December 31, 2017 increased to 67.0% from 64.2% in the year ended December 31, 2016. The year ended December 31, 2016 included a $8.2 million impact of purchase price accounting for inventory acquired in the merger with TriVascular Technologies, Inc. ("TriVascular") (see further details included in Note 13 to our Consolidated Financial Statements included in Item 8 of this Annual Report on Form 10-K). Excluding this impact, cost of goods sold decreased by $1.1 million in the year ended December 31, 2017, as compared to the prior year, driven by lower revenue.

Operating Expenses

	Year Ended December 31,			
(in thousands, except percentages)	2017	2016	Variance	Percent Change
Research and development	$21,019	$32,337	$(11,318)	(35.0)%
Clinical and regulatory affairs	12,952	16,215	(3,263)	(20.1)%
Marketing and sales	92,400	107,759	(15,359)	(14.3)%
General and administrative	35,301	41,044	(5,743)	(14.0)%
Restructuring costs	1,477	11,093	(9,616)	(86.7)%
Contract termination, product withdrawal and business acquisition expenses	—	5,768	(5,768)	(100.0)%
Settlement costs	—	4,650	(4,650)	(100.0)%

Research and development. The $11.3 million decrease in research and development expenses as compared to the prior year was primarily attributable to the timing of project spending and synergies related to the merger with TriVascular.

Clinical and regulatory affairs. The $3.3 million decrease in clinical and regulatory affairs expenses as compared to the prior year was primarily attributable to synergies related to the merger with TriVascular.

Marketing and sales. The $15.4 million decrease in marketing and sales expenses as compared to the prior year was primarily due to synergies related to our merger with TriVascular.

General and administrative. The $5.7 million decrease in general and administrative expenses as compared to the prior year was primarily attributable to a decrease in headcount related to synergies as a result of the merger with TriVascular. The targeted reductions were initiated to improve efficiencies and re-align resources to allow for continued investment in strategic areas and drive growth.

Restructuring costs. The $9.6 million decrease in restructuring costs in the year ended December 31, 2017 was primarily attributable to costs in the year ended December 31, 2016 associated with TriVascular executive change-in-control agreements and severance and retention bonuses resulting from the merger with TriVascular.

Other Expense, Net

	Year Ended December 31,			
(in thousands, except percentages)	2017	2016	Variance	Percent Change
Other expense, net	$(25,039)	$(59,105)	$34,066	(57.6)%

Other expense, net in the year ended December 31, 2017 consisted mainly of interest expense of $22.1 million and loss on debt extinguishment of $6.5 million, partially offset by a favorable change in the fair value of Nellix contingent consideration of $2.9 million and a foreign currency gain of $0.7 million. Other expense, net in the year ended December 31, 2016 included interest expense of $15.8 million, an unfavorable change in fair value of derivative liabilities of $43.8 million and $2.1 million currency remeasurement loss, partially offset by a non-cash benefit of $2.5 million related to the change in the fair value of Nellix contingent consideration.

Income Tax Benefit (Expense)

	Year Ended December 31,			
(in thousands, except percentages)	2017	2016	Variance	Percent Change

Income tax benefit (expense)	$ 459	$ (498)	$ 957	>100%

Our income tax benefit was $0.5 million and our effective tax rate was (0.7)% in the year ended December 31, 2017 due to our tax positions in various jurisdictions and the impact of the TCJA. Our income tax expense was $0.5 million and our effective tax rate was 0.3% in the year ended December 31, 2016 due to our tax positions in various jurisdictions. In the years ended December 31, 2017 and 2016, we had legal entities operating in the United States, Canada, Italy, New Zealand, Poland, Singapore, and the Netherlands, as well as registered sales branches in certain countries in Europe.

Liquidity and Capital Resources

The table below summarizes selected liquidity data and metrics as of December 31, 2018, 2017 and 2016:

	December 31,		
(dollars in thousands)	2018	2017	2016
Cash and cash equivalents	$23,531	$57,991	$26,120
Marketable securities	$—	$—	$20,988
Accounts receivable, net	$20,651	$32,294	$34,430
Total current assets	$78,931	$143,134	$129,845
Total current liabilities	$38,927	$60,630	$44,902
Working capital surplus	$40,004	$82,504	$84,943
Current ratio	2.0	2.4	2.9
Days sales outstanding ("DSO")	55	68	67
Inventory turnover	1.7	1.4	2.0

Year Ended December 31, 2018 versus December 31, 2017

Operating Activities

Cash used in operating activities in the years ended December 31, 2018 and 2017 was $38.6 million and $35.4 million, respectively. Cash used in operating activities in the year ended December 31, 2018 consisted of a net loss of $79.7 million, non-cash expenses of $18.2 million and changes in operating assets and liabilities of $22.9 million. Cash used in operating activities in the year ended December 31, 2017 consisted of a net loss of $66.4 million, non-cash expenses of $32.9 million and changes in operating assets and liabilities of $1.9 million.

In the years ended December 31, 2018 and 2017, our cash collections from customers totaled $168.9 million and $186.8 million, respectively, representing 108% and 103%, respectively, of reported revenue for the same periods.

Investing Activities

Cash (used in) provided by investing activities in the years ended December 31, 2018 and 2017 was $(0.6) million and $19.8 million, respectively. Cash used in investing activities in the year ended December 31, 2018 primarily consisted of purchases of property and equipment. Cash provided by investing activities in the year ended December 31, 2017 consisted of proceeds from the maturities of marketable securities of $21.0 million, partially offset by purchases of property and equipment of $1.2 million.

Financing Activities

Cash provided by financing activities in the years ended December 31, 2018 and 2017 was $3.7 million and $47.2 million, respectively. Cash provided by financing activities in the year ended December 31, 2018 primarily consisted of proceeds of $20.0 million from our common stock offering, $1.8 million from the sale of at-the-market shares and $2.2 million of proceeds from exercise of stock options and sale of common stock under the ESPP, partially offset by a $18.3 million repayment of debt and $1.3 million cash paid for debt extinguishment. Cash provided by financing activities in the year ended December 31, 2017 consisted of $120.0 million of proceeds from issuance of debt and $3.1 million of proceeds from exercise of stock options and sale of common stock under the ESPP, partially offset by a $66.6 million repayment of debt, $6.8 million used to pay deferred financing costs and $2.5 million cash paid for debt extinguishment.

Year Ended December 31, 2017 versus December 31, 2016

Operating Activities

Cash used in operating activities was $35.4 million in the year ended December 31, 2017, as compared to $72.8 million in the prior year. In the year ended December 31, 2017, the decrease in cash usage was primarily due to (i) net loss of $66.4 million, (ii) non-cash stock-based compensation of $11.6 million, (iii) non-cash accretion of interest and amortization of deferred financing costs of $10.2 million, (iv) depreciation and amortization of $9.1 million, (v) a decrease in accounts receivable and other receivables of $4.8 million, (vi) an increase in accrued expenses and other current liabilities of $4.4 million, and (vii) loss on debt extinguishment of $6.5 million. These decreases in cash usage were partially offset by a decrease in accrued payroll of $5.2 million, an increase in inventory expenditures of $3.0 million, a decrease in accounts payable of $1.8 million, and a decrease in prepaid expenses and other current assets of $1.0 million.

In the years ended December 31, 2017 and 2016, our cash collections from customers totaled $186.8 million and $193.9 million, respectively, representing 103% and 101%, respectively, of reported revenue for the same periods.

Investing Activities

Cash provided by investing activities was $19.8 million in the year ended December 31, 2017, as compared to cash used in investing activities of $28.5 million in the prior year. In the year ended December 31, 2017, cash provided by investing activities consisted of $21.0 million of proceeds from maturities of marketable securities, partially offset by $1.2 million used for purchases of property and equipment. Cash used in investing activities in the year ended December 31, 2016 consisted of $60.6 million used for the merger with TriVascular (see Note 13 to our Consolidated Financial Statements included in Item 8 of this Annual Report on Form 10-K), $21.0 million used for purchases of marketable securities and $2.8 million used purchases of property and equipment, partially offset by proceeds from the maturities of marketable securities of $55.9 million.

Financing Activities

Cash provided by financing activities was $47.2 million in the year ended December 31, 2017, as compared to $5.3 million in the prior year. In the year ended December 31, 2017, cash provided by financing activities consisted of $120.0 million of proceeds from issuance of debt and $3.1 million of proceeds from exercise of stock options and sale of common stock under the ESPP, partially offset by a $66.6 million repayment of debt, $6.8 million used to pay deferred financing costs and $2.5 million cash paid for debt extinguishment. Cash provided by financing activities in the year ended December 31, 2016 consisted of proceeds of $6.3 million from exercise of stock options and sale of common stock under the ESPP, partially offset by deferred financing costs of $0.9 million and $0.1 million used to pay minimum tax withholdings on behalf of employees for RSUs.

Credit Arrangements

See Note 6 to our Consolidated Financial Statements included in Item 8 of this Annual Report on Form 10-K for information on our credit arrangements. As of December 31, 2018, we were in compliance with the financial covenants set forth in our credit agreements.

Future Capital Requirements

We believe that the future growth of our business will depend upon our ability to successfully develop new technologies for the treatment of aortic disorders and successfully bring these technologies to market. We expect to incur significant expenditures in completing product development and clinical trials for our products.

The timing and amount of our future capital requirements will depend on many factors, including:

- the need for working capital to support our sales growth;
- the need for additional capital to fund future development programs;
- the need for additional capital to fund our sales force expansion;
- the need for additional capital to fund strategic acquisitions;
- our requirements for additional facility space or manufacturing capacity;
- our requirements for additional information technology infrastructure and systems; and
- adverse outcomes from potential litigation and the cost to defend such litigation.

We believe that our world wide cash resources are adequate to operate our business. We presently have several operating subsidiaries outside of the United States. As of December 31, 2018, these subsidiaries held an aggregate $6.2 million in foreign

bank accounts to fund their local operations. These balances related to undistributed earnings, are deemed by management to be permanently reinvested in the corresponding countries in which our subsidiaries operate. Management has no present or planned intention to repatriate foreign earnings into the United States; however, in the event that we require additional funds in the United States and may have to repatriate any foreign earnings to meet those needs, we would then need to accrue, and ultimately pay, incremental income tax expenses on such "deemed dividends," unless we then have sufficient net operating losses to offset this potential tax liability.

If we require additional financing in the future, it may not be available on commercially reasonable terms, or at all. Even if we are able to obtain financing, it may cause substantial dilution (in the case of an equity financing) or may contain burdensome restrictions on the operation of our business (in the case of debt financing). If we are not able to obtain required financing, we may need to curtail our operations and/or our planned product development.

Contractual Obligations

Contractual obligation payments by year with initial terms in excess of 1 year were as follows as of December 31, 2018:

		Payments due by period					
(in thousands)	Total	2019	2020	2021	2022	2023	Thereafter
Long-term debt obligations	$288,602	$200	$84,600	$45,404	$72,743	$85,655	$ —
Interest on debt obligations	38,503	11,196	11,637	8,128	5,504	2,038	—
Operating lease obligations	33,309	3,807	3,791	3,819	3,871	2,889	15,132
Total	$360,414	$15,203	$100,028	$57,351	$82,118	$90,582	$ 15,132

Long-term debt obligations include interest payable in kind on our term loan facility, a $6.1 million exit fee under our credit facility agreement and remaining fees on our revolving loan facility with affiliates of Deerfield Management Company, L.P. (collectively, "Deerfield"). See Note 6 to our Consolidated Financial Statements for a discussion of long-term debt obligations and Note 8 to our Consolidated Financial Statements for a discussion of operating lease obligations.

Off-Balance Sheet Arrangements

Other than the operating leases described above, we do not have any off-balance sheet arrangements as of December 31, 2018.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

We do not believe that we currently have material exposure to interest rate or foreign currency transaction risks.

Interest rate risk. We are exposed to market risk for changes in interest rates applicable to our credit facility with Deerfield. Any outstanding principal under the credit facility will accrue interest at a rate equal to LIBOR (with a 1% floor) plus 5.50%, payable in cash. The interest rate will accrue on a minimum amount of $9.75 million, whether or not such amount is drawn. As of December 31, 2018, we had no amounts outstanding under our credit facility.

The remainder of our debt, which is comprised of a term loan facility, convertible senior notes and other note payable, bears fixed interest and, therefore, would not be subject to interest rate risk. For a complete summary of our debt, see Note 6 to our Consolidated Financial Statements included in Item 8 of this Annual Report on Form 10-K.

Foreign currency transaction risk. While a majority of our business is denominated in the United States dollar, a portion of our revenue and expenses are denominated in foreign currencies. Fluctuations in the rate of exchange between the United States dollar and the Euro or the British Pound Sterling may affect our results of operations and the period-to-period comparisons of our operating results. Foreign currency transaction gains and losses are caused by transactions denominated in a currency other than our or our respective subsidiaries' functional currency and must be remeasured at each balance sheet date or upon settlement. Realized and unrealized foreign currency exchange gains and losses resulted in approximately $0.7 million of losses in the year ended December 31, 2018, primarily related to intercompany payables and receivables associated with our European operations. We expect to continue to limit our exposure through future settlements.

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Item 8. Financial Statements and Selected Supplementary Data

ENDOLOGIX, INC.
FORM 10-K ANNUAL REPORT
For the Fiscal Year Ended December 31, 2018

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

All other schedules are omitted because the required information is not applicable or the information is presented in the Consolidated Financial Statements or the related notes thereto.

Report of Independent Registered Public Accounting Firm
To the Stockholders and Board of Directors
Endologix, Inc.:
Opinion on the Consolidated Financial Statements
We have audited the accompanying consolidated balance sheets of Endologix, Inc. and subsidiaries (the "Company") as of December 31, 2018 and 2017, the related consolidated statements of operations and comprehensive loss, stockholders' equity, and cash flows for each of the years in the three year period ended December 31, 2018, and the related notes and financial statement schedule of valuation and qualifying accounts (collectively, the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the years in the three year period ended December 31, 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 December 31, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated April 1, 2019 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.
Basis for Opinion
These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated 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 consolidated 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 consolidated 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 consolidated 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 consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ KPMG LLP
We have served as the Company's auditor since 2012.
Irvine, California
April 1, 2019

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors

Endologix, Inc.:

Opinion on Internal Control Over Financial Reporting

We have audited Endologix, Inc. and subsidiaries' (the "Company") internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the consolidated balance sheets of the Company as of December 31, 2018 and 2017, the related consolidated statements of operations and comprehensive loss, stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2018, and the related notes and financial statement schedule of valuation and qualifying accounts (collectively, the "consolidated financial statements"), and our report dated April 1, 2019 expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting appearing under Item 9A. 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 of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included 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/ KPMG LLP

April 1, 2019
Irvine, California

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ENDOLOGIX, INC.
CONSOLIDATED BALANCE SHEETS
(In thousands, except share and par value amounts)

	December 31,	
	2018	2017
ASSETS		
Current assets:		
Cash and cash equivalents	$23,531	$57,991
Restricted cash	1,200	2,608
Accounts receivable, net of allowance for doubtful accounts of $802 and $470, respectively	20,651	32,294
Other receivables	329	418
Inventories	30,399	45,153
Prepaid expenses and other current assets	2,821	4,670
Total current assets	78,931	143,134
Property and equipment, net	16,033	19,212
Goodwill	120,848	120,927
Other intangible assets, net	76,163	80,403
Deposits and other assets	1,095	1,371
Total assets	$293,070	$365,047
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$10,986	$12,351
Accrued payroll	14,627	15,054
Accrued expenses and other current liabilities	13,314	16,002
Current portion of debt	—	17,202
Revolving line of credit	—	21
Total current liabilities	38,927	60,630
Deferred income taxes	150	201
Deferred rent	8,065	7,724
Derivative liabilities	4,012	—
Other liabilities	1,992	3,877
Contingently issuable common stock	2,200	9,300
Debt	198,078	208,253
Total liabilities	253,424	289,985
Commitments and contingencies		
Stockholders' equity:		
Convertible preferred stock, $0.001 par value, 5,000,000 shares authorized, no shares issued and outstanding	—	—
Common stock, $0.001 par value, 170,000,000 and 135,000,000 shares authorized, respectively, 10,387,926 and 8,385,583 shares issued, respectively, 10,345,367 and 8,364,359 shares outstanding, respectively	10	8
Treasury stock, at cost, 42,559 and 21,224 shares, respectively	(4,026)	(2,942)
Additional paid-in capital	640,789	594,662
Accumulated deficit	(599,715)	(520,001)
Accumulated other comprehensive income	2,588	3,335
Total stockholders' equity	39,646	75,062
Total liabilities and stockholders' equity	$293,070	$365,047

See accompanying notes to these consolidated financial statements.

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ENDOLOGIX, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(In thousands, except per share amounts)

	Year Ended December 31,		
	2018	2017	2016
Revenue	$156,473	$181,157	$192,925
Cost of goods sold	64,550	59,828	69,133
Gross profit	91,923	121,329	123,792
Operating expenses:			
Research and development	20,793	21,019	32,337
Clinical and regulatory affairs	13,851	12,952	16,215
Marketing and sales	76,855	92,400	107,759
General and administrative	43,477	35,301	41,044
Restructuring costs	3,270	1,477	11,093
Contract termination, product withdrawal and business acquisition expenses	1,869	—	5,768
Settlement costs	—	—	4,650
Total operating expenses	160,115	163,149	218,866
Loss from operations	(68,192)	(41,820)	(95,074)
Other income (expense):			
Interest income	10	83	228
Interest expense	(27,658)	(22,064)	(15,841)
Change in fair value of contingent consideration related to acquisition	7,100	2,900	2,500
Loss on debt extinguishment	(2,270)	(6,512)	—
Change in fair value of derivative liabilities	12,097	—	(43,831)
Other (expense) income, net	(517)	554	(2,161)
Total other expense, net	(11,238)	(25,039)	(59,105)
Net loss before income taxes	(79,430)	(66,859)	(154,179)
Income tax (expense) benefit	(284)	459	(498)
Net loss	$(79,714)	$(66,400)	$(154,677)
Comprehensive loss, net of taxes:			
Net loss	$(79,714)	$(66,400)	$(154,677)
Other comprehensive (loss) income on foreign currency translation	(747)	1,847	978
Comprehensive loss	$(80,461)	$(64,553)	$(153,699)
Basic and diluted net loss per share	$(9.07)	$(7.97)	$(19.10)
Shares used in computing basic and diluted loss per share	8,790	8,333	8,098

See accompanying notes to these consolidated financial statements.

