UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

☒ **ANNUAL REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2020

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission File Number 000-51470

AtriCure

AtriCure, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**34-1940305**
State or other jurisdiction of incorporation or organization	(I.R.S. Employer Identification Number)
7555 Innovation Way, Mason, OH	**45040**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number including area code: (513) 755-4100

Securities Registered Pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $.001 par value	ATRC	NASDAQ

Securities Registered Pursuant to Section 12(g) of the Act:
None

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

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

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

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

Large Accelerated Filer ☒ Accelerated Filer ☐ Non-Accelerated Filer ☐ Smaller Reporting Company ☐ Emerging Growth Company ☐

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

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

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

The aggregate market value of the voting Common Stock held by non-affiliates of the registrant, based upon the closing sale price of the Common Stock on June 30, 2020, the last business day of the registrant's most recently completed second fiscal quarter as reported on the NASDAQ Global Market, was $1,960.6 million.

Class	**Outstanding February 24, 2021**
Common Stock, $.001 par value	45,573,003

DOCUMENTS INCORPORATED BY REFERENCE

Items 10, 11, 12, 13 and 14 of Part III of this Form 10-K incorporate information by reference from the registrant's definitive proxy statement to be filed with the Securities and Exchange Commission within 120 days after the end of the fiscal year covered by this Form 10-K.

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This Form 10-K, including the sections titled "Management's Discussion and Analysis of Financial Condition and Results of Operations", "Risk Factors" and "Quantitative and Qualitative Disclosures about Market Risk" contains forward-looking statements regarding our future performance. All forward-looking information is inherently uncertain and actual results may differ materially from assumptions, estimates or expectations reflected or contained in the forward-looking statements as a result of various factors, including those set forth under "Risk Factors" and elsewhere in this Form 10-K. Forward-looking statements address our expected future business, financial performance, financial condition and results of operations, and often contain words such as "intends," "estimates," "anticipates," "hopes," "projects," "plans," "expects," "seek," "believes," "see," "should," "will," "would," "could," "can," "may," "future," "predicts," "target," and similar expressions and the negative versions thereof. Such statements are based only upon current expectations of AtriCure. Any forward-looking statement speaks only as of the date made. Reliance should not be placed on forward-looking statements because they involve known and unknown risks, uncertainties and other factors which may cause actual results, performance or achievements to differ materially from those expressed or implied. Forward-looking statements include statements that address activities, events, circumstances or developments that AtriCure expects, believes or anticipates will or may occur in the future. Forward-looking statements are based on AtriCure's experience and perception of current conditions, trends, expected future developments and other factors it believes are appropriate under the circumstances and are subject to numerous risks and uncertainties, many of which are beyond AtriCure's control. With respect to the forward-looking statements, we claim the protection of the safe harbor for forward-looking statements contained in the Private Securities Litigation Reform Act of 1995. These forward-looking statements speak only as of the date of this Form 10-K. We undertake no, and hereby disclaim any and all, obligation to publicly update or revise any forward-looking statements to reflect new information or future events or otherwise unless required by law.

WEBSITE AND SOCIAL MEDIA DISCLOSURE

We use our website (www.atricure.com) and our corporate Facebook, YouTube, LinkedIn, and Twitter accounts as channels of distribution of company information. The information we post through these channels may be deemed material. Accordingly, investors should monitor these channels, in addition to following our press releases, Securities and Exchange Commission, or SEC, filings and public conference calls and webcasts. The contents of our website and social media channels are not, however, a part of this report.

TRADEMARKS

We own or have the rights to use various trademarks referred to in this Annual Report on Form 10-K, including Isolator® clamp, Synergy ™ clamp, Epi-Sense® coagulation device, AtriClip® Flex·V®, and cryoSPHERE® probe, among others, and their respective logos. Solely for convenience, we may refer to trademarks in this Annual Report on Form 10-K without the ™ and ® symbols. Such references are not intended to indicate, in any way, that we will not assert, to the fullest extent permitted by law, our rights to our trademarks.

MARKET AND INDUSTRY INFORMATION

Market data used throughout this Annual Report on Form 10-K is based on management's knowledge of the industry and good faith estimates of management. All of management's estimates presented herein are based on industry sources, including analyst reports and management's knowledge. We also relied, to the extent available, upon management's review of independent industry surveys and publications prepared by a number of sources and other publicly available information. We are responsible for all of the disclosures in this Annual Report on Form 10-K and while we believe that each of the publications, studies and surveys used throughout this Annual Report on Form 10-K are prepared by reputable sources, we have not independently verified market and industry data from third-party sources.

All of the market data used in this Annual Report on Form 10-K involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. While we believe the estimated market position, market opportunity and market size information included in this Annual Report on Form 10-K is generally reliable, such information, which in part is derived from management's estimates and beliefs, is inherently uncertain and imprecise and has not been verified by any independent source. Projections, assumptions and estimates of our future performance and the future performance of the industry in which we operate are subject to a high degree of uncertainty and risk due to a variety of factors, including those described in "Item 1A. Risk Factors" of Part I of this Annual Report on Form 10-K and elsewhere in this Annual Report on Form 10-K. These and other factors could cause results to differ materially from those expressed in our estimates and beliefs and in the estimates prepared by independent parties.

PART I

(Dollar and share amounts referenced in this Part I are in thousands.)

ITEM 1. BUSINESS

Overview

We are a leading innovator in treatments for atrial fibrillation (Afib) and left atrial appendage (LAA) management. According to the American Heart Association, Afib affects 1-2% of the population in the United States. It is the most common cardiac arrhythmia, or irregular heartbeat, encountered in clinical practice and results in high utilization of healthcare services by Afib patients. Symptoms of Afib may include heart palpitations, dizziness, fatigue and shortness of breath, and these symptoms may be debilitating and life threatening in some cases. When a patient is in Afib, abnormal electrical impulses cause the atria, or upper chambers of the heart, to fibrillate, or beat rapidly, irregularly, and in an uncoordinated fashion. As a result, blood in the atria may be in stasis, increasing the risk that a blood clot will form and cause a stroke or other serious complications. In patients with Afib, a significant percentage of those clots can form inside of the LAA. Patients often progress from being in Afib intermittently (paroxysmal) to being in Afib continuously. The continuous Afib patient population includes persistent Afib, which lasts seven days to one year, and long-standing persistent Afib, which lasts longer than one year. Afib often occurs in conjunction with other cardiovascular diseases, including hypertension, congestive heart failure, left ventricular dysfunction, coronary artery disease and valvular disease.

Our ablation and left atrial appendage management (LAAM) products are used by physicians during both open-heart and minimally invasive procedures. In open-heart procedures, the physician is performing heart surgery for other conditions and our products are used in conjunction with ("concomitant" to) such a procedure. Minimally invasive procedures are performed on a standalone basis, and often include multi-disciplinary or "hybrid" approaches, combining both surgical procedures using AtriCure ablation and LAAM products and catheter ablation.