ENDOLOGIX, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In thousands)

	Common Stock		Additional Paid-In Capital	Accumulated Deficit	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity
	Issued Shares	Par Value					
Balance at December 31, 2015	6,824	$ 7	$404,523	$ (298,924)	$(2,809)	$ 510	$ 103,307
Exercise of common stock options	52	—	3,129	—	—	—	3,129
Employee stock purchase plan	39	—	3,216	—	—	—	3,216
Issuance of common stock	1,359	1	100,811	—	—	—	100,812
Treasury stock purchased	1	—	—	—	(133)	—	(133)
Stock-based compensation expense	—	—	8,541	—	—	—	8,541
Issuance of restricted stock	24	—	—	—	—	—	—
Restricted stock expense	—	—	3,715	—	—	—	3,715
Non-employee restricted stock expense	—	—	30	—	—	—	30
Equity conversion option	—	—	43,875	—	—	—	43,875
Net loss	—	—	—	(154,677)	—	—	(154,677)
Other comprehensive income	—	—	—	—	—	978	978
Balance at December 31, 2016	8,299	8	567,840	(453,601)	(2,942)	1,488	112,793
Exercise of common stock options	13	—	546	—	—	—	546
Employee stock purchase plan	45	—	2,519	—	—	—	2,519
Stock-based compensation expense	—	—	8,538	—	—	—	8,538
Issuance of restricted stock	29	—	—	—	—	—	—
Restricted stock expense	—	—	3,027	—	—	—	3,027
Non-employee restricted stock expense	—	—	79	—	—	—	79
Equity conversion option	—	—	(2,235)	—	—	—	(2,235)
Deerfield warrants	—	—	14,704	—	—	—	14,704
Debt issuance costs allocated to equity	—	—	(356)	—	—	—	(356)
Net loss	—	—	—	(66,400)	—	—	(66,400)
Other comprehensive income	—	—	—	—	—	1,847	1,847
Balance at December 31, 2017	8,386	8	594,662	(520,001)	(2,942)	3,335	75,062
Exercise of common stock options, net of shares withheld to cover exercise price	44	—	1,586	—	—	—	1,586
Employee stock purchase plan	61	—	1,346	—	—	—	1,346
Issuance of common stock	1,841	2	21,827	—	—	—	21,829
Treasury stock purchased	21	—	—	—	(1,084)	—	(1,084)
Stock-based compensation expense	—	—	8,404	—	—	—	8,404
Issuance of restricted stock	35	—	—	—	—	—	—
Restricted stock expense	—	—	2,604	—	—	—	2,604
Non-employee restricted stock expense	—	—	22	—	—	—	22
Deerfield warrants	—	—	10,396	—	—	—	10,396
Debt issuance costs allocated to equity	—	—	(58)	—	—	—	(58)
Net loss	—	—	—	(79,714)	—	—	(79,714)
Other comprehensive loss	—	—	—	—	—	(747)	(747)
Balance at December 31, 2018	10,388	$ 10	$640,789	$ (599,715)	$(4,026)	$ 2,588	$ 39,646

See accompanying notes to these consolidated financial statements.

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ENDOLOGIX, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Year Ended December 31,		
	2018	2017	2016
Cash flows from operating activities:			
Net loss	$(79,714)	$(66,400)	$(154,677)
Adjustments to reconcile net loss to net cash used in operating activities:			
Deferred income taxes	(57)	(696)	—
Bad debt expense	552	(235)	916
Depreciation and amortization	7,982	9,111	9,149
Stock-based compensation	11,030	11,644	12,286
Change in fair value of derivative liabilities	(12,097)	—	43,831
Change in fair value of contingent consideration related to acquisition	(7,100)	(2,900)	(2,500)
Accretion of interest and amortization of deferred financing costs	11,801	10,165	9,539
Accretion on marketable securities	—	—	(87)
Payable in kind interest expense on term loan facility	3,084	—	—
Loss on debt extinguishment	2,270	6,512	—
Loss on disposal of assets	64	—	123
Non-cash foreign exchange loss (gain)	711	(678)	2,112
Changes in operating assets and liabilities:			
Accounts receivable and other receivables	10,913	4,771	(2,911)
Inventories	13,805	(3,035)	3,540
Prepaid expenses and other current assets	1,693	(1,034)	1,070
Accounts payable	(1,350)	(1,826)	(5,152)
Accrued payroll	(350)	(5,176)	7,079
Accrued expenses and other liabilities	(1,850)	4,374	2,875
Net cash used in operating activities	(38,613)	(35,403)	(72,807)
Cash flows from investing activities:			
Purchases of marketable securities	—	—	(20,976)
Maturities of marketable securities	—	21,000	55,850
Purchases of property and equipment	(602)	(1,170)	(2,796)
Acquisition of business, net of cash acquired of $24,012	—	—	(60,622)
Net cash (used in) provided by investing activities	(602)	19,830	(28,544)
Cash flows from financing activities:			
Cash paid for debt extinguishment	(1,310)	(2,515)	—
Net (payments) proceeds from revolving line of credit	(21)	21	—
Deferred financing costs	(391)	(6,755)	(918)
Proceeds from sale of common stock under employee stock purchase plan	1,346	2,519	3,216
Proceeds from common stock offering	20,000	—	—
Proceeds from the sale of at-the-market shares	1,829	—	—
Proceeds from exercise of stock options	892	546	3,129
Proceeds from issuance of debt	—	120,000	—
Repayment of debt	(18,278)	(66,613)	—
Minimum tax withholding paid on behalf of employees for stock-based compensation	(390)	—	(133)
Net cash provided by financing activities	3,677	47,203	5,294
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(330)	848	(375)
Net (decrease) increase in cash, cash equivalents and restricted cash	(35,868)	32,478	(96,432)

Cash, cash equivalents and restricted cash, beginning of year	60,599	28,121	124,553
Cash, cash equivalents and restricted cash, end of year	$24,731	$60,599	$28,121
Reconciliation of cash, cash equivalents and restricted cash to the Consolidated Balance Sheets:			
Cash and cash equivalents	$23,531	$57,991	$26,120
Restricted cash	1,200	2,608	2,001
Total cash, cash equivalents and restricted cash	$24,731	$60,599	$28,121

See accompanying notes to these consolidated financial statements.

ENDOLOGIX, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)
(In thousands)

	Year Ended December 31,		
	2018	2017	2016
Supplemental disclosure of cash flow information:			
Cash paid for interest	$12,499	$9,836	$6,262
Cash paid for income taxes	272	681	208
Non-cash investing and financing activities:			
Fair value of warrants issued for business acquisition	$—	$—	$44
Fair value of common stock issued for business acquisition	—	—	100,812
Acquisition of property and equipment included in accounts payable	53	—	—
Fair value of embedded derivative issued in connection with loan agreements (Note 6)	15,655	—	—
Fair value of warrants issued in connection with loan agreements (Note 6)	10,396	14,704	—
Conversion of refund to note payable (Note 6)	4,281	—	—

See accompanying notes to these consolidated financial statements.

ENDOLOGIX, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(all tabular amounts presented in thousands, except share, per share and per unit data, and number of years)

1. Description of Business, Basis of Presentation and Operating Segment

(a)Description of Business

Endologix®, Inc. (the "Company") is a Delaware corporation with corporate headquarters located in Irvine, California and manufacturing facilities located in Irvine, California and Santa Rosa, California. The Company develops, manufactures, markets and sells innovative medical devices for the treatment of aortic disorders. The Company's products are intended for the minimally-invasive endovascular treatment of abdominal aortic aneurysms ("AAA"). The Company's AAA products are built on one of two platforms: (i) traditional minimally-invasive endovascular aneurysm repair ("EVAR"); or (ii) endovascular aneurysm sealing ("EVAS"), the Company's innovative solution for sealing the aneurysm sac while maintaining blood flow. The Company's current EVAR products include the AFX® Endovascular AAA System, the VELA® Proximal Endograft and the Ovation® Abdominal Stent Graft System. The Company's current EVAS product is the Nellix® Endovascular Aneurysm Sealing System (the "Nellix EVAS System"). The Company derives all of its reported revenue from sales of its EVAR and EVAS products (including extensions and accessories) to hospitals and third party distributors.

(b) Basis of Presentation

The accompanying consolidated financial statements in this Annual Report on Form 10-K have been prepared in accordance with generally accepted accounting principles in the United States ("GAAP") and with the rules and regulations of the United States Securities and Exchange Commission ("SEC"). These financial statements include the financial position, results of operations and cash flows of the Company, including its subsidiaries, all of which are wholly-owned. All inter-company accounts and transactions have been eliminated in consolidation. For the years ended December 31, 2018, 2017 and 2016, there were no related party transactions.

The Company adopted Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2014-15, Presentation of Financial Statements - (Subtopic 205-40) effective December 31, 2016, which requires the Company to make certain disclosures if it concludes that there is substantial doubt about the entity's ability to continue as a going concern within 12 months from the date of the issuance of these financial statements. The Company has a history of recurring losses from operations and a net capital deficiency. The Company believes that its existing liquidity will not be sufficient to meet anticipated cash needs for at least the next 12 months from the issuance date of these financial statements.

The Company has taken a number of actions to continue to support its operations and meet its obligations. The Company has entered into certain material agreements to consummate an equity financing and debt restructuring (see Note 15 for additional details). If the Company consummates these transactions on substantially the terms as described below, including generating $52.15 million in cash from the sale of common stock, the Company believes that the existing liquidity will be sufficient to meet anticipated cash needs for at least the next 12 months from the date of the issuance of these financial statements.

The consolidated financial statements included herein have been prepared on a going concern basis, which contemplates continuity of operations and the realization of assets and the repayment of liabilities in the ordinary course of business. Management evaluated the significance of the Company's operating loss and determined that the Company's current operating plan and sources of capital would be sufficient to alleviate concerns about the Company's ability to continue as a going concern.

(c) Operating Segment

The Company has one operating and reporting segment that is focused exclusively on the development, manufacture, marketing and sale of EVAR and EVAS products for the treatment of aortic disorders. For the year ended December 31, 2018, all of the Company's revenue and related expenses were solely attributable to these activities. Substantially all of the Company's long-lived assets are located in the United States.

(d) Reverse Stock Split

At a special meeting of stockholders held on February 22, 2019, the Company's stockholders approved a proposal to amend the Amended and Restated Certificate of Incorporation, as amended, to effect a reverse stock split of the Company's issued and outstanding common stock at a ratio not less than 1-for-5 and not greater than 1-for-10 (inclusive), with the exact ratio to be set as a whole number within that range at the discretion of the board of directors before February 22, 2020 without further approval or authorization of our stockholders. On February 26, 2019, the Company's board of directors approved the

ENDOLOGIX, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
(all tabular amounts presented in thousands, except share, per share and per unit data, and number of years)

reverse stock split at a ratio of 1-for-10. On March 5, 2019, the Company filed a Certificate of Amendment of Amended and Restated Certificate of Incorporation, as Amended (the "Certificate of Amendment"), with the Secretary of State of the State of Delaware to effect the reverse stock split. Unless stated otherwise, all share and per share amounts in this Annual Report on Form 10-K have been retroactively adjusted to reflect the reverse stock split.

2. Summary of Significant Accounting Policies

(i) Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, revenue and expenses, and the related disclosure of contingent assets and liabilities as of the date of the financial statements and the reported amounts of revenue and expenses during the periods presented. Management evaluates its estimates on an ongoing basis, including those related to: (i) the collectibility of customer accounts; (ii) whether the cost of inventories can be recovered; (iii) the value of goodwill and intangible assets; (iv) the realization of tax assets and estimates of tax liabilities; (v) the likelihood of payment and the value of contingent liabilities; and (vi) the potential outcome of litigation. Such estimates are based on management's judgment which takes into account historical experience and various assumptions. Nonetheless, actual results may differ from management's estimates.

(ii) Cash and Cash Equivalents

The Company considers all highly liquid investments that are readily convertible into cash and have a maturity of 3 months or less at the time of purchase to be cash equivalents. The cost of these investments approximates fair value.

(iii) Restricted Cash

The Company entered into a corporate credit card agreement whereby the Company was required to maintain a $1.2 million deposit in favor of the credit card issuer. The deposit account related to these credit cards was presented as restricted cash on the Company's Consolidated Balance Sheets.

(iv) Accounts Receivable

Trade accounts receivable are recorded at the invoiced amount, inclusive of applicable value-added tax ("VAT"), and do not bear interest. Revenue is recorded net of VAT. The allowance for doubtful accounts is management's best estimate of the amount of probable credit losses in existing accounts receivable. Account balances are charged off against the allowance after appropriate collection efforts are exhausted.

(v) Inventories

The Company values its inventory at the lower of the actual cost to purchase or manufacture the inventory or net realizable value for such inventory. Cost is determined using the first-in, first-out method. The Company regularly reviews inventory quantities in process and on-hand and, when appropriate, records a provision for obsolete and excess inventory. The provision is based on actual loss experience and a forecast of product demand compared to its remaining shelf life.

ENDOLOGIX, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
(all tabular amounts presented in thousands, except share, per share and per unit data, and number of years)

(vi) Property and Equipment

Property and equipment are stated at cost and depreciated on a straight-line basis over the following estimated useful lives:

Property Class	Useful Life
Office furniture	7 years
Computer hardware	3 years
Computer software	3-8 years
Production equipment and molds	3-7 years
Leasehold improvements	Shorter of expected useful life or remaining term of lease

Upon the sale or disposition of property and equipment, any gain or loss is included in the Consolidated Statements of Operations and Comprehensive Loss. Property and equipment are tested for impairment only when impairment indicators are present.

(vii) Goodwill and Intangible Assets

Intangible assets with definite lives are amortized over their estimated useful lives using a method that reflects the pattern over which the economic benefit is expected to be realized.

In-process research and development is amortized over its useful life upon commencement of commercial sales.

Goodwill and other intangible assets with indefinite lives are not subject to amortization but are tested for impairment annually or whenever events or changes in business circumstances suggest the potential of an impairment. The evaluation of indefinite-lived intangible assets for impairment allows for a qualitative assessment to be performed. In performing its qualitative assessment, the Company considers relevant events and conditions including, but not limited to: macroeconomic trends, industry and market conditions, overall financial performance, cost factors, company-specific events, legal and regulatory factors and the Company's market capitalization. The Company completed its annual impairment test of indefinite-lived intangible assets as of June 30, 2018, with no resulting impairment.

The Company completed its annual test for impairment of goodwill as of June 30, 2018, with no resulting impairment, as its market capitalization was in substantial excess of the value of its total stockholders' equity (the Company has one reporting unit for purposes of its goodwill impairment test).

Finite-lived intangible assets are tested for impairment only when impairment indicators are present. The Company's impairment reviews require significant estimates about fair value, including estimates of future cash flows, selection of appropriate discount rates and estimates of long-term growth rates.

(viii) Fair Value Measurements

When determining the fair value measurements for assets and liabilities required or permitted to be recorded at 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, such as inherent risk, transfer restrictions and risk of nonperformance. The Company uses the following three levels of inputs in determining the fair value of the Company's assets and liabilities, focusing on the most observable inputs when available:

- Level 1 — Quoted prices in active markets for identical assets or liabilities.
- Level 2 — Observable inputs other than Level 1 prices such as: quoted prices for similar assets or liabilities; quoted prices in markets with insufficient volume or infrequent transactions (less active markets); or model-derived valuations in which all significant inputs are observable or can be derived principally from or corroborated by observable market data for substantially the full term of the assets or liabilities.
- Level 3 — Unobservable inputs to the valuation methodology that are significant to the measurement of fair value of assets or liabilities.

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To the extent that the valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. In certain cases, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, for financial statement disclosure purposes, the level in the fair value hierarchy within which the fair value measurement is categorized is based on the lowest level input that is significant to the fair value measurement.

(ix) Continent Consideration for Business Acquisition

The Company determined the fair value of contingently issuable common stock on the date of the Nellix, Inc. ("Nellix") acquisition (see Note 9) using a probability-based income approach with an appropriate discount rate (determined using both Level 1 and Level 3 inputs). Changes in the fair value of the contingently issuable common stock are determined at each period end and are recorded in the other income (expense), net line item of the Consolidated Statements of Operations and Comprehensive Loss, and the current and non-current liabilities line items of the Consolidated Balance Sheets.

(x) Litigation Accruals

From time to time the Company is involved in various claims and legal proceedings of a nature considered normal and incidental to its business. These matters may include product liability, intellectual property, employment and other general claims. The Company accrues for contingent liabilities when it is probable that a liability has been incurred and the amount can be reasonably estimated. The accruals are adjusted periodically as assessments change or as additional information becomes available.

(xi) Business Combinations

In accordance with GAAP, the Company records the assets acquired and the liabilities assumed in an acquired business at their estimated fair values on the date of acquisition. The difference between the purchase price amount and the net fair value of assets acquired and liabilities assumed is recognized as goodwill if it exceeds the estimated fair value and as a bargain purchase gain if it is below the estimated fair value. Determining fair value of identifiable assets, particularly intangible assets, liabilities acquired and contingent obligations assumed requires management to make estimates. In certain circumstances, the allocations of the purchase price are based upon preliminary estimates and assumptions and are subject to revision when the Company receives final information, including appraisals and other analyses. Accordingly, the measurement period for such purchase price allocations will end when the information, or the facts and circumstances, becomes available, but will not exceed 12 months. The Company will recognize measurement-period adjustments during the period of resolution, including the effect on earnings of any amounts that would have been recorded in previous periods if the accounting had been completed at the acquisition date.

Goodwill and intangible assets often represent a significant portion of the assets acquired in a business combination. The Company recognizes the fair value of an acquired intangible asset apart from goodwill whenever the intangible asset arises from contractual or other legal rights, or when it can be separated or divided from the acquired entity and sold, transferred, licensed, rented or exchanged, either individually or in combination with a related contract, asset or liability. Intangible assets consist primarily of technology, customer relationships, trade name and trademarks acquired in business combinations, and in-process research and development ("IPR&D"). The Company generally assesses the estimated fair values of acquired intangible assets using a combination of valuation techniques. To estimate fair value, the Company is required to make certain estimates and assumptions, including future economic and market conditions, revenue growth, market share, operating costs and margins, and risk-adjusted discount rates. Management's estimates require significant judgment and are based on historical data, various internal estimates and external sources. The Company's assessment of IPR&D also includes consideration of the risk that the projects may not achieve technological feasibility.

(xii) Revenue Recognition

The Company measures revenue based on consideration specified in contracts with customers: hospitals and distributors. The Company excludes any amounts related to taxes assessed by governmental authorities from this

revenue measurement and reduces revenue by any sales incentives offered by the Company to its customers. The Company recognizes revenue when it satisfies a performance obligation by transferring control of products to customers.

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Specifically, the Company recognizes revenue when all of the following criteria are met:
- A contract has been identified with the customer;
- The performance obligations have been identified;
- The transaction price has been determined and allocated to the respective performance obligations; and
- The performance obligations have been satisfied.

Respective performance obligations are satisfied at a point in time for sales made to both hospitals and distributors. Payment terms with customers range from 30 to 180 days which reflects days from the date the Company satisfies the performance obligations.

For implant-based sales, the Company recognizes revenue when the AAA products are utilized in a procedure or implanted in a patient. For shipment-based sales, the Company recognizes revenue when control over a product has transferred to the customer, which is typically at the time of shipment, without a right of return.

The Company provides certain sales incentives to customers for meeting certain purchase thresholds and, accordingly, the transaction price is reduced by the Company's best estimate of this variable consideration. The Company estimates this variable consideration through the most-likely amount method.

(xiii) Stock-based Compensation

The Company values stock-based awards, including stock options, restricted stock awards ("RSAs") and restricted stock units ("RSUs"), as of the date of grant. The fair value of stock options is estimated at the date of grant using the Black-Scholes option-pricing model. The fair value of RSAs and RSUs is based on the closing market price of the Company's common stock on the grant date.

The Company recognizes stock-based compensation expense (net of estimated forfeitures) using the straight-line method over the requisite or implicit service period, as applicable. Forfeitures of employee awards are estimated at the time of grant, and the forfeiture assumption is periodically adjusted for actual employee vesting behavior.

The Company uses the Black-Scholes option-pricing model, in combination with the discounted employee price, in determining the value of expense related to our Amended and Restated 2006 Employee Stock Purchase Plan, as amended (the "ESPP") to be recognized during each offering period.

(xiv) Shipping Costs

Shipping and handling costs billed to customers are reported within revenue, with the corresponding costs within cost of goods sold. In addition, any shipping and handling costs related to outbound freight after control over a product has transferred to a customer are accounted for as fulfillment costs and are included in cost of goods sold.

(xv) Foreign Currency Transactions

The assets and liabilities of the Company's foreign subsidiaries are translated using the exchange rates at the balance sheet date. The income and expense items of these subsidiaries are translated using average monthly exchange rates. Gains and losses resulting from foreign currency transactions, which are denominated in a currency other than the respective entity's functional currency are included in other income (expense), net. Foreign currency translation adjustments between the respective entity's functional currency and the United States dollar are included in accumulated other comprehensive income (loss). There were no items reclassified out of accumulated other comprehensive income (loss) in the years ended December 31, 2018, 2017 and 2016.

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(xvi) Income Taxes

The Company records the estimated future tax effects of temporary differences between the tax bases of assets and liabilities and amounts reported in the financial statements, as well as operating losses and tax credit carry forwards. The Company has recorded a valuation allowance to substantially reduce its net deferred tax assets, because the Company believes that, based upon a number of factors, it is more-likely-than-not that substantially all of the deferred tax assets will not be realized. If the Company was to determine that it would be able to realize additional deferred tax assets in the future, an adjustment to the valuation allowance on its deferred tax assets would increase net income in the period such determination was made. In the event that the Company was assessed interest and/or penalties from taxing authorities, such amounts would be included in income tax benefit (expense) in the period the notice of such interest and/or penalties was received.

(xvii) Net Loss Per Share

Net loss per common share is computed using the weighted average number of common shares outstanding during the periods presented.

(xviii) Research and Development Costs

Research and development costs are expensed as incurred.

(xix) Product Warranty

Within 6 months of shipment, certain customers may request replacement of products they receive that do not meet product specifications. No other warranties are offered. The Company contractually disclaims responsibility for any damages associated with a physician’s use of its EVAR or EVAS products. Historically, the Company has not experienced a significant amount of costs associated with its warranty policy.

(xx) Reclassifications

Certain amounts in prior periods have been reclassified to conform to current period presentation. See the “Recent Accounting Pronouncements” section below for details.

(xxi) Recently Adopted Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board (the “FASB”) issued Accounting Standards Update (“ASU”) No. 2014-09, “Revenue from Contracts with Customers” (the “new revenue standard”), which requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. The new revenue standard replaced most existing revenue recognition guidance under GAAP when it became effective for the Company on January 1, 2018. The new revenue standard permits the use of either the full retrospective or modified retrospective transition method; these methods may be applied retrospectively to each prior period presented or retrospectively with the cumulative effect recognized as of the date of initial application. The Company adopted the new revenue standard on January 1, 2018 utilizing the modified retrospective transition method. The new revenue standard has been applied to all contracts at the date of initial application. The Company did not record a cumulative adjustment to the opening balance of retained earnings as of January 1, 2018. See the above “Revenue Recognition” section and Note 7 for additional disclosures related to this standard.

In August 2016, the FASB issued ASU No. 2016-15, “Statement of Cash Flows – Classification of Certain Cash Receipts and Cash Payments.” ASU No. 2016-15 provides guidance on the presentation and classification of specific cash flow items to improve consistency within the statement of cash flows. The Company retroactively adopted this new accounting guidance in the year ended December 31, 2018. As a result of this new accounting guidance cash payments for debt extinguishment costs were classified as cash outflows for financing activities instead of operating activities. Pursuant to ASU No. 2016-15, the Company reclassified $2.5 million in cash paid in the year ended December 31, 2017 relating to the termination of its revolving loan facility with MidCap Financial Trust (“MidCap”) from cash flows used in operating activities to cash flows used in financing activities.

In October 2016, the FASB issued ASU No. 2016-16, “Intra-Entity Transfers of Assets Other Than Inventory,” which requires an entity to immediately recognize the tax consequences of an intercompany transfer other than inventory. The Company assessed the impact that this guidance will have on its consolidated financial statements and noted that

a cumulative-effect adjustment was not necessary in the first quarter of 2018, the period of adoption.

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In November 2016, the FASB issued ASU No. 2016-18, "Restricted Cash," which was intended to reduce the diversity in the classification and presentation of changes in restricted cash in the statement of cash flows, by requiring entities to combine the changes in cash, cash equivalents and restricted cash in one line item. As a result, entities will no longer present transfers between cash, cash equivalents and restricted cash in the statement of cash flows. In addition, if more than one line item is recorded on the balance sheet for cash, cash equivalents and restricted cash, a reconciliation between the statement of cash flows and balance sheet is required. The Company retroactively adopted ASU No. 2016-18 in the year ended December 31, 2018. Because ASU No. 2016-18 is to be applied retrospectively to each period presented, "net cash used in operating activities" in the Company's Consolidated Statements of Cash Flows for the years ended December 31, 2017 and 2016 now omits the change in restricted cash as previously reported for those periods, and that change is now included within "net (decrease) increase in cash, cash equivalents and restricted cash" in order to conform to the current period's presentation.

In January 2017, the FASB issued ASU No. 2017-04, "Intangibles – Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment." ASU No. 2017-04 changes the procedural steps in applying the goodwill impairment test. A goodwill impairment will now be the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying amount of goodwill. The guidance is effective prospectively for annual and interim periods beginning after December 15, 2019, with early adoption permitted. As this standard is prospective in nature, the impact to the Company's consolidated financial statements as a result of not performing the second step to measure the amount of any potential goodwill impairment will depend on various factors. However, the elimination of the second step will reduce the complexity and cost of the subsequent measurement of goodwill. The Company early-adopted ASU No. 2017-04 on a prospective basis in the year ended December 31, 2018, which did not have any impact on the Company's consolidated financial statements.

In May 2017, the FASB issued ASU No. 2017-09, "Compensation – Stock Compensation: Scope of Modification Accounting," which clarifies and aims to reduce the cost and complexity when applying the stock compensation modification accounting guidance. The amendments in this update provide guidance about which changes to the terms or conditions of a share-based payment award require an entity to apply modification accounting. The Company prospectively adopted this accounting update in the year ended December 31, 2018, which did not result in any change to its consolidated financial statements.

3. Balance Sheet Account Detail

(a) Property and Equipment

Property and equipment consisted of the following:

	December 31,	
	2018	2017
Production equipment, molds and office furniture	$11,854	$12,118
Computer hardware and software	8,235	8,115
Leasehold improvements	15,535	15,499
Construction in progress (software and related implementation, production equipment and leasehold improvements)	993	743
Property and equipment, at cost	36,617	36,475
Accumulated depreciation	(20,584)	(17,263)
Property and equipment, net	$16,033	$19,212

Depreciation expense for property and equipment for the years ended December 31, 2018, 2017 and 2016 was $3.7 million, $5.0 million, and $5.3 million, respectively.

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(b) Inventories

Inventories consisted of the following:

	December 31,	
	2018	2017
Raw materials	$4,636	$12,226
Work-in-process	6,401	7,736
Finished goods	19,362	25,191
Inventories	$30,399	$45,153

(c) Goodwill and Other Intangible Assets

The change in the carrying amount of goodwill for the year ended December 31, 2018 was as follows:

Balance at December 31, 2017	$120,927
Foreign currency translation adjustment	(79)
Balance at December 31, 2018	$120,848

Other intangible assets consisted of the following:

		December 31, 2018			December 31, 2017		
	Estimated Useful Life (in years)	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Indefinite-lived intangible assets:							
Trademarks and trade names	N/A	$2,708	N/A	$2,708	$2,708	N/A	$2,708
In-process research and development	N/A	11,200	N/A	11,200	11,200	N/A	11,200
Total indefinite-lived intangible assets		13,908		13,908	13,908		13,908
Finite-lived intangible assets:							
Developed technology	11-13	67,600	$ (10,657)	56,943	67,600	$ (7,167)	60,433
Customer relationships	10	7,500	(2,188)	5,312	7,500	(1,438)	6,062
Total finite-lived intangible assets		75,100	(12,845)	62,255	75,100	(8,605)	66,495
Other intangible assets, net		$89,008	$ (12,845)	$76,163	$89,008	$ (8,605)	$80,403

Amortization expense for intangible assets for the years ended December 31, 2018, 2017 and 2016 was $4.2 million, $4.1 million and $3.8 million, respectively.

Estimated amortization expense for the 5 succeeding years and thereafter is as follows:

2019	$3,446
2020	3,683
2021	4,283
2022	5,628
2023	7,780
Thereafter	37,435
Total	$62,255

(d) Fair Value Measurements

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The following fair value hierarchy table presents information about each major category of the Company's assets and liabilities measured at fair value on a recurring basis as of December 31, 2018 and 2017:

		December 31, 2018				December 31, 2017			
		Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Financial liabilities:									
Contingently issuable common stock	(a)	$—	$—	$2,200	$2,200	$—	$—	$9,300	$9,300
Derivative liabilities	(b)	—	—	4,012	4,012	—	—	—	—
Total financial liabilities		$—	$—	$6,212	$6,212	$—	$—	$9,300	$9,300

(a) See Note 9 for additional details.
(b) See Note 6 for additional details.

Changes in the fair value of the Company's Level 3 liabilities were as follows:

	Contingently issuable common stock (a)	Derivative liabilities (b)
Balance at December 31, 2017	$ 9,300	$ —
Additions	—	16,109
Fair value adjustment	(7,100)	(12,097)
Balance at December 31, 2018	$ 2,200	$ 4,012

(a) See Note 9 for additional details.
(b) See Note 6 for additional details.

There were no transfers of financial assets or liabilities into or out of Level 3 in the years ended December 31, 2018 and 2017.

Financial Instruments Not Recorded at Fair Value on a Recurring Basis

The table below summarizes the carrying and fair values of the Company's long-term debt:

	December 31, 2018		December 31, 2017	
	Carrying value	Fair value	Carrying value	Fair value
Term loan facility	$117,880	$116,916	$102,008	$101,948
Revolving loan facility	—	—	21	21
Convertible senior notes	75,917	50,489	123,447	131,201
Other debt	4,281	1,221	—	—
	$198,078	$168,626	$225,476	$233,170

The fair values of the Company's term loan facility and other debt are determined using Level 3 inputs, while the fair value of the Company's convertible senior notes is determined using Level 2 inputs. See Note 6 for further details. The carrying value of the Company's revolving loan facility approximates fair value.

4. Stock-based Compensation

2015 Stock Incentive Plan

Under the Company's stock-based compensation plan which is governed by its Amended and Restated 2015 Stock Incentive Plan, as amended (the "2015 Plan"), the Company may grant incentive stock options, non-qualified stock options, RSAs, RSUs and stock appreciation rights. The maximum number of shares of the Company's common stock available for issuance under the 2015 Plan is 1,630,000 shares. As of December 31, 2018, 230,847 shares were available for grant. It is the

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Company's policy that before stock is issued through the exercise of stock options, the Company must first receive all required cash payment for such shares. The stock issuable under the 2015 Plan must be shares of authorized new unissued shares.

Stock-based awards are governed by agreements between the Company and the recipients. Incentive stock options and non-qualified stock options may be granted under the 2015 Plan at an exercise price of not less than 100% of the closing fair market value of the Company's common stock on the respective date of grant. The grant date is generally the date of approval of the grant. The Company's standard stock-based awards vest as to 1/3 of the shares underlying the award on the 1st anniversary of the date of grant, or for new hires, the 1st anniversary of their initial date of employment with the Company. Awards vest monthly thereafter on a straight-line basis over 2 years. All stock options have 10-year terms.

2017 Inducement Stock Incentive Plan

On October 27, 2017, the Company adopted the 2017 Inducement Stock Incentive Plan, as amended (the "2017 Inducement Plan"). The 2017 Inducement Plan provides for the grant of equity-based awards in the form of non-qualified stock options, RSAs, RSUs, stock appreciation rights, performance shares and performance units. In accordance with Nasdaq Listing Rules, awards under the 2017 Inducement Plan may only be made to an employee who has not previously been an employee of the Company or a member of the Company's board of directors (the "Board"), or an employee or member of the Board of any subsidiary of the Company, or following a bona fide period of non-employment with the Company or any subsidiary of the Company, if he or she is granted such award in connection with his or her commencement of employment with the Company or a subsidiary of the Company and such grant is an inducement material to his or her entering into employment with the Company or such subsidiary. The maximum number of shares of the Company's common stock available for issuance under the 2017 Inducement Plan is 400,000 shares. As of December 31, 2018, 235,300 shares were available for grant.

Employee Stock Purchase Plan

Under the terms of the ESPP, eligible employees can purchase common stock, through payroll deductions, at a purchase price equal to the closing price of the Company's common stock on the first or last day of the offering period (whichever is less) minus a 15% discount. As of December 31, 2018, 38,396 shares were available for grant.

The table below summarizes the stock-based compensation expense, common stock purchased by Company employees and the average purchase price per share under the ESPP in the years ended December 31, 2018, 2017 and 2016.

	Year Ended December 31,		
	2018	2017	2016
Stock-based compensation expense	$1,033	$850	$1,205
Common stock purchased by Company employees	60,695	44,649	39,412
Average purchase price per share	$22.16	$56.43	$81.72

Stock-based Compensation Expense Summary

The table below summarizes the impact of recording stock-based compensation expense in the Consolidated Statements of Operations and Comprehensive Loss in the years ended December 31, 2018, 2017 and 2016:

	Year Ended December 31,		
	2018	2017	2016
Cost of goods sold	$830	$828	$944
Operating expenses:			
Research and development	1,132	1,259	1,528
Clinical and regulatory affairs	483	770	672
Marketing and sales	3,468	3,796	4,335
General and administrative	5,117	4,991	4,807

Total operating expenses	10,200	10,816	11,342
Total stock-based compensation expense	$11,030	$11,644	$12,286

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In addition, the Company had $0.3 million, $0.4 million and $0.5 million of stock-based compensation expense capitalized in inventory as of December 31, 2018, 2017 and 2016, respectively.

Valuation Assumptions

The following assumptions were used to determine fair value for the stock options granted in the applicable year:

	Year Ended December 31,		
	2018	2017	2016
Expected life (in years)	5.6	5.6	5.5
Volatility	56.5%	51.3%	44.2%
Risk-free interest rate	2.7%	1.9%	1.2%
Dividend yield	—	—	—
Weighted average grant date fair value per share	$10.66	$25.13	$34.51

Stock Option Activity

Stock option activity in the year ended December 31, 2018 was as follows:

	Number of Shares	Weighted Average Exercise Price	Weighted-Average Remaining Contractual Life (in years)	Aggregate Intrinsic Value (a)
Outstanding balance at December 31, 2017	1,182,433	$ 75.55		
Granted	531,017	20.51		
Exercised	(60,734)	26.12		
Forfeited	(196,514)	65.12		
Expired	(140,842)	103.38		
Outstanding balance at December 31, 2018	1,315,360	$ 54.20	7.5	$ 6,952
Vested and expected to vest balance at December 31, 2018	1,200,709	$ 55.85	7.3	$ 5,274
Exercisable balance at December 31, 2018	475,323	$ 84.08	4.8	$ —

(a) The aggregate intrinsic value of stock options as of December 31, 2018 is calculated based on the difference between the Company's closing stock price on the last trading day of the period reported and the stock option exercise price.

In the years ended December 31, 2018, 2017 and 2016, the aggregate intrinsic value of stock options exercised was $1.3 million, $0.2 million and $2.7 million, respectively.

As of December 31, 2018, the aggregate unrecognized compensation expense related to stock options of $9.4 million is expected to be recognized over an estimated weighted average period of 1.9 years.

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The following table summarizes information regarding outstanding and exercisable stock options as of December 31, 2018:

	Outstanding			Exercisable		
Range of Exercise Prices	Number of Shares	Weighted Average Remaining Contractual Term (in years)	Weighted Average Exercise Price	Number of Shares	Weighted Average Remaining Contractual Term (in years)	Weighted Average Exercise Price
$6.80 – $13.70	327,950	9.9	$ 8.15	—	0.0	$ —
16.40 – 44.20	258,712	7.4	38.05	60,120	2.2	40.55
44.90 – 66.20	323,981	7.7	55.93	114,741	6.3	57.07
66.60 – 75.30	209,526	6.5	73.72	147,924	6.2	73.78
75.70 – 155.10	162,038	5.0	121.65	124,141	4.3	123.75
155.30 – 175.80	33,154	5.4	165.84	28,398	5.3	165.72
$6.80 – $175.80	1,315,361	7.5	$ 54.20	475,324	5.2	$ 84.08

RSU Activity

The following table summarizes the activity for RSUs:

	Number of Shares	Weighted Average Grant Date Fair Value
Unvested as of December 31, 2017	213,644	$ 62.70
Granted (1)	321,261	15.02
Forfeited	(72,473)	51.85
Vested	(39,712)	85.55
Unvested as of December 31, 2018	422,720	$ 26.15

(1) Shares granted in 2018 include 39,574 performance stock units that require certain performance conditions to be achieved in order to vest.

In the years ended December 31, 2018, 2017 and 2016, the weighted average grant date fair value of RSUs granted was $15.02, $50.10 and $82.90, respectively.

In the years ended December 31, 2018, 2017 and 2016, the total fair value of RSUs vested was $2.1 million, $1.8 million and $2.6 million, respectively.

As of December 31, 2018, the aggregate unrecognized compensation expense related to RSUs of $3.8 million is expected to be recognized over an estimated weighted average period of 2.1 years.

Non-Employee RSUs

There were no RSUs granted to non-employees in the year ended December 31, 2018.

As of December 31, 2018 and 2017, a total of 0 and 4,100 shares, respectively, of unvested RSUs issued to non-employees were outstanding.

Award Modifications

In the year ended December 31, 2018, there were award modifications affecting 2 individuals, a former executive and a former director of the Company, in connection with their departures. The employees were provided with accelerated vesting and extended exercisability for certain awards outstanding which included stock options, RSUs and performance stock units. The total incremental stock-based compensation expense recognized in the years ended 2018, 2017 and 2016 related to award modifications was $1.8 million, $0.3 million and $0.3 million, respectively.