We believe that we are currently the market leader in the surgical treatment of Afib. Our Isolator® Synergy™ Ablation System is approved by the United States Food and Drug Administration (FDA) for the treatment of persistent and long-standing persistent Afib concomitant to other open-heart surgical procedures. All of our other ablation devices are cleared for sale in the United States under FDA 510(k) clearances, including our other radio frequency (RF) and cryoablation products, which are indicated for the ablation of cardiac tissue and/or the treatment of cardiac arrhythmias. In addition, certain of our cryoablation probes are cleared for managing pain by temporarily ablating peripheral nerves, or cryo nerve block therapy. In January 2021, we announced 510(k) clearance of additional labeling claims for cryo nerve block therapy to include the treatment of adolescent patients (12-21 years of age). Our AtriClip® LAA Exclusion System products are 510(k)-cleared with an indication for the exclusion of the LAA, performed under direct visualization and in conjunction with other cardiac surgical procedures. Direct visualization, in this context, requires that the surgeon is able to see the heart directly, with or without assistance from a camera, endoscope or other appropriate viewing technologies. The LARIAT® system is cleared for soft tissue ligation. Several of our products are currently being studied to expand labeling claims or to support indications specifically for the treatment of Afib. Our Isolator Synergy clamps, Isolator Synergy pens, Coolrail® linear pen, cryoablation devices, certain products of the AtriClip LAA Exclusion System, COBRA Fusion® Ablation System, the EPi-Sense® Guided Coagulation System with VisiTrax® technology, and LARIAT Suture Delivery Device bear the CE mark and may be commercially distributed throughout the member states of the European Union and other countries that comply with or mirror the Medical Device Directive. Our Isolator Synergy clamps, Isolator Synergy pens, Coolrail linear pen, cryoablation devices, and certain products of the AtriClip LAA Exclusion System are available in select Asia-Pacific countries. We anticipate that substantially all of our revenue for the foreseeable future will relate to products we currently sell or are in the process of developing.

We sell our products to medical centers through our direct sales force in the United States and in certain international markets, such as Germany, France, the United Kingdom and the Benelux region. We also sell our products to distributors who in turn sell our products to medical centers in other international markets. Our business is primarily transacted in U.S. Dollars with the exception of transactions with our European customers, which are transacted primarily in the Euro or the British Pound.

Market Overview

Afib is the most commonly diagnosed sustained cardiac arrhythmia with approximately 1.2 million diagnoses annually in the United States, and affects approximately 33 million people worldwide. It is estimated that the incidence of Afib doubles with each decade of an adult's life. At age 40, remaining lifetime risk for Afib is 26% for men and 23% for women. Afib is an under-diagnosed condition due in large part to the fact that patients with Afib often have mild or no symptoms, and their Afib is often only diagnosed when they seek treatment for an associated condition, such as a structural heart disease or stroke. We believe that increasing awareness of Afib and improved diagnostic screening will result in an increased number of patients diagnosed with Afib over time. Also, since the prevalence of Afib increases with age, there will likely be an increase in the number of diagnosed Afib patients in the United States as the population ages. We believe that the same trends in the United States apply globally.

Afib is a condition that doctors often find difficult to treat and, historically, there has been no widely accepted long-term cure for Afib. This difficulty is exacerbated with more serious forms of Afib, or persistent and long-standing persistent Afib. Over the past two decades, technology advancements have made surgical ablation more effective, repeatable and available to cardiac surgeons and electrophysiologists around the world. Societal guideline changes from the Society of Thoracic Surgeons (STS), Heart Rhythm Society (HRS), and American Association of Thoracic Surgery (AATS) have Class I recommendations for surgical ablation, meaning that it is a "recommended" treatment, no longer just "reasonable", for patients who have structural heart disease and Afib. In addition, guidelines for the treatment of more serious forms of Afib have also been introduced in the past several years. These societal guidelines are reflective of the scientific evidence suggesting that surgical ablation is safe and effective for patients who have Afib.

Of the patients undergoing open-heart surgery globally on an annual basis, we estimate that over 250,000 are potential candidates for surgical ablation using our products. Today, we estimate that approximately 25% to 35% of those candidates are being treated, but we believe many are not treated properly or fully. Of the population diagnosed with Afib, a large percentage of patients are symptomatic and do not respond to pharmacological therapy. Additionally, there is a large population of patients who have no other underlying cardiac disease but who suffer from serious forms of Afib. Many of these patients fail traditional therapies, and thus we believe could benefit from a minimally invasive or hybrid Afib treatment using our products.

In addition, Afib is thought to be responsible for approximately 15% to 20% of the estimated 800,000 strokes that occur annually in the United States. According to the American Heart Association, the risk of stroke is five times higher in people with Afib. Studies have also suggested that 90% of clots that cause strokes in patients who have Afib originate from within the LAA. Afib accounts for billions of dollars in hospitalization-related and office visit costs in the United States each year. Indirect costs, such as the management of Afib-related strokes, are believed to be significant. Because of the risk of stroke and the significant cost burden on the healthcare system, more and more surgeons are routinely addressing the LAA, both in patients who have Afib, but also in those who do not have Afib but may be at increased risk of developing the disease in the future. We believe that our AtriClip system is safer, more effective and easier to use than other products and techniques for excluding the LAA during cardiac surgery. Therefore, we believe that the market for the AtriClip system represents a significant growth opportunity.

Cardiothoracic and thoracic surgery involving an incision through the ribcage, typically referred to as thoracotomy access, can often times result in post-operative pain and longer hospital recovery times as patients refrain from mobilizing their chest near the incision site. Most surgeons will employ a multi-modal pain management protocol that includes global and local pain management techniques, including epidural delivery of medication directly around the spinal cord, intravenous, or oral delivery of opioid and non-opioid pain medications. More focused, local techniques include syringe injections between vertebrates and cryo nerve block, the use of cryo-energy to temporarily ablate peripheral nerves. Cryo nerve block can be delivered using our cryoICE cryoSPHERE® probe, which is specifically designed for cryo nerve block, as well as our cryoICE CRYO2 probe, one of the same probes used to treat cardiac arrhythmias. Depending on the degree of invasiveness, physicians and their nursing staff will take advantage of multiple modes of pain management. It is estimated that each year roughly 140,000 cardiac and thoracic procedures are performed in the United States through thoracotomy access. Hospital recovery times can vary from two to eight days depending on the procedure, operative complications associated with the procedure, pain management protocol, and other factors. In recent years, opioids have come under heavy scrutiny due to their potential for long-term dependency, overdose and possible death. The Center for Disease Control has reported over 49,000 deaths involving opioids in the United States in a single year, and both federal and local governments in the United States have proposed and implemented new regulations to curb the opioid overdose epidemic. It is also estimated that one in seven cardiothoracic surgical patients develops an unhealthy post-procedural addiction to prescription narcotics, making alternative, non-opioid pain management modalities, such as cryo nerve block, increasingly important.

The AtriCure Solution and Products

Our products enable cardiothoracic surgeons to mimic all or portions of the cut and sew Maze procedure with faster, less invasive and less technically challenging approaches. We have completed, and continue to invest in, clinical studies for the use of our ablation and left atrial appendage management products to treat Afib. Leading cardiothoracic surgeons and electrophysiologists, including those who serve or who have served as consultants to us, have published results of pre-clinical and clinical studies utilizing our devices. The results of these studies have assessed efficacy, ease of use and safety endpoints.

Products for cardiac tissue ablation include those that heat tissue using radio frequency (RF) energy to create the tissue effects or those that cool tissue using cryo-thermal heat transfer to create the tissue effects. Our ablation products are part of platforms each consisting of disposable handpieces which connect to compact RF power generation sources or the cryoICE Box generator that we generally place with our direct customers and sell to our distributors.

Products for open and minimally invasive ablation:

- **Isolator Synergy Clamps.** Our Isolator Synergy System historically represented our primary product line and currently generates the majority of our ablation-related revenue. All of our clamps are single-use disposable RF products with jaws that close in a parallel fashion. We sell multiple configurations of our Isolator Synergy clamps with the primary difference being the form of the clamping jaws. The parallel closure compresses tissue and evacuates the blood and fluids from the energy pathway in order to make the ablation more effective. The Isolator Synergy System is currently being evaluated under the DEEP AF IDE pivotal trial and was previously studied under the ABLATE clinical trial supporting a pre-market approval (PMA) in 2011.
- **Multifunctional Pens and Linear Ablation Devices.** These devices are single-use disposable RF products that come in multiple configurations which have different contact lengths. The MAX Pen devices enable surgeons to evaluate cardiac arrhythmias, perform temporary cardiac pacing, sensing and stimulation and ablate cardiac tissue with the same device. Surgeons are able to readily toggle back and forth between these functions. The Coolrail device enables the user to make longer linear lines of ablation. Surgeons generally use one or more of our pen and linear devices in combination with Isolator Synergy clamps.