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5. Net Loss Per Share

Because of the net losses in the years ended December 31, 2018, 2017 and 2016, the following outstanding Company securities, using the treasury stock method, were excluded from the calculations of net loss per share because the effect would have been anti-dilutive:

	Year Ended December 31,		
	2018	2017	2016
Stock options	11,276	52,029	124,805
RSAs	11,616	11,898	12,909
RSUs	21,974	25,005	36,982
Total	44,866	88,932	174,696

For purposes of calculating the maximum dilutive impact, it is presumed that the convertible senior notes and Deerfield Warrants (as defined and described in further detail in Note 6) will be settled in common stock with the resulting potential common shares included in diluted earnings per share if the effect is more dilutive. The effect of the conversion of the convertible senior notes and Deerfield Warrants is excluded from the calculation of diluted loss per share because the impact of these securities would be anti-dilutive.

The potential dilutive effect of these securities is shown in the table below:

	Year Ended December 31,		
	2018	2017	2016
Convertible senior notes	755,695	1,193,938	1,476,736
2017 Deerfield Warrants	647,001	647,001	—
2018 Deerfield Warrants	875,001	—	—

The effect of the contingently issuable common stock (see Note 9) is excluded from the calculation of basic loss per share until all necessary conditions for issuance have been satisfied.

6. Credit Facilities

Long-term debt consisted of the following:

	December 31,	
	2018	2017
Term loan facility	$161,622	$120,000
Revolving loan facility	—	21
Convertible senior notes	84,500	143,278
Other debt	4,281	—
Debt discounts and deferred financing costs	(52,325)	(37,823)
Long-term debt, including current portion	198,078	225,476
Less current portion	—	(17,223)
Long-term debt	$198,078	$208,253

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Deerfield Facility Agreement, as Amended

On April 3, 2017 (the "Agreement Date"), the Company entered into a facility agreement with affiliates of Deerfield Management Company, L.P. (collectively, "Deerfield"), pursuant to which Deerfield agreed to loan to the Company up to $120.0 million (the "Term Loan"), subject to the terms and conditions set forth in the facility agreement (the "Facility Agreement"). The Company drew the entire principal amount of the Term Loan on the Agreement Date. Deferred financing costs of $5.1 million were recorded on the Company's Consolidated Balance Sheets as a direct reduction of the Term Loan, to be subsequently amortized as interest expense over the effective period of the Term Loan.

On August 9, 2018 (the "New Agreement Date"), the Company entered into an amended and restated facility agreement (the "Amended Facility Agreement") with Deerfield, pursuant to which Deerfield and the Company canceled and extinguished the $40.5 million principal amount of 3.25% Convertible Senior Notes due 2020 (the "3.25% Senior Notes") held by Deerfield in exchange for an additional $40.5 million of indebtedness under the Amended Facility Agreement (as a last-out waterfall tranche under the Amended Facility Agreement). The Company entered into the Amended Facility Agreement with Deerfield in order to, among other things, allow for the Company's entry into the New Credit Agreement (as defined in the "Deerfield Revolver" section below) and the transactions contemplated therein. The Amended Facility Agreement amends and restates in its entirety the Company's Facility Agreement with Deerfield.

Any outstanding principal under the Amended Facility Agreement will accrue interest at a rate equal to 5.00% payable in cash and 4.75% payable in kind. The Amended Facility Agreement contains the same operating covenants applicable to the New Credit Agreement.

The Company may issue up to a maximum of 252,680 shares of the Company's common stock to Deerfield pursuant to the Amended Facility Agreement in lieu of paying cash to satisfy a portion of its obligation to pay interest owed to Deerfield. Each share of the Company's common stock issued to Deerfield in respect of an obligation to pay interest will be valued at 96% of the lesser of the (i) trailing 10-day volume weighted average price per share ending on the last trading date prior to issuance and (ii) the last closing bid price of the Company's common stock on the last trading date prior to issuance.

The Company's obligations under the Amended Facility Agreement are secured by a first priority security interest in substantially all of the Company's assets including intellectual property, with the priority of such security interest being pari passu with the security interest granted to Deerfield pursuant to the New Credit Agreement.

Pursuant to the Amended Facility Agreement, Deerfield has the right, but not the obligation, to convert a portion of the outstanding principal amount of the loan into shares of the Company's common stock at 96% of the trailing 3-day volume weighted average price per share on the date of conversion into a maximum of 1,430,001 shares of the Company's common stock. The first $60.0 million of the principal amount of the loan (or exercise price of the Warrants elected to be paid through a reduction in principal, as described below) converted into the Company's common stock will be credited first against principal and payable in kind interest payments due in 2021 and then against principal and payable in kind interest payments due in 2022. Any additional amounts will be split between principal and payment in kind interest payments due in 2022 and 2023.

The Company also agreed to pay Deerfield a $6.1 million fee upon the termination of the Amended Facility Agreement and to reimburse Deerfield for all reasonable out-of-pocket expenses incurred by Deerfield in connection with the negotiation and documentation of the New Credit Agreement and the Amended Facility Agreement.

The Company evaluated the August 9, 2018 transaction to determine whether it represented an extinguishment of previously issued debt instruments. The Company noted in the analysis that the cancellation of 3.25% Senior Notes and the issuance of the last-out waterfall tranche of term loans resulted in the removal of a conversion feature. The Company concluded that the conversion option was not substantive, and the removal of this feature did not trigger extinguishment accounting. Thus, the 3.25% Senior Notes were treated as non-convertible instruments for purposes of the analysis. The restructuring of each of the outstanding instruments were negotiated concurrently and in contemplation of each other, and required that the Company assess the impact of the modifications, replacement

instruments, and Warrants on the entire portfolio of term debt instruments (the New Credit Agreement was assessed separately). Under this approach, the Company determined that the lender did not provide a concession in connection with the transactions completed on the New Agreement Date. Pursuant to the guidance in ASU 470-50, “Debt - Modifications and Extinguishments,” the Company determined that exchange of instruments, the modifications of terms, the issuance of Warrants, and removal of the conversion feature resulted in changes to the debt portfolio that were not substantial.

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As of the New Agreement Date, the new carrying amount of the Term Loan under the Amended Facility Agreement was $113.1 million, representing a discount of $47.4 million from par value of $160.5 million. The discount was determined based on the fees and consideration paid to Deerfield in connection with the restructuring, the previously deferred but unamortized costs of the original debt, and the unamortized discounts on the original debt.
Under modification accounting, fees and consideration paid to the lender in connection with the restructuring should be reflected as an additional debt discount and accreted as an adjustment to interest expense over the remaining term of the modified debt portfolio using the effective interest method. The Warrants issued to Deerfield (see “Deerfield Warrants” section below) were treated as consideration paid to the lender and their associated fair values were treated as an additional debt discount. Likewise, the bifurcated derivative for the share settlement provision in the Amended Facility Agreement, outlined in the disclosures above, was also reflected as a discount. The original discount and deferred fees from the existing debt will continue to be accreted to interest expense throughout the life of the Term Loan via the effective interest method.
As of December 31, 2018, the Company had a carrying amount of $117.9 million, inclusive of deferred financing costs of $4.2 million and interest paid in kind of $1.1 million, related to the Term Loan. As of December 31, 2018, annual interest expense on the Term Loan will range from $4.1 million to $31.0 million from the New Agreement Date through maturity.
Upon a change of control of the Company, if the acquirer satisfies certain conditions set forth in the Amended Facility Agreement, such acquirer may assume the outstanding principal amount under the Amended Facility Agreement without penalty. If such acquirer does not satisfy the conditions set forth in the Amended Facility Agreement, Deerfield may, at its option, require the Company to repay the outstanding principal balance under the Facility Agreement plus, depending on the timing of the change of control transaction, the Company may be required to pay a make-whole premium and will be required to pay a change of control fee.
At any time on or after April 2, 2021 (the “First Amortization Date”), the Company has the right to prepay any amounts owed under the Amended Facility Agreement without premium or penalty, unless such prepayment occurs in connection with a change of control of the Company, in which case the Company must pay Deerfield a change of control fee unless such change of control occurs beyond a certain period after the maturity date. At any time prior to the First Amortization Date, any prepayment made by the Company will be subject to a make-whole premium and, if such prepayment occurs in connection with a change of control of the Company, a change of control fee.

Any amounts drawn under the Amended Facility Agreement may become immediately due and payable upon customary events of default, as defined in the Amended Facility Agreement, or the consummation of certain change of control transactions, as described above.
Deerfield Warrants
In connection with the execution of the Facility Agreement and the Amended Facility Agreement the Company issued warrants to Deerfield (“2017 Deerfield Warrants” and “2018 Deerfield Warrants,” respectively; collectively “Warrants”) as summarized below:

	Number of shares of common stock	Exercise price
2017 Deerfield Warrants	647,001	$ 92.30
2018 Deerfield Warrants	875,001	$ 47.10

The number of shares of common stock of the Company into which the Warrants are exercisable and the exercise price of the Warrants will be adjusted to reflect any stock splits, recapitalizations or similar adjustments in the number of outstanding shares of common stock of the Company.

The 2017 Deerfield Warrants expire on the 7th anniversary of the Agreement Date. Subject to certain exceptions, the 2017 Deerfield Warrants contain limitations such that the Company may not issue shares of common stock of the Company to Deerfield upon the exercise of the 2017 Deerfield Warrants if such issuance would result in Deerfield beneficially owning in excess of 4.985% of the total number of shares of common stock of the Company then issued and outstanding.

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The holders of the 2017 Deerfield Warrants may exercise the 2017 Deerfield Warrants for cash, on a cashless basis or through a reduction of an amount of principal outstanding under the Term Loan. In connection with certain major transactions, the holders may have the option to convert the 2017 Deerfield Warrants, in whole or in part, into the right to receive the transaction consideration payable upon consummation of such major transaction in respect of a number of shares of common stock of the Company equal to the Black-Scholes value of the 2017 Deerfield Warrants, as defined therein, and in the case of other major transactions, the holders may have the right to exercise the 2017 Deerfield Warrants, in whole or in part, for a number of shares of common stock of the Company equal to the Black-Scholes value of the 2017 Deerfield Warrants.

The Company measured the initial fair value of the shares underlying the 2017 Deerfield Warrants at $14.3 million, net of issuance costs of $0.4 million, and recorded the amount in additional paid-in-capital and as a direct reduction of the Term Loan, to be subsequently amortized as interest expense over the effective period of the Term Loan.

The 2018 Deerfield Warrants are exercisable commencing on February 9, 2019, and expire on the 7th anniversary of the New Agreement Date. The holders of the 2018 Deerfield Warrants may exercise the 2018 Deerfield Warrants for cash, on a cashless basis, or by reduction of the principal owed to Deerfield pursuant to the Amended Facility Agreement.

The Company measured the initial fair value of the shares underlying the 2018 Deerfield Warrants at $10.3 million, net of issuance costs of $0.1 million, and recorded the amount in additional paid-in-capital and as a direct reduction of the Term Loan, to be subsequently amortized as interest expense over the effective period of the Term Loan.

Derivative Liabilities

In accordance with Accounting Standards Codification (“ASC”) 815, “Derivatives and Hedging,” and ASC 470, “Debt,” the Company assessed whether any provisions within the Amended Facility Agreement constitute embedded derivatives requiring bifurcation from the host instrument, and assessed the fair values of any such features. The Company determined that the provision allowing the holders to convert a portion of the outstanding principal of the Term Loan into shares of the Company’s common stock at a discount effectively provided the holders with an embedded put option derivative meeting the definition of an “embedded derivative” pursuant to ASC 815. Consequently, the embedded derivative was bifurcated and accounted for separately. The Amended Facility Agreement retained a provision that, upon a change of control of the Company, Deerfield may declare the outstanding principal of the loans to be immediately due and payable in full, together with any accrued and unpaid interest, a “Change of Control” fee, and a specified make-whole amount (prior to the First Amortization Date). This feature remained substantively the same as outlined under the previous Facility Agreement. The Company concluded that this provision continues to meet the definition of a derivative and requires bifurcation and separate accounting pursuant to ASC 815. As of the New Agreement Date, the Company measured the fair value of the above embedded derivatives at $16.4 million and recorded the amount in derivative liabilities in the Consolidated Balance Sheets.

For the year ended December 31, 2018, the Company recorded income of $12.1 million as a fair value adjustment of the derivative liabilities. The primary factor causing the change in the fair value of the derivative liabilities was the decrease in the Company’s stock price from the New Agreement Date. Adjustments to the fair value of the derivative liabilities are recognized within other income (expense), net in the Consolidated Statements of Operations and Comprehensive Loss. See Note 3 for additional details.

Deerfield Revolver

On the Agreement Date, the Company entered into a Credit and Security Agreement (the “Credit Agreement”) with Deerfield ELGX Revolver, LLC (“Deerfield Revolver”), pursuant to which the Company could borrow up to the lesser of $50.0 million or its applicable borrowing base (the “Previous Revolver”). As described in the “MidCap Credit Facility” section below, the Previous Revolver replaced the Company’s revolving loan facility with MidCap. The Company recorded $1.2 million in deferred financing costs related to the Previous Revolver and presented these costs as a deferred asset and amortized as interest expense over the term of the Previous Revolver on the Company’s Consolidated Balance Sheets.

Effective January 12, 2018, the Company terminated its Credit Agreement with Deerfield Revolver and paid $1.3 million in termination fees. Additionally, the Company wrote off $1.0 million in unamortized deferred financing costs as of the termination date. The total of $2.3 million was charged to loss on debt extinguishment on the Company's Consolidated Statements of Operations and Comprehensive Loss.

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On the New Agreement Date, the Company entered into a Credit Agreement (the "New Credit Agreement") with Deerfield Revolver, pursuant to which the Company may borrow up to the lesser of $50.0 million or its applicable borrowing base from time to time prior to April 2, 2022 (the "ABL Facility"). The borrowing base consists of eligible accounts, eligible inventory and eligible equipment. On the New Agreement Date, availability under the ABL Facility was $24.0 million. Any outstanding principal under the ABL Facility will accrue interest at a rate equal to LIBOR (with a 1% floor) plus 5.50%, payable in cash. The interest rate will accrue on a minimum amount of $9.75 million, whether or not such amount is drawn (which amount in excess of the revolver usage accruing interest will not be subject to the unused line fee). The Company is subject to other fees in addition to interest on the outstanding principal amount under the ABL Facility, including a commitment fee of $0.5 million (payable $0.2 million upon closing, $0.2 million on the 1st anniversary of the closing and $0.1 million on the 2nd anniversary of the closing), a $1.0 million fee upon the expiration of the ABL Facility, and an early commitment termination or reduction fee of 2.5% in the 1st year, 1.5% in the 2nd year, 0.5% in the 3rd year and 0% thereafter. The Company recorded $0.6 million in deferred financing costs, including the commitment fee, related to the ABL Facility and presented these costs as a deferred asset, to be subsequently amortized as interest expense over the term of the ABL Facility, on the Company's Consolidated Balance Sheets.

The New Credit Agreement has a $22.5 million global liquidity requirement, net revenue tests, fixed charge coverage, capital expenditure limitations and operating expense tests. The Company was in compliance with its financial covenants as of December 31, 2018. The New Credit Agreement also contains various representations and warranties, events of default, and affirmative and negative covenants, customary for financings of this type, including reporting requirements, requirements that the Company maintain timely reporting with the SEC and restrictions on the ability of the Company and its subsidiaries to incur additional liens on their assets, incur additional indebtedness and acquire and dispose of assets outside the ordinary course of business.

The Company's obligations under the New Credit Agreement are secured by a first priority security interest in substantially all of the Company's assets including intellectual property, with the priority of such security interest being pari passu with the security interest granted to Deerfield pursuant to the Company's Amended Facility Agreement (as described above).

As of December 31, 2018, the Company had no outstanding borrowings and $0.6 million in deferred financing costs relating to the ABL Facility. The remaining borrowings available was $13.7 million.

2.25% Convertible Senior Notes

On December 10, 2013, the Company issued $86.3 million in aggregate principal amount of 2.25% Senior Notes. The 2.25% Senior Notes matured on December 15, 2018. The Company received net proceeds from the sale of the 2.25% Senior Notes of approximately $82.6 million, after deducting underwriting discounts and commissions and offering expenses payable by the Company.

The Company used a portion of the proceeds from the Term Loan to repurchase $68.0 million in aggregate principal amount of outstanding 2.25% Senior Notes, plus the accrued but unpaid interest thereon, from the holders thereof in privately negotiated transactions. The embedded conversion option of the 2.25% Senior Notes, which was originally recorded in additional paid-in capital, was reduced by $2.2 million. Additionally, $3.2 million related to the reduction of outstanding principal related to the 2.25% Senior Notes was charged to loss on extinguishment of debt on the Company's Consolidated Statements of Operations and Comprehensive Loss in the year ended December 31, 2017.

In the year ended December 31, 2018, the Company repaid the remainder of the outstanding borrowings of $18.3 million related to the 2.25% Senior Notes.

3.25% Convertible Senior Notes Due 2020

On November 2, 2015, the Company issued $125.0 million in aggregate principal amount of 3.25% Senior Notes in an underwritten public offering. The 3.25% Senior Notes are governed by a base indenture ("Base Indenture"), as amended and supplemented by the second supplemental indenture relating to the 3.25% Senior Notes (the "Second Supplemental Indenture," and together with the Base Indenture, the "3.25% Senior Notes Indenture"), dated as of November 2, 2015,

by and between the Company and the Trustee (as defined therein).

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The 3.25% Senior Notes are senior unsecured obligations and are: senior in right of payment to the Company's future indebtedness that is expressly subordinated in right of payment to the 3.25% Senior Notes; equal in right of payment to the Company's existing and future unsecured indebtedness that is not so subordinated, including the 2.25% Senior Notes; effectively junior to any of the Company's secured indebtedness to the extent of the value of the assets securing such indebtedness; and structurally junior to all existing and future indebtedness (including trade payables) incurred by the Company's subsidiaries.

The 3.25% Senior Notes accrue interest at a rate of 3.25% per year, payable semi-annually. The 3.25% Senior Notes mature on November 1, 2020, unless earlier purchased, redeemed or converted into shares of common stock in accordance with the terms of the 3.25% Senior Notes Indenture.

On or after November 1, 2018, the Company may redeem for cash all or any portion of the 3.25% Senior Notes, at its option, but only if the closing sale price of the Company's common stock for at least 20 trading days (whether or not consecutive) during any 30 consecutive trading day period ending on, and including, the second trading day immediately preceding the date on which the Company provides notice of redemption, exceeds 130% of the conversion price on each applicable trading day. The redemption date can be no sooner than 30 trading days from the date on which notice of redemption is provided to the holders, during which time, up until 2 trading days prior to the redemption, the holders may elect to convert all or a portion of the 3.25% Senior Notes into shares of the Company's common stock. The redemption price will equal 100% of the principal amount of the 3.25% Senior Notes to be redeemed, plus accrued and unpaid interest until, but excluding, the redemption date. No sinking fund is provided for the 3.25% Senior Notes.