Products for open ablation:

- **cryoICE Cryoablation System.** The cryoICE cryoablation system is used in open ablation procedures and consists of the cryoICE Box generator along with a single-use disposable probe. The primary differences between these cryoablation probes is the form of the distal end. The cryoICE devices enables the user to make linear ablations of varied lengths. Surgeons may utilize the cryoICE devices in combination with Isolator Synergy clamps or independently. The ICE-AFIB clinical trial is studying the safety and efficacy of the cryoICE system for persistent and long-standing persistent Afib treatment during concomitant on-pump cardiac surgery. The cryoSPHERE system and certain cryoICE devices are used to apply cryo-energy to targeted intercostal peripheral nerves in the ribcage in order to provide temporary pain relief. This technique, called cryo nerve block, is applied intra-operatively by cardiothoracic or thoracic surgeons and results in temporary pain relief for up to 90 days after the procedure. Sensation typically returns to the affected region of the chest after this period. Studies, including the FROST trial, are ongoing to characterize the effects of cryo nerve block and further refine the procedure.

Products for minimally invasive ablation:

- **EPi-Sense Guided Coagulation System with VisiTrax Technology.** The EPi-Sense Guided Coagulation System with VisiTrax technology utilizes monopolar RF energy for the coagulation of tissue. The Epi-Sense device is a single-use disposable which is also capable of intra-operative cardiac signal sensing and recording when connected to an external recording device. The CONVERGE IDE clinical trial evaluated the safety and efficacy of the EPi-Sense Guided Coagulation System with VisiTrax technology to treat symptomatic persistent and long-standing persistent Afib patients who are refractory or intolerant to at least one Class I and/or III anti-arrhythmic drug. The results from the trial have been submitted to the FDA as part of a PMA submission.

Products for appendage management:

- **AtriClip System**. The AtriClip System includes an implantable device (AtriClip) coupled to a single-use disposable applier. The AtriClip is designed to exclude the left atrial appendage by mechanically clamping the appendage from the outside of the heart, eliminating blood flow between the left atrial appendage and the atrium while avoiding contact with circulating blood. We believe that the AtriClip system is potentially safer, more effective and easier to use than other available products and techniques for permanently excluding the left atrial appendage. These benefits compared to other techniques include permanent exclusion and electrical isolation of the appendage. The AtriClip device comes in a variety of lengths allowing the user to select a configuration specific to the patient and in two geometries (a rectangular configuration which encircles the targeted tissue and "V" shape which allows lateral access for improved usability). The appliers come in multiple forms tailored to specific procedural needs and with different deployment mechanisms. The AtriClip System includes various combinations of AtriClips and appliers.
- **LARIAT System**. The LARIAT System is a suture-based solution for soft-tissue closure and is compatible with a wide range of anatomical shapes. The product is currently being studied in the aMAZE IDE clinical trial. The Lariat System includes a suture loop coupled to a single-use disposable applier. The loop is designed to exclude the left atrial appendage by mechanically cinching the appendage from the outside of the heart, eliminating blood flow between the left atrial appendage and the atrium while avoiding contact with circulating blood. The objective of the aMAZE IDE clinical trial is to demonstrate that using the LARIAT System for left atrial appendage exclusion, plus

a pulmonary vein isolation (PVI) catheter ablation, will lead to a reduced incidence of recurrent Afib compared to PVI alone, with a favorable safety profile.

In addition to the above product lines we also sell enabling technologies including our Lumitip™ dissectors, COBRA Fusion Surgical Ablation System, the Fusion Magnetic Retriever System and a line of reusable cardiac surgery (valve) instruments. The Lumitip dissector is used by surgeons to separate tissues to provide access to key anatomical structures that are targeted for ablation. Cardiac surgery instruments are used during certain surgical procedures for repair or replacement of heart valves.