The 3.25% Senior Notes are convertible at the option of the holders: (i) in the calendar quarter following any quarter in which, for at least 20 out of the 30 consecutive trading days (whether or not consecutive) ending on the last day of the quarter, the closing price of the Company's common stock is more than 130% of the then-current conversion price of the 3.25% Senior Notes; (ii) in the 5 business days following any 5-day period in which the trading price per $1,000 note was less than 98% of the product of the closing sale price of the Company's common stock and the current conversion rate; (iii) in the event that the Company has provided notice of redemption, but no later than 2 trading days prior to Company's proposed redemption date; or (iv) upon the occurrence of specified corporate events. On or after August 1, 2020 until the close of business on the second scheduled trading day immediately preceding the stated maturity date, holders may surrender their 3.25% Senior Notes for conversion at any time, regardless of the foregoing circumstances.

The initial conversion rate of the 3.25% Senior Notes is 8.9431 shares of the Company's common stock per $1,000 principal amount of the 3.25% Senior Notes, which is equivalent to an initial conversion price of approximately $111.82 per share. The conversion rate is subject to adjustment upon the occurrence of certain specified events. Upon conversion, the Company, will at its election pay or deliver, as the case may be, cash, shares of the Company's common stock or a combination of cash and shares of the Company's common stock.

If a fundamental change (as defined in the 3.25% Senior Notes Indenture) occurs prior to the stated maturity date, holders may require the Company to purchase for cash all or any portion of their 3.25% Senior Notes at a fundamental change purchase price equal to 100% of the principal amount of the 3.25% Senior Notes to be purchased, plus accrued and unpaid interest.

The 3.25% Senior Notes Indenture contains customary terms, covenants and events of default with respect to the 3.25% Senior Notes. If an event of default (as defined in the 3.25% Senior Notes Indenture) occurs and is continuing, either the Trustee or the holders of at least 25% in aggregate principal amount of the outstanding 3.25% Senior Notes may declare the principal amount of the 3.25% Senior Notes to be due and payable immediately by notice to the Company (with a copy to the Trustee). If an event of default arising out of certain events of bankruptcy, insolvency or reorganization involving the Company or a significant subsidiary (as set forth in the 3.25% Senior Notes Indenture) occurs with respect to the Company, the principal amount of the 3.25% Senior Notes and accrued and unpaid interest, if any, will automatically become immediately due and payable.

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Upon issuance and through December 31, 2015, the Company was not required to separate the conversion option from the 3.25% Senior Notes under ASC 815, "Derivatives and Hedging." However, because the Company has the ability to settle the 3.25% Senior Notes in cash, common stock or a combination of cash and common stock, the Company applied the cash conversion guidance contained in ASC 470-20, "Debt With Conversion and other Options," and accounted for the 3.25% Senior Notes by allocating the issuance proceeds between the liability-classified debt component and a separate equity component attributable to the conversion option. The equity component is classified in stockholders' equity and the resulting discount on the liability component is accreted such that interest expense equals the Company's borrowing rate for nonconvertible loan products of similar duration. The separation was performed by first determining the fair value of a similar debt that does not have an associated equity component. That amount was then deducted from the initial proceeds of the 3.25% Senior Notes as a whole to arrive at a residual amount, which was allocated to the conversion feature that is classified as equity. The initial fair value of the indebtedness was $97.8 million resulting in a $27.2 million allocation to the embedded conversion option. The embedded conversion option was recorded in stockholders' equity and as a debt discount, to be subsequently accreted to interest expense over the term of the 3.25% Senior Notes. Underwriting discounts and commissions and offering expenses totaled $3.7 million and were allocated between the liability and the equity components in proportion to the allocation of proceeds and accounted for as debt issuance costs and equity issuance costs, respectively. As a result, $2.9 million attributable to the indebtedness was recorded as deferred financing costs, to be subsequently amortized as interest expense over the term of the 3.25% Senior Notes, and $0.8 million attributable to the equity component was recorded as a reduction to additional paid-in-capital in stockholders' equity.
As of December 31, 2018, the Company had outstanding borrowings of $76.8 million and deferred financing costs of $0.8 million, related to the 3.25% Senior Notes. There were no principal payments due during the term. Annual interest expense on the 3.25% Senior Notes will range from $6.4 million to $7.2 million through maturity.
In connection with the issuance of the Company's common stock as consideration in the merger with TriVascular Technologies, Inc. ("TriVascular") (see Note 13 for details), the quantity of authorized common shares available for future issuance was reduced to a level insufficient to honor all of the potential common shares underlying instruments then outstanding. Such instruments included the conversion options related to the 3.25% Senior Notes, the 2.25% Senior Notes, stock options, RSUs, contingently issuable common stock and stock warrants. The creation of this authorized share deficiency in February 2016 required the Company, during the first quarter of 2016, to separate as a stand-alone derivative the 3.25% Senior Notes conversion option and a portion of the 2.25% Senior Notes conversion option for which no authorized shares were available to effect share settlement in the event of a conversion. Accordingly, in February 2016, the Company re-classed $24.8 million of the conversion features of the 3.25% Senior Notes and 2.25% Senior Notes (collectively, the "Senior Notes") originally recorded in stockholders' equity to derivative liabilities which were be marked to market each period until the Company authorized sufficient new common stock to alleviate the deficiency. On June 2, 2016, the Company increased the number of authorized shares of common stock to a level sufficient to alleviate the share deficiency. Accordingly, on June 2, 2016, the Company reclassed $68.6 million of the conversion features of the Senior Notes from derivative liabilities to additional paid-in capital.

For the year ended December 31, 2016, the Company recorded $43.8 million as a fair value adjustment of derivative liabilities. The primary factor causing the change in the fair value of the derivative liability was the increase in the Company's stock price during the period from February 3, 2016 through June 2, 2016. Adjustments to the fair value of the derivative liabilities are recognized within other income (expense), net in the Consolidated Statements of Operations and Comprehensive Loss.

The value of the derivative liabilities was estimated using a "with" and "without" approach utilizing Level 3 inputs. In the "with" scenario, the value of the Senior Notes were estimated in a binomial lattice model that considered all terms of the

Senior Notes, including the conversion features, with a range of probabilities and assumptions related to the timing and likelihood of the conversion features being exercised by either the Company or the holders of the Senior Notes. In the “without” scenario the value of the Senior Notes absent the conversion options was estimated. The difference between the values estimated in the “with” and “without” scenarios represents the value of the derivative liabilities. Changes in the value of the derivative liabilities were driven by changes in the Company’s stock price, expected volatility, credit spreads and market yields.

MidCap Credit Facility

On April 3, 2017, the Company replaced its revolving loan facility with MidCap with the Previous Revolver. As a result, during the year ended December 31, 2017, the Company recognized a $3.3 million loss on debt extinguishment, comprised of approximately $0.8 million in deferred financing costs and a $2.5 million termination fee paid to MidCap.

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Japan Lifeline Co., Ltd. Subordinated Promissory Note

On November 20, 2018, the Company issued a subordinated promissory note to Japan Lifeline Co., Ltd. ("JLL"), the Company's Japanese distributor, pursuant to which the Company converted a $4.3 million refund payable to a note payable (the "JLL Note"). The amount owing under the JLL Note accrues interest at a rate of 2.5% per annum, subject to the terms of JLL's subordination agreement with Deerfield, and would become due and payable on the earlier of: (i) December 31, 2023; or (ii) the date the JLL Note is declared due and payable by JLL upon the occurrence of certain events of default.

Principal Maturities of Long-term Debt

The aggregate principal maturities of long-term debt as of December 31, 2018 are as follows:

	Term loan facility	Convertible senior notes	Other debt	Total
Year ending December 31:				
2019	$—	$ —	$—	$—
2020	—	84,500	—	84,500
2021	40,374	—	—	40,374
2022	60,624	—	—	60,624
2023	60,624	—	4,281	64,905
	$161,622	$ 84,500	$4,281	$250,403

7. Revenue Disaggregation

The Company disaggregated revenue in accordance with the new revenue standard to depict how the nature, amount, timing, and uncertainty of revenue and cash flows are affected by economic factors. These economic factors are primarily attributable to different geographic regions and the timing of transfer of control of products to customers. Accordingly, sales in which control of the product has passed to the customer at the time of procedure or implant into a patient or at the time of shipment have been bifurcated as "Implant-based" and "Shipment-based" revenue, respectively. The table below includes a reconciliation of disaggregated revenue with the Company's reportable segment:

	Year Ended December 31,								
	2018			2017			2016		
	Implant-based	Shipment-based	Total	Implant-based	Shipment-based	Total	Implant-based	Shipment-based	Total
United States	$106,014	$ 3,079	$109,093	$120,572	$ 2,637	$123,209	$133,734	$ 2,377	$136,111
International	21,097	26,283	47,380	23,246	34,702	57,948	26,884	29,930	56,814
Total Revenue	$127,111	$ 29,362	$156,473	$143,818	$ 37,339	$181,157	$160,618	$ 32,307	$192,925

8. Commitments and Contingencies

(a) Leases

The Company leases facilities located in Irvine, California and Santa Rosa, California and an office located in Rosmalen, the Netherlands. These facility lease agreements require the Company to pay operating costs, including property taxes, insurance and maintenance. In addition, the Company has certain equipment and automobiles under long-term agreements that are accounted for as operating leases.

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Future minimum payments by year under non-cancelable leases with initial terms in excess of 1 year were as follows as of December 31, 2018:

2019	$3,807
2020	3,791
2021	3,819
2022	3,871
2023	2,889
2024 and thereafter	15,132
Total	$33,309

Facilities rent expense in the years ended December 31, 2018, 2017 and 2016 was $3.4 million, $3.4 million and $3.3 million, respectively.

On June 12, 2013, the Company entered into a lease agreement for 2 adjacent office, research and development, and manufacturing facilities in Irvine, California. The premises consist of approximately 129,000 combined square feet. The lease has a 15-year term beginning January 1, 2014 and provides for an optional 5-year extension. The initial base rent under the lease is $1.9 million per year, payable in monthly installments, and escalates by 3% per year for 2015 through 2019 and 4% per year for 2020 and beyond. The Company received a rent abatement for the first 9 months of the lease. These premises replaced the Company's previous Irvine facilities. The terms of this lease agreement provide for $6.8 million of landlord-funded improvements (and certain other allowances) to this facility, in order to best suit the Company's requirements.

The Company's facility in Rosmalen, the Netherlands is an administrative office consisting of approximately 2,900 square feet under an operating lease scheduled to expire in January 2020, which may be renewed for an additional year.

In connection with the Company's merger with TriVascular (see Note 13), the Company assumed the lease for TriVascular's facility in Santa Rosa, California. The facility is being used for manufacturing, research and development, and administrative purposes and consists of 110,000 square feet under an operating lease scheduled to expire in February 2023, which may be renewed for an additional 5 years.

(b) Employment Agreements and Retention Plan

The Company has entered into employment agreements with certain of its executive officers under which payment and benefits would become payable in the event of termination by the Company for any reason other than cause, death or disability or termination by the employee for good reason (collectively, an "Involuntary Termination") prior to, upon or following a change in control of the Company. The severance payment will generally be in a range of 6 to 24 months of the employee's then current salary for an Involuntary Termination prior to a change in control of the Company, and will generally be in a range of 18 to 24 months of the employee's then current salary for an Involuntary Termination upon or following a change in control of the Company.

(c) Legal Matters

From time to time the Company is involved in various claims and legal proceedings of a nature considered normal and incidental to a medical device business. These matters may include product liability, intellectual property, employment, and other general claims. Such cases and claims may raise complex factual and legal issues and are subject to many uncertainties, including, but not limited to, the facts and circumstances of each particular case or claim, the jurisdiction in which each suit is brought, and differences in applicable law. The Company accrues for contingent liabilities when it is probable that a liability has been incurred and the amount can be reasonably estimated. The accruals are adjusted periodically as assessments change or as additional information becomes available.

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LifePort Sciences LLC v. Endologix, Inc.
On December 28, 2012, LifePort Sciences, LLC ("LifePort") filed a complaint against the Company in the United States District Court, District of Delaware, alleging that certain of the Company's products infringe United States Patent Nos. 5,489,295, 5,676,696, 5,993,481, 6,117,167, 6,302,906, and 8,192,482, which were alleged to be owned by LifePort. On March 17, 2016, the Company entered into a Settlement and Patent License Agreement with LifePort (the "Settlement Agreement") whereby LifePort granted the Company license rights to patents in exchange for a settlement of $4.7 million. The Settlement Agreement resolved this litigation and fully and finally released the Company and LifePort from any claims arising out of or in connection with the litigation or the subject patents. The Settlement Agreement also contained a covenant not to sue for other patents owned by LifePort. However, since the subject patents were all expired and the Company was not currently using and has no plans to use the other patents owned by LifePort in products that could reach technological feasibility during the covenant not to sue period, there is no alternative future use and the full amount was recorded as settlement costs in the accompanying Consolidated Statements of Operations and Comprehensive Loss.

Steven M. Ortiz v. Endologix, Inc.
On September 9, 2016, a former employee, Steven M. Ortiz, filed a class action lawsuit against the Company in Orange County Superior Court, claiming the Company's failure to pay all overtime wages owing; failure to provide meal periods and failure to pay meal period premiums; failure to pay all wages owed at time of termination, seeking waiting time penalties under Labor Code section 203; failure to provide accurate wage statements; and violations of Business and Professions Code section 17200, and alleging claims for penalties under the Private Attorneys General Act of 2004. While the Company contested the allegations asserted in the litigation, a mediation was held on February 24, 2017 at which time the parties agreed to settle the case for $750,000. The court gave final approval to the settlement agreement and the $750,000 in settlement funds that were deposited with the class administrator have been distributed. On July 16, 2018, the court issued an order closing the case.

Stockholder Securities Litigation
On January 3, 2017 and January 9, 2017, two stockholders purporting to represent a class of persons who purchased the Company's securities between August 2, 2016 and November 16, 2016, filed lawsuits against the Company and certain of its officers in the United States District Court for the Central District of California (the "District Court"). The lawsuits allege that the Company made materially false and misleading statements and failed to disclose material adverse facts about its business, operational and financial performance, in violation of federal securities laws, relating to the United States Food and Drug Administration (the "FDA") pre-market approval for the Company's Nellix EVAS System. On May 26, 2017, the plaintiffs filed an amended complaint extending the class period to include persons who purchased the Company's securities between May 5, 2016 and May 18, 2017 and adding certain factual assertions and allegations regarding the Nellix EVAS System. The plaintiffs sought unspecified monetary damages on behalf of the alleged class, interest, and attorney's fees and costs of litigation. The first lawsuit, Nguyen v. Endologix, Inc. et al., Case No. 2:17-cv-0017 AB (PLAx) (C.D. Cal.), was consolidated with the second lawsuit, Ahmed v. Endologix, Inc. et al, Case No. 8:17-cv-00061 AB (PLAx) (C.D. Cal.), and lead Nguyen plaintiff filed a consolidated First Amended Complaint. On December 5, 2017, the District Court granted Endologix's motion to dismiss lead plaintiff's First Amended Complaint, with leave to amend. On January 9, 2018, lead plaintiff filed a Second Amended Complaint and on March 12, 2018, the Company filed its Motion to Dismiss lead plaintiff's Second Amended Complaint with prejudice. On September 6, 2018, the District Court dismissed the Second Amended Complaint with prejudice and, on October 5, 2018, lead plaintiff filed a notice of appeal and on March 15, 2019, lead plaintiff filed its opening brief with the appellate court. The Company believes these lawsuits are without merit and continues to defend itself vigorously.

Stockholder Derivative Litigation

As of June 11, 2017, four stockholders have filed derivative lawsuits seeking unspecified monetary damages on behalf of Endologix, the nominal plaintiff, based on allegations substantially similar to those alleged by lead plaintiff in Nguyen. Those actions consist of: Sindlinger v. McDermott et al., Case No. BC662280 (Los Angeles Superior Court); Abraham v. McDermott et al., Case No. 30-2018-00968971-CU-BT-CSC (Orange County Superior Court); and Green v. McDermott et al., Case No. 8:17-cv-01155-AB (PLAx), which has been consolidated with Cocco v. McDermott et al., Case No. 8:17-cv-01183-AB (PLAx) (C.D. Cal.). The Company believes these lawsuits are without merit and continues to defend itself vigorously.

SEC Investigation

In July 2017, we learned that the SEC issued a Formal Order of Investigation to investigate, among other things, events surrounding the Nellix EVAS System and the prospect of its FDA pre-market approval. On February 5, 2019, we received notification that the SEC staff had concluded its investigation and did not intend to recommend an enforcement action.

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(d) Contract Termination and Product Withdrawal

In the year ended December 31, 2016, the Company sent notices of termination to certain of its distributors providing for the termination of the respective distribution agreements. In accordance with ASC No. 420 “Exit or Disposal Cost Obligations,” the Company expensed distributor termination costs in the period in which the written notification of termination occurred. As a result, the Company incurred termination costs of $2.5 million for the year ended December 31, 2016. Such termination costs were included in contract termination, product withdrawal and business acquisition expenses in the Consolidated Statements of Operations and Comprehensive Loss.

Voluntary Recall of the Nellix EVAS System

On January 4, 2019, the Company announced that in order to ensure optimal outcomes for patients, the Nellix EVAS System will, for the foreseeable future, only be available for use at approved centers in a clinical investigation setting with pre-screened patients that adhere to the current indications outside of the United States. All cases will be pre-screened by a physician panel to ensure adherence to protocol and use in accordance with current product indications. Compassionate use requests will be reviewed in accordance with the process established by the Company and associated national competent authorities. The existing inventory has been voluntarily recalled.

In January 2019, the Company announced that the CE Mark for the Nellix EVAS System had been suspended by its Notified Body following a voluntary recall and field safety notification issued by the Company on January 4, 2019. Suspension of the CE Mark means that the Company may not affix the CE Mark and sell the Nellix EVAS System in the EU during the term of the suspension.

In the year ended December 31, 2018, the Company recorded a $2.2 million loss contingency related to the estimated costs of the recall. Such costs were included in contract termination, product withdrawal and business acquisition expenses in the Consolidated Statements of Operations and Comprehensive Loss.

9. Contingently Issuable Common Stock

On October 27, 2010, the Company, entered into an Agreement and Plan of Merger and Reorganization (the “Nellix Merger Agreement”) with Nepal Acquisition Corporation, a wholly-owned subsidiary of the Company, Nellix, certain of Nellix’s stockholders named therein and Essex Woodlands Health Ventures, Inc., as representative of the former Nellix stockholders. On December 10, 2010 (the “Nellix Closing Date”), the Company completed its acquisition of Nellix. The purchase price consisted of the Company’s common shares issuable as of the Nellix Closing Date. Additional payments, solely in the form of the Company’s common stock, will be made upon the achievement of a revenue milestone and a regulatory approval milestone (collectively, the “Nellix Milestones”). Under the Nellix Merger Agreement, the ultimate value of the contingently issuable common stock would be determined on the date that each Nellix Milestone is achieved. The number of issuable shares would be established using an applicable per share price, which is subject to a ceiling and/or floor, resulting at the closing of the merger in a maximum of approximately 1,020,000 shares issuable upon the achievement of the Nellix Milestones. As of the Nellix Closing Date, the fair value of the contingently issuable common stock was estimated to be $28.2 million.