Current Afib Treatment Alternatives

Physicians usually begin treating Afib patients with a variety of drugs intended to prevent blood clots, control heart rate or restore the heart to normal sinus rhythm. If a patient's Afib cannot be adequately controlled with drug therapy, doctors may perform one of several open-heart or minimally-invasive procedures that vary depending on the severity of the Afib symptoms and whether or not the patient suffers from other forms of heart disease. Often, Afib procedures are performed concomitantly with other cardiac treatments.

Alternative treatments to open-heart and minimally invasive procedures include:

- *Drug Therapy.* Pharmaceutical options called anti-arrhythmics are available to treat Afib. Depending on a patient's severity of the disease and heart condition, physicians typically administer these medications in a hospital setting with continuous monitoring. If the patient goes back into a normal rhythm, the physician will often prescribe a similar anti-arrhythmic drug to try to prevent a recurrence of Afib. The effectiveness of drug therapy varies based on the patient population and the drug being prescribed, among other factors. Often, pharmaceuticals to thin the blood (anti-coagulants) are prescribed due to the increased risk of stroke for patients who also have Afib.
- *Implantable Devices.* Implantable devices, such as defibrillators and pacemakers, can be effective in reducing the symptoms of Afib episodes, but neither device is intended to treat Afib. Patients may continue to experience the adverse effects of Afib as well as some of the symptoms and complications, including dizziness, fatigue, palpitations and stroke because the Afib continues.
- *Catheter Ablation.* Catheter ablation is a procedure that is typically performed by an electrophysiologist. The ablations are made from the inside of the heart using a flexible catheter. The heart is reached via a blood vessel, most commonly through the femoral vein. In proportion to the prevalence of Afib, less than 6% of patients receive catheter-based Afib treatments each year in the United States. The rate of treatment is even lower for long-standing persistent patients in which less than 1% receive catheter-based Afib treatments.

We do not promote our products specifically for Afib treatment in the United States, except for the Isolator Synergy System, which may be promoted according to its FDA-approved indication for patients with persistent and long-standing persistent Afib undergoing certain open concomitant procedures. During elective open-heart surgical procedures, such as bypass or valve surgery, cardiothoracic surgeons use our ablation systems to treat patients with a pre-existing history of Afib. Surgeons use our products to perform cardiac procedures that may vary depending on the length of time a patient has been diagnosed with Afib and whether the patient's Afib is intermittent (paroxysmal), or continuous (non-paroxysmal), which is typically further classified as persistent or long-standing persistent. Patients who have been diagnosed with Afib for a longer duration and have persistent or long-standing persistent forms of Afib generally receive more extensive ablation procedures than patients who have been diagnosed with Afib for a shorter duration or who have paroxysmal Afib. Additionally, during an open-heart procedure, physicians may use our AtriClip system to exclude the LAA.

For those patients with Afib who do not require a concomitant open-heart surgical procedure, surgeons have used our products for minimally invasive Afib treatment procedures. These procedures have generally been performed through small incisions without the need to place patients on a heart-lung bypass machine. We do not currently have any products with FDA-approved indications for the standalone treatment of Afib, but we have two IDE trials underway at various stages of completion. Additionally, during a minimally invasive surgical procedure, physicians may use our AtriClip system to exclude the LAA.

Certain physicians are combining various minimally invasive stand-alone epicardial ablation procedures (surgical ablation on the outside of the heart) with endocardial ablation and mapping techniques (catheter ablation from the inside of the heart). The combination of procedures are often referred to as "hybrid" or "multi-disciplinary" approaches, in that both surgical ablation and catheter ablations are performed. Sometimes, both procedures are performed on the same day or in the same hospital stay, where other times they are performed weeks or months apart. Patient health condition, physician preference, hospital logistics and procedural room availability influence the decision whether to perform hybrid ablations in a single or a staged setting. Physicians are reporting that they are performing these procedures utilizing certain of our products to primarily treat patients who have non-paroxysmal forms of Afib.