The Nellix Merger Agreement provides that, in addition to the shares of common stock of the Company issued to the former Nellix stockholders at the Nellix Closing Date, if the Company receives approval from the FDA to sell one of Nellix’s products in the United States (the “PMA Milestone”), the Company will issue additional shares of its common stock to the former stockholders of Nellix. The dollar value of the shares of the Company’s common stock to be issued upon achievement of the PMA Milestone will be equal to $15.0 million (less the dollar value of certain cash payments and other deductions). The price per share of the shares of the Company’s common stock to be issued upon achievement of the PMA Milestone is subject to a stock price floor of $45.00 per share but not subject to a stock price ceiling.

The value of the contingently issuable common stock is derived using a discounted income approach model, with a range of probabilities and assumptions related to the timing and likelihood of achievement of the PMA Milestone (which include Level 3 inputs and the Company’s stock price (Level 1 input) as of the balance sheet date). These varying probabilities and assumptions and changes in the Company’s stock price have required fair value adjustments

of the contingently issuable common stock in periods subsequent to the Nellix Closing Date.

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The fair value of the contingently issuable common stock will continue to be evaluated on a quarterly basis until milestone achievement occurs or until the expiration of the "Earn-Out Period," as defined within the Nellix Merger Agreement. Adjustments to the fair value of the contingently issuable common stock are recognized within other income (expense), net in the Consolidated Statements of Operations and Comprehensive Loss. See the "Fair Value Measurements" section of Note 3 for further details. As of December 31, 2018, the fair value of contingently issuable common stock was presented in non-current liabilities.

At December 31, 2018, the Company's stock price closed at $7.16 per share. Thus, had the PMA Milestone been achieved on December 31, 2018, the contingently issuable common stock would have comprised approximately 333,149 shares (based on the 30-day average closing stock price ending 5 days prior to the announcement, subjected to the stock price floor of $45.00 per share), representing a value of $2.4 million.

10. Income Taxes

Net loss before income taxes attributable to United States and international operations, consisted of the following:

	Year Ended December 31,		
	2018	2017	2016
United States	$(70,176)	$(56,178)	$(135,925)
Foreign	(9,254)	(10,681)	(18,254)
Net loss before income taxes	$(79,430)	$(66,859)	$(154,179)

Income tax expense (benefit) consisted of the following:

	Year Ended December 31,		
	2018	2017	2016
Current:			
Federal	$—	$(102)	$(50)
State	81	102	90
Foreign	260	237	458
Total current	341	237	498
Deferred:			
Federal	(27)	(699)	—
State	(19)	—	—
Foreign	(11)	3	—
Total deferred	(57)	(696)	—
Total:			
Federal	(27)	(801)	(50)
State	62	102	90
Foreign	249	240	458
Income tax expense (benefit)	$284	$(459)	$498

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Income tax expense (benefit) was computed by applying the United States federal statutory rate to net loss before income taxes as follows:

	Year Ended December 31,		
	2018	2017	2016
Income tax benefit at federal statutory rate	$(16,680)	$(22,732)	$(52,418)
State income tax benefit, net of federal benefit	(1,756)	(1,114)	(2,323)
Meals and entertainment	230	454	445
Research and development credits	(1,211)	(913)	(2,041)
Stock-based compensation	2,016	3,203	2,604
163(l) limited interest expense	994	—	—
Derivative loss	—	—	14,903
Contingent consideration	(1,491)	(986)	(850)
Foreign tax rate differential	(405)	692	1,394
Net change in valuation allowance	16,360	(24,976)	35,678
Return to provision true-up	1,612	5,719	1,981
Unrecognized tax benefits	605	457	971
Federal tax rate change	—	39,807	—
Other, net	10	(70)	154
Income tax expense (benefit)	$284	$(459)	$498

Significant components of the Company’s deferred tax assets (liabilities) were as follows:

	Year Ended December 31,	
	2018	2017
Deferred tax assets:		
Net operating loss carryforwards	$110,130	$101,423
Accrued expenses	7,475	5,617
Tax credits	12,540	11,826
Bad debt	104	78
Inventory	4,821	2,160
Capitalized research and development	17,931	16,079
Deferred compensation	2,669	2,535
Other	1,174	1,099
Deferred tax asset	156,844	140,817
Valuation allowance	(135,216)	(118,551)
Total deferred tax assets	21,628	22,266
Deferred tax liabilities:		
Developed technology and trademark	(8,830)	(9,033)
Trademarks and trade names	(765)	(733)
Depreciation and amortization	(8,034)	(8,961)
Convertible debt	(4,149)	(3,740)
Other	—	—
Total deferred tax liabilities	(21,778)	(22,467)
Net deferred tax liability	$(150)	$(201)

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The Company has evaluated the available evidence supporting the realization of its gross deferred tax assets, including the amount and timing of future taxable income, and has determined that it is more likely than not that the domestic and foreign deferred tax assets will not be realized. Due to such uncertainties surrounding the realization of the domestic and foreign deferred tax assets, the Company maintained a valuation allowance of $135.2 million against a substantial portion of its deferred tax assets as of December 31, 2018. For the year ended December 31, 2018, the total change in valuation allowance was $16.7 million, of which $16.4 million was recorded as a tax expense through the income statement and $0.3 million was due to state net operating loss not taking federal benefit on deferred balances. Realization of the deferred tax assets will be primarily dependent upon the Company's ability to generate sufficient taxable income prior to the expiration of its net operating losses.

At December 31, 2018, the Company had net operating loss carryforwards for federal and state income tax purposes of approximately $344.2 million and $206.0 million, respectively.

Federal and state net operating loss carryforwards began expiring in 2017 and will continue to expire through 2038. The majority of the state net operating losses are attributable to California. In addition, the Company had research and development credits for federal and state income tax purposes of approximately $9.9 million and $15.2 million, respectively, which will begin to expire in 2020. The California research and development credits do not expire.

Under Section 382 of the Internal Revenue Code of 1986, as amended ("IRC"), substantial changes in the Company's ownership may limit the amount of net operating loss and research and development income tax credit carryforwards that could be utilized annually in the future to offset taxable income. Specifically, this limitation may arise in the event of a cumulative change in ownership of the Company of more than 50% within a 3-year period. Any such annual limitation may significantly reduce the utilization of the net operating loss carryforwards before they expire.

Since the Company's formation, the Company has raised capital through the issuance of capital stock on several occasions which, combined with the purchasing stockholders' subsequent disposition of those shares, may have resulted in such an ownership change, or could result in an ownership change in the future upon subsequent disposition. The Company intends to complete a study in the future to assess whether an ownership change has occurred or whether there have been multiple ownership changes since the Company's formation.

The Company completed an analysis under IRC Sections 382 and 383 to determine if the acquired TriVascular net operating loss carryforwards and research and development credits are limited due to a change in ownership. The Company concluded that TriVascular had an ownership change as of February 3, 2016. As a result of the ownership change, the Company reduced the acquired federal and state net operating loss carryforwards by $230.3 million and $209.4 million, respectively, and federal research and development credits by $3.1 million.

The following is a tabular reconciliation of the total amounts of unrecognized tax benefits:

	Year Ended December 31,	
	2018	2017
Balance at January 1	$12,207	$11,754
Additions for tax positions related to prior periods	—	—
Decreases related to prior year tax positions	(17)	(160)
Lapse of statute of limitations	—	—
Additions for tax positions related to current period	698	613
Balance at December 31	$12,888	$12,207

Our gross unrecognized tax benefits presented above would not reduce our annual effective tax rate if they were to be recognized because we have recorded a full valuation allowance on the deferred tax assets. We do not foresee any material changes to our gross unrecognized tax benefits within the next 12 months. We recognize interests and/or penalties related to income tax matters in income tax expense. We did not recognize any accrued interest and penalties related to gross unrecognized tax benefits related to the year ended December 31, 2018.

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The undistributed earnings of the Company's foreign subsidiaries are considered to be indefinitely reinvested. Accordingly, no provisions for United States federal and state income taxes or foreign withholding taxes have been provided on such undistributed earnings. As of December 31, 2018, the cumulative amount of earnings with respect to which United States income taxes have not been provided is approximately $0.2 million. Determination of the potential amount of unrecognized deferred United States income tax liability and foreign withholding taxes is not practicable because of the complexities associated with its hypothetical calculation; however, net operating losses and unrecognized foreign tax credits would be available to reduce some portion of the United States liability.

In general, the Company is no longer subject to United States federal, state, local, or foreign examinations by taxing authorities for years before 2014, however, net operating loss and other tax attribute carryforwards utilized in subsequent years continue to be subject to examination by the tax authorities until the year to which the net operating loss and/or other tax attributes are carried forward is no longer subject to examination.

For the year ended December 31, 2018, our provision for income taxes was $0.3 million and our effective tax rate was 0.4%. In the year ended December 31, 2018, we had legal entities operating in the United States, Italy, New Zealand, Singapore, Poland, Germany, Switzerland, South Korea and the Netherlands, as well as registered sales branches of our Dutch entity in certain countries in Europe.

On December 22, 2017, President Trump signed into law the Tax Cuts and Jobs Act of 2017 (the "TCJA"), which significantly reforms the IRC. The TCJA significantly changes United States tax law by, among other things, lowering corporate income tax rates, implementing a territorial tax system and imposing a repatriation tax on deemed repatriated earnings of foreign subsidiaries. The TCJA permanently reduced the United States corporate income tax rate from a maximum of 35% to a flat 21% rate, effective January 1, 2018.

The Company has federal alternative minimum tax credit carryforwards of $0.1 million that will be refundable in future years due to the TCJA.

In 2017, the Company used the asset and liability method of accounting for income taxes. Under this method, deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax basis. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to reverse. As a result of the reduction in the United States corporate income tax rate from 35% to 21% under the TCJA, the Company revalued its ending net deferred tax liabilities at December 31, 2017 and recognized a $0.4 million tax benefit in the Company's Consolidated Statement of Operations and Comprehensive Loss for the year ended December 31, 2017.

The TCJA provided for a one-time deemed mandatory repatriation of post-1986 undistributed foreign subsidiary earnings and profits ("E&P") through the year ended December 31, 2018. The Company does not have undistributed foreign E&P subject to the deemed mandatory repatriation and therefore has not recognized income tax expense in the Company's Consolidated Statement of Operations and Comprehensive Loss for the year ended December 31, 2018.

While the TCJA provides for a territorial tax system, beginning in 2018, it includes two new United States tax base erosion provisions, the global intangible low-taxed income ("GILTI") provisions and the base-erosion and anti-abuse tax provisions.

The GILTI provisions require the Company to include in its United States income tax return foreign subsidiary earnings in excess of an allowable return on the foreign subsidiary's tangible assets beginning in 2018. The Company does not believe that it will be subject to excess tax at this time under this new provision. In the event the Company becomes subject to this provision, it will elect to either account for the additional tax in the period in which it is incurred or to account for it through deferred taxes. On December 22, 2017, the SEC staff issued Staff Accounting Bulletin No. 118 to address the application of GAAP in situations when a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the TCJA. The Company has recognized the provisional tax impacts related to deemed repatriated earnings and the revaluation of deferred tax assets and liabilities and included these amounts in its

consolidated financial statements for the year ended December 31, 2017. The ultimate impact may differ from these provisional amounts, possibly materially, due to, among other things, additional analysis, changes in interpretations and assumptions the Company has made, additional regulatory guidance that may be issued, and actions the Company may take as a result of the TCJA. The accounting is expected to be complete when the 2018 United States corporate income tax return is filed in 2019.

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The Company applied the guidance in Staff Accounting Bulletin 118 when accounting for the enactment-date effects of the TCJA in 2017 and throughout 2018. At December 31, 2017, the Company had not completed its accounting for all of the enactment-date income tax effects of the TCJA under ASC 740, "Income Taxes," for the following aspects: remeasurement of deferred tax assets and liabilities, one-time transition tax, and tax on global intangible low-taxed income. At December 31, 2018, the Company completed its accounting for all of the enactment-date income tax effects of the TCJA. The Company did not recognize any material adjustments to the provisional amounts recorded at December 31, 2018.

11. Quarterly Results of Operations (Unaudited)

	Revenue	Gross profit	Operating expenses	Net loss	Basic and diluted loss per share
Three Months Ended:					
December 31, 2018	$34,693	$11,366	$35,062	$(25,955)	$(2.67)
September 30, 2018	34,756	22,627	38,546	(10,116)	(1.20)
June 30, 2018	44,740	29,604	45,110	(23,876)	(2.80)
March 31, 2018	42,284	28,326	41,397	(19,767)	(2.40)
Three Months Ended:					
December 31, 2017	$44,003	$31,356	$40,261	$(14,521)	$(1.67)
September 30, 2017	45,986	29,107	38,454	(14,273)	(1.70)
June 30, 2017	48,556	32,224	40,130	(16,292)	(2.00)
March 31, 2017	42,612	28,642	44,304	(21,314)	(2.60)

12. Restructuring Charges

In the years ended December 31, 2018, 2017 and 2016, the Company recorded $3.3 million, $1.5 million and $11.1 million, respectively, in restructuring costs within operating expenses related to focused reductions of its workforce. The Company began substantially formulating plans around this workforce reduction during the first quarter of 2016 in conjunction with its merger with TriVascular (see Note 13). The targeted reductions and other restructuring activities were initiated to improve efficiencies and re-align resources as well as to allow for continued investment in strategic areas and to drive growth.

In August 2018, the Company continued its restructuring activities including: restructuring certain aspects of its business and operations to re-prioritize its sales and marketing efforts; rationalizing its international presence and related expenses; streamlining its workforce and taking other measures to increase efficiencies; decreasing its cash consumption and decreasing its cost to serve; and refocusing its business on strong execution of its core strategies. The Company determined to streamline and restructure certain of its operations and implement certain management changes. These plans have resulted in significant changes in the composition of the senior management team.

As of December 31, 2018, the Company estimates that it will incur a total of $16.2 million in restructuring charges upon the completion of the plan, of which $15.8 million has already been incurred since the first quarter of 2016. The recognition of restructuring charges requires that the Company make certain judgments and estimates regarding the nature, timing and amount of costs associated with the reductions of its workforce. At the end of each reporting period, the Company will evaluate the remaining accrued balance to ensure that no excess accruals are retained and the utilization of the provisions are for their intended purpose in accordance with developed plans. The following table reflects the movement of activity of the restructuring reserve for the year ended December 31, 2018:

	One-time termination benefits

Accrual balance as of December 31, 2017	$ 1,008
Restructuring charges	3,270
Utilization	(3,716)
Accrual balance as of December 31, 2018	$ 562

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The accrual balance as of December 31, 2018 is classified within accrued expenses and other current liabilities in the Company's Consolidated Balance Sheets.

13. TriVascular Merger

On February 3, 2016, the Company completed its merger with TriVascular pursuant to the Agreement and Plan of Merger (the "TriVascular Merger Agreement"), dated October 26, 2015, by and among the Company, TriVascular and Teton Merger Sub, Inc., a Delaware corporation and direct wholly-owned subsidiary of the Company ("Merger Sub"). Pursuant to the terms of the TriVascular Merger Agreement, the Company acquired all of TriVascular's outstanding capital stock through the merger of Merger Sub with and into TriVascular (the "Merger"), with TriVascular surviving the Merger as a wholly-owned subsidiary of the Company. The Company completed the Merger to further its mission to be the leading innovator of medical devices to treat aortic disorders, leverage the combined company's commercial capabilities, and provide an accelerated path to profitability. The total consideration paid by the Company pursuant to the TriVascular Merger Agreement is as follows:

Cash consideration	$84,634
Common stock consideration	100,812
Fair value of assumed TriVascular warrants	44
Total consideration	$185,490

Common stock consideration consisted of 1,358,650 shares of the Company's common stock, valued at $100.8 million based on the market price of $74.20 per share as of February 3, 2016, the effective date of the Merger.

In connection with the Merger, the Company assumed stock warrants, originally issued by TriVascular, and converted them into warrants to purchase the Company's common stock. The fair value of the warrants represents a component of the total consideration for the Merger. The assumed warrants were valued using the Black-Scholes option pricing model as of the effective date of the Merger.

The acquisition was recorded by allocating the costs of the net assets acquired based on their estimated fair values at the acquisition date. The excess of the cost of the acquisition over the fair value of the net assets acquired was recorded as goodwill. The fair values were based on management's analysis, including work performed by third party valuation specialists. The following presents the final allocation of the total consideration to the assets acquired and liabilities assumed on February 3, 2016:

Cash and cash equivalents	$24,012
Short-term investments	3,008
Accounts receivable	5,780
Inventories	17,765
Prepaid expenses and other current assets	1,895
Property and equipment	3,152
Intangible assets	46,200
Other assets	317
Accounts payable	(2,214)
Accrued liabilities and other	(6,450)
Notes payable	(61)
Net assets acquired	93,404
Goodwill	92,086
Total consideration	$185,490

The goodwill is primarily attributable to strategic opportunities that arose from the acquisition of TriVascular, such as broadening the Company's product portfolio for the treatment of AAA and leveraging the combined company's technology and commercial capabilities. The goodwill is not expected to be deductible for tax purposes.

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Of the $46.2 million of acquired intangible assets, $7.5 million was assigned to customer relationships (10-year life), $27.5 million was assigned to developed technology (11-year life) and $11.2 million was assigned to in-process research and development.

14. Sales of Common Stock

At-the-Market Sales Agreement

On May 31, 2018, the Company filed a shelf registration statement to offer up to $100 million of its securities and entered into an “at-the-market” program pursuant to a Sales Agreement with Stifel, Nicolaus & Company, through which it may, from time to time, issue and sell shares of common stock having an aggregate offering value of up to $50 million. The registration statement was declared effective by the SEC on August 3, 2018. The Company believes that the “at-the-market” program will provide additional liquidity. In the year ended December 31, 2018, the Company sold 75,821 shares of common stock through the “at-the-market” program, for total proceeds of $1.8 million, net of fees and commissions.

Common Stock Offering

On October 24, 2018, the Company entered into an underwriting agreement with BTIG, LLC (the “Underwriting Agreement”) relating to the underwritten offering of 1,765,381 shares of the Company’s common stock (the “Offering”). BTIG, LLC agreed to purchase the shares pursuant to the Underwriting Agreement at a price of $11.3290 per share. The total net proceeds to the Company from the Offering were approximately $20.0 million, before deducting offering expenses payable by the Company. The Offering closed on October 29, 2018.

15. Subsequent Events

Nasdaq Continued Listing Deficiency and Plan of Compliance

On January 8, 2019, the Company received a letter (the “Letter”) from the Nasdaq Stock Market LLC (“Nasdaq“) indicating that Nasdaq has determined that the Company no longer meets the minimum bid price requirement of Nasdaq Listing Rule 5450(a)(1), as the minimum closing bid price for its common stock was less than $1.00 per share for the previous 30 consecutive business days.

The receipt of the Letter has no immediate effect on the listing of the Company’s common stock on the Nasdaq Global Select Market. Under Nasdaq Listing Rule 5810(c)(3)(A), the Company has a 180 calendar day grace period to regain compliance by meeting the continued listing standard. The continued listing standard will be met if the Company’s common stock has a minimum closing bid price of at least $1.00 per share for a minimum of 10 consecutive business days during the 180 calendar day grace period.

The Company regained compliance with the $1.00 minimum bid price for its common stock. See Part II, Item 7, “Management's Discussion and Analysis of Financial Condition and Results of Operations“ for additional information.

Equity Financing

Effective March 31, 2019, the Company entered into a Purchase Agreement (the “Purchase Agreement”) with select institutional investors and certain other parties (“Investors”), whereby the Company agreed to issue and sell to the Investors, and the Investors agreed to purchase, an aggregate of 7,889,552 shares (the “Equity Shares”) of the Company’s common stock (the “Common Stock”) at a price per share of $6.61 (the “Equity Offering Price”), for an aggregate cash purchase price of approximately $52.15 million (the “Financing”). For any Investor whose purchase of the Equity Shares would result in its beneficially owning in excess of 19.99% of the shares (the excess shares, the “Blocked Shares”) of the Common Stock outstanding immediately after giving effect to the issuance, in lieu of issuing the Blocked Shares which such Investor would have received, the Company will issue to such Investor a pre-paid warrant to purchase shares of Common Stock equal to the number of Blocked Shares that would have been received (the “Pre-Paid Warrants”) for the Equity Offering Price per share. Each Pre-Paid Warrant will be exercisable upon issuance, provided that such exercise does not result in the issuance of Blocked Shares, and will expire ten years from the date of issuance. The Company currently expects the conditions to closing contemplated by the Purchase Agreement to be

satisfied, and the closing contemplated thereunder, to take place on April 3, 2019.

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The description of the terms and conditions of the Purchase Agreement and the rights and obligations of the Company and the Investors in connection therewith are qualified by reference in their entirety to the definitive terms and conditions of the Purchase Agreement, the form of which is attached as Exhibit 10.1 to the Current Report on Form 8-K filed on April 1, 2019 (the "Form 8-K").

The Purchase Agreement is being filed in order to provide investors and the Company's stockholders with information regarding its terms and in accordance with applicable rules and regulations of the Securities and Exchange Commission (the "Commission"). Pursuant to the Purchase Agreement, each of the Company and the Investors made customary representations, warranties and covenants and agreed to indemnify each other for certain losses arising out of breaches of such representations, warranties, covenants and other specified matters. The representations, warranties and covenants were made by the parties to and solely for the benefit of each other and any expressly intended third party beneficiaries in the context of all of the terms and conditions of the Purchase Agreement and in the context of the specific relationship between the parties. Accordingly, investors and stockholders should not rely on the representations, warranties and covenants. Furthermore, investors and stockholders should not rely on the representations, warranties and covenants as characterizations of the actual state of facts or continuing intentions of the parties, since they were only made as of the date of the Purchase Agreement. Information concerning the subject matter of such representations, warranties and covenants may change after the date of the Purchase agreement, which subsequent information may or may not be fully reflected in the Company's reports or other filings with the Commission.

The Financing is being made pursuant to the registration statement on Form S-3, declared effective by the Commission on August 3, 2018 (Registration No. 333-225320), a base prospectus dated August 3, 2018 and a prospectus supplement to be filed prior to closing. A copy of the opinion of DLA Piper LLP (US) relating to the legality of the shares of common stock to be issued in the Financing is attached as Exhibit 5.1 to the Form 8-K.

The foregoing descriptions of the terms of the Purchase Agreement and the Pre-Paid Warrant are qualified in their entirety by reference to the text of such documents, copies of which are filed as Exhibits 10.1 and 4.1 to the Form 8-K.

Convertible Note Exchange

On March 31, 2019, the Company and two investors holding $73.4 million of the principal amount of the Company's 3.25% Convertible Senior Notes due 2020 (the "Holders") entered into an Exchange Agreement (the "Exchange Agreement") providing for the exchange of the Holders' existing notes (the "Existing Notes") for new 5.00% Voluntary Convertible Senior Notes due 2024 (the "New Voluntary Notes") and new 5.00% Mandatory Convertible Senior Notes due 2024 (the "New Mandatory Notes", and together with the New Voluntary Notes, the "New Notes"). The exchanging Holders will receive $900 principal amount of New Notes for every $1000 principal amount of Existing Notes plus accrued interest exchanged pursuant to the Exchange Agreement (the "Exchange"). The Company will issue $25.0 million of principal amount of the New Mandatory Notes and $42.02 million of principal amount of the New Voluntary Notes to the Holders. The New Notes are being issued in a transaction exempt from the registration requirements of the Securities Act of 1933, as amended (the "Securities Act") by virtue of Section 4(a)(2) of the Securities Act. The Company currently expects the conditions to closing contemplated by the Exchange Agreement to be satisfied, and the closing contemplated thereunder to take place, on April 3, 2019.

The New Voluntary Notes and New Mandatory Notes will be governed by separate Indentures (respectively, the "New Voluntary Notes Indenture" and "New Mandatory Notes Indenture", and collectively, the "Indentures"), each dated as of the closing of the Exchange (the "Closing Date"), by and between the Company and Wilmington Trust, National Association, as trustee (the "Trustee"). The New Notes will accrue interest at a rate of 5.00% per year, payable semi-annually in arrears on April 1 and October 1 of each year, commencing October 1, 2019. The New Notes will mature on the anniversary of the Closing Date in 2024, unless earlier purchased, redeemed or converted in accordance with the terms of the Indenture. The Indentures governing the New Notes will contain customary terms and covenants and events of default.

The New Voluntary Notes will be convertible at the option of each Holder into shares of common stock at any time on or after July 1, 2020, but prior to the close of business on the business day immediately preceding January 1, 2024, provided that, except if the Company undergoes a fundamental change (as defined in the New Voluntary Notes Indenture) and for certain other customary circumstances of conversion, each Holder may not convert more than 30% the initial aggregate principal amount of his or her outstanding New Voluntary Notes per calendar quarter (a "Voluntary Conversion"). Thereafter, until the close of business on the business day immediately preceding the maturity date, the New Voluntary Notes will be convertible at the option of the holder at any time regardless of the conditions described in this paragraph. The initial conversion rate of the New Voluntary Notes in a Voluntary Conversion is 0.12103 shares of the Company's common stock per $1.00 principal amount of the New Notes, which is equivalent to an initial conversion price per share equal to 125% of the Equity Offering Price (the "Voluntary Conversion Price"). The conversion rate is subject to adjustment upon the occurrence of certain specified events. Except if the Company undergoes a fundamental change (as defined in the New Voluntary Notes Indenture) and for certain

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other customary circumstances of conversion, in no event prior to the close of business on the business day immediately preceding January 1, 2024 may the New Voluntary Notes be converted in a calendar quarter unless the closing sale price of the Company's common stock for at least twenty (20) trading days during the period of thirty (30) consecutive trading days ending on the last trading day of the immediately preceding calendar quarter is greater than or equal to 110% of the Equity Offering (subject to adjustment upon the occurrence of certain specified events) (the "Voluntary Conversion Threshold").

The New Mandatory Notes provide for the mandatory conversion (a "Mandatory Conversion") of $1,666,666 of the aggregate principal amount each calendar month for fifteen (15) consecutive months beginning on the calendar month beginning with May 1, 2019, if and only if at the end of the prior calendar month the trailing average volume weighted average price ("VWAP") of the last five (5) trading days of the prior calendar month is greater than 100% of the Equity Offering Price (the "Mandatory Conversion Trigger"). In the event of a Mandatory Conversion, $1,666,666 of the New Mandatory Notes would mandatorily convert at a conversion rate of 0.15129 shares of the Company's common stock per $1.00 principal amount of the New Notes, which is equivalent to a price per share equal to the Equity Offering Price. The New Mandatory Notes will be convertible at the option of each Holder into shares of common stock at the Voluntary Conversion Price at any time prior to the close of business on the business day immediately preceding January 1, 2024, provided that, except if the Company undergoes a fundamental change (as defined in the New Mandatory Notes Indenture) and for certain other customary circumstances of conversion, each Holder may not convert more than 30% of the initial aggregate principal amount of his or her outstanding New Mandatory Note per calendar quarter, and provided further, that (i) voluntary conversions may be effected only if the Voluntary Conversion Threshold has been achieved and (ii) a voluntary conversion may not take place in the same calendar quarter as a Mandatory Conversion. Thereafter, until the close of business on the business day immediately preceding the maturity date, the New Mandatory Notes will be convertible at the option of the holder at any time regardless of the conditions described in this paragraph.

The Indentures will provide that in no event may a Holder convert, whether in a Voluntarily Conversion or a Mandatory Conversion or otherwise, into shares of common stock if such conversion would result in the Holder beneficially owning more that 9.5% of the Company's outstanding common stock. The foregoing descriptions of the terms of the Exchange Agreement, the Indentures and the New Notes are qualified in their entirety by reference to the text of such documents, copies of which are filed as Exhibits 10.2, 4.5, 4.6, 4.7 and 4.8 to the Form 8-K.

Second Amendment to Facility Agreement

On March 31, 2019, the Company entered into a Second Amendment to Amended and Restated Facility Agreement and First Amendment to Amended and Restated Guaranty and Security Agreement (the "Facility Amendment") with Deerfield Private Design Fund IV, L.P. and certain of its related funds and affiliates (collectively, "Deerfield"), dated August 9, 2018, as amended by that certain First Amendment to Amended and Restated Facility Agreement, dated November 20, 2018 (as so amended, the "Facility Agreement"). The Facility Amendment provides for, among other things, the reduction in the global excess liquidity covenant from $22.5 million to $17.5 million and the reduction of the minimum net revenue financial covenants. In addition, the percentage of the $120.0 million of first out waterfall loans (the "First Out Waterfall Loans") due on April 2, 2021 decreased from 33.33% to 16.67% of the First Out Waterfall Loans outstanding on such date, while the percentage of the remainder of the First Out Waterfall Loans due on April 2, 2022 remained at 50% of the First Out Waterfall Loans outstanding on such date.

The Facility Agreement provides for the exchange of the existing notes representing the First Out Waterfall Loans for amended notes (the "First Out Waterfall Notes") that provide that in the event that, in any calendar month beginning April 1, 2019 and ending June 30 2020 (the "Mandatory Conversion Period"), if (A)(i) the arithmetic mean of the volume weighted average prices of the Company's common stock (the "VWAP") on the five (5) consecutive trading days ending on the 15th calendar day (or, if not a trading day, the first trading day thereafter) (the "Mandatory Conversion Measurement Date") and (ii) the closing price for the Company's common stock on the Mandatory Conversion Measurement Date, both exceed $6.625 (as may be adjusted to reflect certain events) (the "Fixed Conversion Price") and

(B)(i) the VWAP on the five (5) consecutive trading days ending on (and including) the third (3rd) trading day immediately prior to the Mandatory Conversion Measurement Date (the "Initial Mandatory Conversion Measurement Date") and (ii) the closing price for the Company's common stock on the Initial Mandatory Conversion Measurement Date both exceed the Fixed Conversion Price, Deerfield shall be obligated to convert $1,666,666 of the principal amount of the loan into shares of common stock at the Fixed Conversion Price, up to a maximum aggregate amount of $25.0 million over the Mandatory Conversion Period.

Deerfield also has the option to convert up to an additional $50.0 million of the Company's outstanding debt (the "Voluntary Conversion Amount") at the greater of the Fixed Conversion Price and 85% of the arithmetic average of the volume weighted average price of the Company's common stock on each of the fifteen (15) consecutive trading days prior to the conversion date (the "15 Day VWAP"). The Company has the option to require conversion of the Voluntary Conversion

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Amount (less the amount of prior voluntary conversions) if the Company's 15 Day VWAP is greater than 175% of the Fixed Conversion Price. The First Amendment Waterfall Notes also provide that in no event may Deerfield convert, whether voluntarily or mandatorily, into shares of common stock if such conversion would result in Deerfield beneficially owning more that 4.985% of the Company's outstanding common stock. The First Out Waterfall Notes also revises Deerfield's existing right to convert a portion of the outstanding principal amount of the first-out waterfall loan into a maximum of 1,430,000 shares of the Company's common stock from the current conversion price of 96% of the arithmetic average of the volume weighted average price of the Company's common stock on each of the three (3) consecutive trading days prior to the conversion date (the "96% VWAP Price") to the greater of (i) $6.625 (subject to certain adjustments) or (ii) the 96% VWAP Price.

Further, the Facility Amendment also provides, upon the effectiveness, for an increase of $5,000,000 in the amounts payable to the holders of the First Out Waterfall Notes as a fee upon termination (or reduction, or required reduction of the outstanding amounts under the First Out Waterfall Notes to less than $10,000,000) under the Facility Agreement and to reimburse Deerfield for all expenses incurred by Deerfield in connection with the negotiation and documentation of the Facility Amendment. Also, the existing right of the Company to satisfy interest payments on the First Out Waterfall Loans with up to 250,000 shares of its common stock has been removed.

The Facility Amendment is conditioned upon completion of the Financing with gross proceeds to the Company of at least $40.0 million and the closing of the transactions contemplated by the Exchange Agreement, amongst other conditions.

In connection with entry into the Facility Amendment, the Company is amending warrants (the "Warrant Amendment") to purchase 647,001 shares of common stock previously issued to Deerfield pursuant to the Company's prior facility agreement with Deerfield dated, April 3, 2017 (as amended, the "2017 Warrants") and warrants to purchase 875,001 shares of common stock previously issued to Deerfield pursuant to the Facility Agreement (as amended, the "2018 Warrants" and, together with the 2017 Warrants, the "Warrants") in order to reduce the exercise price of the Warrants to the Equity Offering Price. All other material terms and conditions of the Warrants remain the same. Accordingly, the Facility Amendment is expected to become effective on or about April 3, 2019.

Second Amendment to Credit Agreement

On March 31, 2019, the Company entered into a Second Amendment to Credit Agreement and First Amendment to Guaranty and Security Agreement (the "Credit Amendment") with Deerfield ELGX Revolver, LLC and certain of its affiliates (collectively, "Deerfield"), dated August 9, 2018, as amended by that certain First Amendment to Credit Agreement, dated November 20, 2018 (as so amended, the "Credit Agreement"). The Credit Amendment includes conforming revisions to reflect the changes in the Facility Amendment. In addition, the Credit Amendment extends the maturity date of the Credit Agreement to the earlier or (i) April 2, 2023 or (ii) the date the loans pursuant to the Facility Agreement have been repaid in full.

The foregoing descriptions of the terms of the Facility Amendment, the form of Amended and Restated Initial (2017) Warrant, the form of Amended and Restated Additional (2018) Warrant, the First Out Waterfall Note, and the Credit Amendment are qualified in their entirety by reference to the text of such documents, copies of which are filed as Exhibits 10.4, 4.2, 4.3, 4.4 and 10.5 to the Form 8-K.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure
None.
Item 9A Controls and Procedures

Management's Annual Report on Internal Control over Financial Reporting
Our management, including our chief executive officer and chief financial officer, is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of the financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. This process includes those policies and procedures that: (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of our assets; (ii) 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 authorizations of our management and directors; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on our financial statements.
Because of its inherent limitations, internal control over financial reporting may not prevent or detect all material misstatements. In addition, projections of any evaluation of the internal control over financial reporting to future periods are subject to risk that the internal control may become inadequate because of changes in conditions, or that the degree of compliance with policies or procedures may deteriorate.
Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2018. In making this assessment, our management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in the report entitled Internal Control-Integrated Framework (2013). Based on its assessment, our management has concluded that, as of December 31, 2018, our internal control over financial reporting was effective based on those criteria.
KPMG LLP, an independent registered public accounting firm, has issued an attestation report on the effectiveness of our internal control over financial reporting as of December 31, 2018 as stated in its report, which is included herein.

Disclosure Controls and Procedures
We maintain disclosure controls and procedures, as defined in Rule 13a-15(e) and 15d-15(e) under the Exchange Act. Our disclosure controls and procedures are designed to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to 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, and management was required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

We carried out an evaluation, under the supervision of and with the participation of our management, including our chief executive officer and chief financial officer, of the effectiveness of our disclosure controls and procedures as of December 31, 2018, pursuant to Rule 13a-15(b) under the Exchange Act. Based on that evaluation, our chief executive officer and chief financial officer have concluded that our disclosure controls and procedures were effective as of December 31, 2018.

Changes in Internal Control over Financial Reporting
There has been no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the fourth quarter of the fiscal year ended December 31, 2018 that has materially

affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information
Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance
The information required hereunder is incorporated herein by reference to our definitive Proxy Statement on Schedule 14A related to our 2019 Annual Meeting of Stockholders, or to an amendment to this Annual Report on Form 10-K, to be filed within 120 days of December 31, 2018.
Item 11. Executive Compensation
The information required hereunder is incorporated herein by reference to our definitive Proxy Statement on Schedule 14A related to our 2019 Annual Meeting of Stockholders, or to an amendment to this Annual Report on Form 10-K, to be filed within 120 days of December 31, 2018.
Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters
The information required hereunder is incorporated herein by reference to our definitive Proxy Statement on Schedule 14A related to our 2019 Annual Meeting of Stockholders, or to an amendment to this Annual Report on Form 10-K, to be filed within 120 days of December 31, 2018.

Item 13. Certain Relationships and Related Transactions, and Director Independence
The information required hereunder is incorporated herein by reference to our definitive Proxy Statement on Schedule 14A related to our 2019 Annual Meeting of Stockholders, or to an amendment to this Annual Report on Form 10-K, to be filed within 120 days of December 31, 2018.

Item 14. Principal Accountant Fees and Services
The information required hereunder is incorporated herein by reference to our definitive Proxy Statement on Schedule 14A related to our 2019 Annual Meeting of Stockholders, or to an amendment to this Annual Report on Form 10-K, to be filed within 120 days of December 31, 2018.

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a) Financial Statements and Schedules

The following financial statements and schedules are included in this Annual Report on Form 10-K:

Reports of Independent Registered Public Accounting Firm

Consolidated Balance Sheets as of December 31, 2018 and 2017

Consolidated Statements of Operations and Comprehensive Loss for the years ended December 31, 2018, 2017 and 2016

Consolidated Statements of Stockholders' Equity for the years ended December 31, 2018, 2017 and 2016

Consolidated Statements of Cash Flows for the years ended December 31, 2018, 2017 and 2016

Notes to Consolidated Financial Statements

Financial Statement Schedule:

Schedule II - Valuation and Qualifying Accounts for the years ended December 31, 2018, 2017 and 2016. All other schedules are omitted, as required information is inapplicable or the information is presented in the Consolidated Financial Statements.

SCHEDULE II — VALUATION AND QUALIFYING ACCOUNTS

Years Ended December 31, 2018, 2017 and 2016

Column A	Column B	Column C		Column D	Column E
		Additions (reductions)			
Description	Balance at beginning of period	Charged to bad debt expense	Charged to other accounts	Deductions (1)	Balance at end of period
			(In thousands)		
Year ended December 31, 2018					
Allowance for doubtful accounts	$ 470	$ 552	$ —	$ (220)	$ 802
Year ended December 31, 2017					
Allowance for doubtful accounts	$ 1,037	$ (235)	$ —	$ (332)	$ 470
Year ended December 31, 2016					
Allowance for doubtful accounts	$ 226	$ 916	$ —	$ (105)	$ 1,037

(1) Deductions represent the actual write-off of accounts receivable balances.

(b) Exhibits

The following is a list of exhibits required by Item 601 of Regulation S-K filed as part of this Annual Report on Form 10-K. For exhibits that we previously filed with the SEC, we incorporate those exhibits herein by reference. The exhibit table below includes the form type and filing date of the previous filing, the original exhibit number in the previous filing which is being incorporated by reference herein, and a hyperlink thereto.

Exhibit Number		Exhibit Description
2.1		Agreement and Plan of Merger and Reorganization, dated October 27, 2010, by and among Endologix, Inc., Nepal Acquisition Corporation, Nellix, Inc., certain of Nellix, Inc.'s stockholders listed therein and Essex Woodlands Health Ventures, Inc., as representative of Nellix, Inc.'s stockholders (Incorporated by reference to Exhibit 2.1 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on October 27, 2010).
2.2		Agreement and Plan of Merger, dated October 26, 2015, by and among Endologix, Inc., Teton Merger Sub, Inc. and TriVascular Technologies, Inc. (Incorporated by reference to Exhibit 2.1 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on October 26, 2015).
3.1	(2)	Amended and Restated Certificate of Incorporation, (as updated through March 5, 2019 and currently in effect).
3.2	(2)	Amended and Restated Bylaw (as updated through June 14, 2018 and currently in effect).
4.1		Specimen Certificate of Common Stock (Incorporated by reference to Exhibit 4.1 to Amendment No. 2 to Endologix, Inc. Registration Statement on Form S-1, No. 333-04560, filed on June 10, 1996).
4.1.1		Updated Specimen Certificate of Common Stock effective as of May 22, 2014 (Incorporated by reference to Exhibit 4.1.1 to Endologix, Inc. Annual Report on Form 10-K, File No. 000-28440, filed on March 2, 2015).
4.2		Indenture, dated December 10, 2013, between Endologix, Inc. and Wells Fargo Bank, National Association, as trustee (Incorporated by reference to Exhibit 4.1 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on December 10, 2013).
4.3		First Supplemental Indenture, dated December 10, 2013, between Endologix, Inc. and Wells Fargo Bank, National Association, as trustee (Incorporated by reference to Exhibit 4.2 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on December 10, 2013).
4.4		Form of 2.25% Convertible Senior Notes due 2018 (Incorporated by reference to Exhibit A to Exhibit 4.2 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on December 10, 2013).
4.5		Second Supplemental Indenture, dated November 2, 2015, between Endologix, Inc. and Wells Fargo Bank, National Association, as trustee (Incorporated by reference to Exhibit 4.2 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on November 2, 2015).
4.6		Form of 3.25% Convertible Senior Notes due 2020 (Incorporated by reference to Exhibit A to Exhibit 4.2 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on November 2, 2015).
4.7		Form of Warrant to Purchase Common Stock of Endologix, Inc., issued to Deerfield Private Design Fund IV, L.P., Deerfield International Master Fund, L.P., Deerfield Partners, L.P., and Deerfield Private Design Fund III, L.P., together with a schedule of holders and amounts (issued April 3, 2017) (Incorporated by reference to Exhibit 4.1 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on April 5, 2017).
4.8		Registration Rights Agreement, dated April 3, 2017, by and among Endologix, Inc., Deerfield Private Design Fund IV, L.P., Deerfield International Master Fund, L.P., Deerfield Partners, L.P., and Deerfield Private Design Fund III, L.P. (Incorporated by reference to Exhibit 4.2 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on April 5, 2017).
4.9		Warrant, issued August 9, 2018, issued by Endologix, Inc. to Deerfield Private Design Fund III, L.P. (Incorporated by reference to Exhibit 4.1 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on August 10, 2018).
4.10		Warrant, issued August 9, 2018, issued by Endologix, Inc. to Deerfield Private Design Fund IV, L.P. (Incorporated by reference to Exhibit 4.2 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on August 10, 2018).
4.11		Warrant, issued August 9, 2018, issued by Endologix, Inc. to Deerfield Partners, L.P. (Incorporated by reference to Exhibit 4.3 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on

	August 10, 2018).
4.12	First Out Waterfall Note ($40,000,000), issued August 9, 2018, issued by Endologix, Inc. to Deerfield Private Design Fund III, L.P. (Incorporated by reference to Exhibit 4.4 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on August 10, 2018).
4.13	First Out Waterfall Note ($40,000,000), issued August 9, 2018, issued by Endologix, Inc. to Deerfield Private Design Fund IV, L.P. (Incorporated by reference to Exhibit 4.5 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on August 10, 2018).
4.14	First Out Waterfall Note ($22,320,000), issued August 9, 2018, issued by Endologix, Inc. to Deerfield Partners, L.P. (Incorporated by reference to Exhibit 4.6 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on August 10, 2018).

Exhibit Number		Exhibit Description
4.15		First Out Waterfall Note ($17,680,000), issued August 9, 2018, issued by Endologix, Inc. to Deerfield Partners, L.P. (Incorporated by reference to Exhibit 4.7 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on August 10, 2018).
4.16		Note, issued August 9, 2018, issued by Endologix, Inc. and certain of its subsidiaries to Deerfield Private Design Fund III, L.P. (Incorporated by reference to Exhibit 4.8 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on August 10, 2018).
4.17		Note, issued August 9, 2018, issued by Endologix, Inc. and certain of its subsidiaries to Deerfield Private Design Fund IV, L.P. (Incorporated by reference to Exhibit 4.9 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on August 10, 2018).
4.18		Note, issued August 9, 2018, issued by Endologix, Inc. and certain of its subsidiaries to Deerfield Partners, L.P. (Incorporated by reference to Exhibit 4.10 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on August 10, 2018).
4.19		Last Out Waterfall Note ($40,500,000), issued August 9, 2018, issued by Endologix, Inc. to Deerfield Partners, L.P. (Incorporated by reference to Exhibit 4.11 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on August 10, 2018).
10.1	(1)	Amended and Restated 2006 Employee Stock Purchase Plan, as amended (Incorporated by reference to Exhibit 10.2 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on June 7, 2016).
10.2	(1)	Amended and Restated 2015 Stock Incentive Plan, as amended (Incorporated by reference to Appendix A to Endologix, Inc. Definitive Proxy Statement on Schedule 14A, File No. 000-28440, filed on November 13, 2018).
10.2.1	(1)	Form of Stock Option Agreement under 2015 Stock Incentive Plan (Incorporated by reference to Exhibit 10.1 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on June 1, 2015).
10.2.2	(1)	Form of Restricted Stock Unit Award Agreement under 2015 Stock Incentive Plan (Incorporated by reference to Exhibit 10.1 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on June 1, 2015).
10.3	(1)	2017 Inducement Stock Incentive Plan (Incorporated by reference to Exhibit 10.1 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on October 30, 2017).
10.4	(1)	Severance Agreement and General Release, dated February 21, 2018, by and between Endologix, Inc. and John McDermott (Incorporated by reference to Exhibit 10.1 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on February 21, 2018).
10.5	(1)(2)	Amended and Restated Employment Agreement, dated as of December 4, 2018, by and between Endologix, Inc. and Vaseem Mahboob.
10.6.1	(1)	Separation Agreement and General Release, dated December 15, 2017, by and between Endologix, Inc. and Robert D. Mitchell, including the Agreement for Independent Contractor Services attached as Exhibit A thereto. (Incorporated by reference to Exhibit 10.9.1 to Endologix, Inc. Annual Report on Form 10-K, File No. 000-28440, filed on March 13, 2018).
10.6.2	(1)	

		Second Amendment to Restricted Stock Award Agreement, dated December 15, 2017, by and between Endologix, Inc. and Robert D. Mitchell. (Incorporated by reference to Exhibit 10.9.2 to Endologix, Inc. Annual Report on Form 10-K, File No. 000-28440, filed on March 13, 2018).
10.7	(1)	Employment Agreement, dated as of February 3, 2016, by and between Endologix, Inc. and Michael Chobotov, Ph.D. (Incorporated by reference to Exhibit 10.1 to Endologix, Inc. Quarterly Report on Form 10-Q, File No. 000-28440, filed on May 5, 2017).
10.8	(1)	Employment Agreement, dated as of February 3, 2016, by and between Endologix, Inc. and Shari O'Quinn (Incorporated by reference to Exhibit 10.2 to Endologix, Inc. Quarterly Report on Form 10-Q, File No. 000-28440, filed on May 5, 2017).
10.9	(1)	Form of Indemnification Agreement entered into with Endologix, Inc. officers and directors (Incorporated by reference to Exhibit 10.23 to Endologix, Inc. Annual Report on Form 10-K, File No. 000-28440, filed on March 3, 2014).
10.10	(1)	Employment Agreement, dated as of May 2, 2018, by and between Endologix, Inc. and John Onopchenko (Incorporated by reference to Exhibit 10.2 to Endologix, Inc. Quarterly Report on Form 10-Q, File No. 000-28440, filed on August 9, 2018).
10.11	(1)(2)	Amended and Restated Employment Agreement, dated as of December 4, 2018, by and between Endologix, Inc. and Jeremy Hayden.
10.12	(1)(2)	Amended and Restated Employment Agreement, dated as of December 4, 2018, by and between Endologix, Inc. and Matthew Thompson.

Exhibit Number	Exhibit Description
10.13	Standard Industrial/Commercial Multi-Tenant Lease - Net, for 2 Musick, Irvine, California and 35 Hammond, Irvine, dated June 12, 2013, by and between Endologix, Inc. and The Northwestern Mutual Life Insurance Company (Incorporated by reference to Exhibit 10.1 to Endologix, Inc. Quarterly Report on Form 10-Q, File No. 000-28440, filed with on August 5, 2013).
10.14 †	Cross License Agreement dated as of October 26, 2011, by and between Endologix, Inc. and Bard Peripheral Vascular, Inc. (Incorporated by reference to Exhibit 10.19 to Endologix Inc. Annual Report on Form 10-K, File No. 000-28440, filed on March 6, 2012).
10.15	Credit Agreement, dated August 9, 2018, by and among Endologix, Inc. and Deerfield ELGX Revolver, LLC and certain of its affiliates (Incorporated by reference to Exhibit 10.1 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on August 10, 2018).
10.15.1	First Amendment to Credit Agreement, dated November 20, 2018, by and among Endologix, Inc. and ELGX Revolver, LLC and certain of its affiliates (Incorporated by reference to Exhibit 10.1 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on November 26, 2018).
10.15.2	Amended and Restated Facility Agreement, dated August 9, 2018, by and among Endologix, Inc. and Deerfield Private Design Fund IV, L.P. and certain of its affiliates (Incorporated by reference to Exhibit 10.2 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on August 10, 2018).
10.15.3	First Amendment to Amended and Restated Facility Agreement, dated November 20, 2018, by and among Endologix, Inc. and Deerfield Private Design Fund IV, L.P. and certain of its affiliates (Incorporated by reference to Exhibit 10.2 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on November 26, 2018).
10.15.4	Amended and Restated Registration Rights Agreement, dated August 9, 2018, by and between Endologix, Inc. and Deerfield Private Design Fund IV, L.P. (Incorporated by reference to Exhibit 10.3 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on August 10, 2018).
10.15.5	Amended and Restated Guaranty and Security Agreement, dated August 9, 2018, by and among Endologix, Inc., its subsidiaries and Deerfield Private Design Fund IV, L.P. (Incorporated by reference to Exhibit 10.4 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on August 10, 2018).
10.15.6	Guaranty and Security Agreement, dated August 9, 2018, by and among Endologix, Inc., its subsidiaries and Deerfield ELGX Revolver, LLC. (Incorporated by reference to Exhibit 10.5 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on August 10, 2018).
10.15.7	Intercompany Subordination Agreement, dated August 9, 2018, by and among Endologix, Inc., its subsidiaries and Deerfield Private Design Fund IV, L.P. (Incorporated by reference to Exhibit 10.6 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on August 10, 2018).
10.15.8	Intercompany Subordination Agreement, dated August 9, 2018, by and among Endologix, Inc., its subsidiaries and Deerfield ELGX Revolver, LLC. (Incorporated by reference to Exhibit 10.7 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on August 10, 2018).
10.15.9	Intercreditor Agreement, dated August 9, 2018, by and among Endologix, Inc., its subsidiaries, Deerfield ELGX Revolver, LLC and Deerfield Private Design Fund IV, L.P. (Incorporated by reference to Exhibit 10.8 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on August 10, 2018).
10.15.10	Reaffirmation Agreement, dated August 9, 2018, by and among Endologix, Inc., its subsidiaries and Deerfield Private Design Fund IV, L.P. (Incorporated by reference to Exhibit 10.9 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on August 10, 2018).
10.15.11	Patent Security Agreement, dated August 9, 2018, by and among Endologix, Inc., certain of its subsidiaries and Deerfield ELGX Revolver, LLC. (Incorporated by reference to Exhibit 10.10 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on August 10, 2018).
10.15.12	Trademark Security Agreement, dated August 9, 2018, by and among Endologix, Inc., certain of its subsidiaries and Deerfield ELGX Revolver, LLC. (Incorporated by reference to Exhibit 10.11 to

	Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on August 10, 2018).
10.15.13	First Supplement to Patent Security Agreement, dated August 9, 2018, by and among Endologix, Inc., certain of its subsidiaries and Deerfield Private Design Fund IV, L.P. (Incorporated by reference to Exhibit 10.12 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on August 10, 2018).
10.15.14	First Supplement to Trademark Security Agreement, dated August 9, 2018, by and among Endologix, Inc., certain of its subsidiaries and Deerfield Private Design Fund IV, L.P. (Incorporated by reference to Exhibit 10.13 to Endologix, Inc. Current Report on Form 8-K, File No. 000-28440, filed on August 10, 2018).
10.16	Lease Agreement, dated June 16, 2005, by and among TriVascular, Inc., Carmel River, LLC, Carlsen Investments, LLC, and Rieger Investments, LLC. (Incorporated by reference to Exhibit 10.23 to Endologix, Inc. Annual Report on Form 10-K, File No. 000-28440, filed on March 13, 2018).

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Exhibit Number		Exhibit Description
10.16.1		Consent, Assignment, First Amendment to Lease and Non-Disturbance Agreement, dated March 28, 2008, by and among Boston Scientific Santa Rosa Corp., Carmel River, LLC, Carlsen Investments, LLC, Rieger Investments, LLC, and Boston Scientific Corporation. (Incorporated by reference to Exhibit 10.23.1 to Endologix, Inc. Annual Report on Form 10-K, File No. 000-28440, filed on March 13, 2018).
10.16.2		Second Amendment to Lease, dated December 6, 2011, by and among TriVascular, Inc., Sonoma Airport Properties LLC and Boston Scientific Corporation. (Incorporated by reference to Exhibit 10.23.2 to Endologix, Inc. Annual Report on Form 10-K, File No. 000-28440, filed on March 13, 2018).
10.16.3		Third Amendment to Lease, by and between TriVascular, Inc. and Sonoma Airport Properties LLC, dated July 3, 2017 (Incorporated by reference to Exhibit 10.4 to Endologix, Inc. Quarterly Report on Form 10-Q, File No. 000-28440, filed on August 4, 2017).
14		Code of Ethics for Chief Executive Officer and Principal Financial Officers (Incorporated by reference to Exhibit 14 to Endologix, Inc. Annual Report on Form 10-K, File No. 000-28440, filed on March 26, 2004).
21.1	(2)	List of Subsidiaries.
23.1	(2)	Consent of Independent Registered Public Accounting Firm (KPMG LLP).
24.1	(2)	Power of Attorney (included on signature page hereto).
31.1	(2)	Certification of Chief Executive Officer Pursuant to Rule 13a-14(a)/15d-14(a) under the Securities Exchange Act of 1934.
31.2	(2)	Certification of Chief Financial Officer Pursuant to Rule 13a-14(a)/15d-14(a) under the Securities Exchange Act of 1934.
32.1	(2)(3)	Certification of Chief Executive Officer Pursuant to Rule 13a-14(b)/15d-14(b) under the Securities Exchange Act of 1934 and 18 U.S.C. Section 1350.
32.2	(2)(3)	Certification of Chief Financial Officer Pursuant to Rule 13a-14(b)/15d-14(b) under the Securities Exchange Act of 1934 and 18 U.S.C. Section 1350.
101.INS	(2)	XBRL Instance Document
101.SCH	(2)	XBRL Taxonomy Extension Schema Document
101.CAL	(2)	XBRL Taxonomy Extension Calculation Link Base Document
101.DEF	(2)	XBRL Taxonomy Extension Definition Link Base Document
101.LAB	(2)	XBRL Taxonomy Extension Label Link Base Document
101.PRE	(2)	XBRL Taxonomy Extension Presentation Link Base Document

† Portions of this exhibit are omitted and were filed separately with the SEC pursuant to Endologix Inc.'s application requesting confidential treatment under Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

(1) These exhibits are identified as management contracts or compensatory plans or arrangements of the registrant pursuant to Item 15(a)(3) of Form 10-K.

(2) Filed herewith.

(3) Furnished herewith and not "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended.

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, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

ENDOLOGIX, INC.

By: /S/ JOHN ONOPCHENKO
John Onopchenko
Chief Executive Officer
(Principal Executive Officer)
Date: April 1, 2019

POWER OF ATTORNEY
We, the undersigned directors and officers of Endologix, Inc., do hereby constitute and appoint Vaseem Mahboob and Jeremy Hayden, and each of them, as our true and lawful attorneys-in-fact and agents with power of substitution, to do any and all acts and things in our name and on our behalf in our capacities as directors and officers and to execute any and all instruments for us and in our names in the capacities indicated below, which said attorney-in-fact and agent may deem necessary or advisable to enable said corporation to comply with the Securities Exchange Act of 1934, as amended, and any rules, regulations and requirements of the Securities and Exchange Commission, in connection with this Annual Report on Form 10-K, including specifically but without limitation, power and authority to sign for us or any of us in our names in the capacities indicated below, any and all amendments (including post-effective amendments) hereto; and we do hereby ratify and confirm all that said attorney-in-fact and agent shall do or cause to be done by virtue hereof.
Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ JOHN ONOPCHENKO (John Onopchenko)	Chief Executive Officer and Director (Principal Executive Officer)	April 1, 2019
/s/ VASEEM MAHBOOB (Vaseem Mahboob)	Chief Financial Officer (Principal Financial and Accounting Officer)	April 1, 2019
/s/ DAN LEMAITRE (Dan Lemaitre)	Chairman of the Board	April 1, 2019
/s/ THOMAS F. ZENTY III (Thomas F. Zenty III)	Director	April 1, 2019
/s/ THOMAS C. WILDER (Thomas C. Wilder)	Director	April 1, 2019
/s/ GUIDO J. NEELS (Guido J. Neels)	Director	April 1, 2019

/s/ GREGORY D. WALLER (Gregory D. Waller)	Director	April 1, 2019
/s/ LESLIE V. NORWALK (Leslie V. Norwalk)	Director	April 1, 2019