Business Strategy

We are passionately focused on reducing the global Afib epidemic and healing the lives of those affected. Our strategy is to expand the treatment options for patients who suffer from Afib or have a high risk of stroke through the continued development of

our technologies and expansion of our product offerings, global commercial expansion and clinical science investments. The key elements of our strategy include:

New Product Innovation. Our product development pipeline includes projects which extend and improve our existing products, as well as research and development projects for new technologies. We plan to continue to develop new and innovative products, including those that allow us to enter new market opportunities or expand our growth in existing markets.

Invest in Clinical Science. We continue to invest in landmark clinical trials, including the CONVERGE, aMAZE IDE and ICE-AFIB IDE trials, to validate the long-term results of procedures using our products and to support applications to regulatory agencies for expanded indications. We also make clinical research grants to support our product development efforts and expand the body of clinical evidence.

Build Physician and Societal Relationships. We have formed consulting relationships with cardiothoracic surgeons, cardiologists, electrophysiologists and thoracic surgeons who work with us to develop and evaluate our products. Additionally, we have formed advisory boards made up of key opinion leaders in multiple specialties to oversee our training and clinical programs. We are building these relationships to provide insight regarding treatment trends, input on future product direction and education for providers involved in treating the disease.

We are partnering with leading surgical and cardiology societies to increase the awareness of Afib treatment options. In the past three years, both the Society for Thoracic Surgeons and the Heart Rhythm Society have released new guidelines on the surgical treatment of Afib in both open-heart and minimally-invasive settings.

Provide Training and Education. We have recruited and trained sales and physician education professionals to effectively communicate to our customers the unique features and benefits of our technologies as they relate to their indications for use. Our highly trained professionals meet with physicians at institutions around the world to provide education and technical training on the features, benefits and safe-and-effective use of our products. With the approval of our Isolator Synergy System, we instituted a program to train providers on the use of the Isolator Synergy System to treat persistent and long-standing persistent Afib in patients undergoing open-heart surgery. We believe this training and education program has increased awareness about the surgical treatment of Afib during open-heart procedures, and we will continue to make investments to serve our physician customers. As a result of the educational process, we believe that awareness of our technologies is growing and will result in the increased use of our products.

Expand Adoption of Our Minimally Invasive Products. We believe that the catalysts for expanded adoption of our minimally invasive products include completing clinical trials, including the CONVERGE, aMAZE IDE and DEEP AF IDE clinical trials, procedural advancements, such as the hybrid or multi-disciplinary procedure, continued innovation and product development, and the publication of additional scientific evidence supporting the safety and efficacy of hybrid treatments for persistent and long-standing persistent Afib. We believe these efforts will help validate the successful, long-term use of our products for patients with persistent and long-standing persistent Afib. We believe that ongoing research activities, including prospective clinical trials, new procedural techniques and anticipated presentations and publications will create an increased demand for our minimally invasive products.

Evaluate Acquisition Opportunities. We expect to continue to be opportunistic with respect to acquisitions. We evaluate acquisition opportunities on a variety of factors, including investment in clinical science, product innovation and strategic and financial considerations.

Clinical Trials

In the United States, a significant risk device requires the prior submission of an application for an Investigational Device Exemption (IDE) to FDA for approval before initiating a clinical trial. Clinical trials are required to support a pre-market approval (PMA) and are sometimes required for 510(k) clearance. Some trials require a feasibility study followed by a pivotal trial. We are conducting several clinical trials to validate the long-term results of procedures using our products and to support applications to regulatory agencies for expanded indications. In addition, we also conduct various studies to gather clinical data regarding our products. Key trials and studies are:

CONVERGE. We are conducting the CONVERGE IDE clinical trial to evaluate the safety and efficacy of the EPi-Sense Guided Coagulation System with VisiTrax technology to treat symptomatic persistent and long-standing persistent Afib patients who are refractory or intolerant to at least one Class I and/or III anti-arrhythmic drug. The trial provides for enrollment of up to 153 patients at 27 domestic medical centers and three international medical centers. Enrollment began in 2014 and was completed in August 2018. The study protocol requires patient follow-up for twelve months post procedure for the primary effectiveness endpoint assessment and long-term follow-up through five years. The last PMA module was submitted in December 2019. Throughout 2020, we have conducted several meetings with FDA as they review our PMA submission, and we continue to actively work with FDA to complete the regulatory process. In November 2020, we submitted our responses to FDA, seeking PMA approval of the EPi-Sense

system for an indication for treatment of symptomatic, drug-refractory, long-standing persistent atrial fibrillation, when augmented with an endocardial ablation catheter. We are currently waiting for feedback from FDA.

aMAZE. In connection with our acquisition of SentreHEART in August 2019, we are conducting the aMAZE IDE clinical trial. aMAZE is an FDA-approved, prospective, multicenter, randomized controlled trial evaluating the LARIAT system for LAA exclusion adjunctive to PVI catheter ablation for the treatment of persistent and long-standing persistent Afib. The objective of the aMAZE IDE trial is to demonstrate that using the LARIAT system for LAA exclusion, plus a PVI catheter ablation, will lead to a reduced incidence of recurrent Afib compared to PVI alone, with a favorable safety profile. The aMAZE IDE trial provides enrollment of up to 600 patients at 65 sites with one-year follow up. Enrollment was completed in December 2019, and patient follow-up for twelve months post PVI catheter ablation required by the study protocol remains ongoing. At this time, we have not experienced a significant delay in patient follow-up. However, we are unable to predict the occurrence of future delays as a result of the COVID-19 pandemic. In January 2020, we received approval for a CAP for the aMAZE IDE trial. The aMAZE CAP provides for additional patient enrollment of up to 85 patients at existing aMAZE IDE trial sites, with the opportunity to further expand to 250 patients while the pre-market application is under review. Enrollment in the aMAZE CAP is active and remains ongoing.

ICE-AFIB. The ICE-AFIB clinical trial is designed to study the safety and efficacy of the cryoICE® system for persistent and long-standing persistent Afib treatment during concomitant on-pump cardiac surgery. The trial provides for enrollment of up to 150 patients at up to 20 sites in the United States. Enrollment began in January 2019 and remains ongoing.

ATLAS. The ATLAS study is a non-IDE randomized pilot study evaluating outcomes of patients with risk factors for developing postoperative Afib as well as risk of bleeding on oral anticoagulation. There are two types of patients subject to this study: those with a postoperative Afib diagnosis and receiving prophylactic exclusion of the left atrial appendage with the AtriClip device concomitant to cardiac surgery and those with a postoperative Afib diagnosis who are medically managed. Enrollment began in February 2016 and ended in March 2018. Preliminary data was presented at the Heart Rhythm Society meeting in May 2019, and a manuscript will be drafted after event adjudication is complete and data is analyzed.

FROST. We have conducted a cryo nerve block study, which was a non-IDE randomized pilot study evaluating intraoperative intercostal cryoanalgesia. The study involves treatment arm patients who received intercostal cryoanalgesia in conjunction with standard post-operative pain management and control arm patients who receive standard post-operative pain management only. The study provided for enrollment of up to 100 patients at five medical centers. Enrollment began in June 2016 and an interim data analysis was completed when a total of 80 patients were enrolled in 2019. Enrollment was stopped following the interim analysis due to early achievement of statistical significance. Results from the trial were presented at the Society of Thoracic Surgeons podium in January 2020.

DEEP AF Pivotal Study. The DEEP AF IDE pivotal trial evaluates the safety and efficacy of the AtriCure Bipolar System when used in a staged approach where a minimally invasive surgical ablation procedure is first performed. The patient undergoes the endocardial catheter procedure approximately 91-120 days later. The study began in 2014 and was paused during 2016-2017 due to our work to mitigate the risk related to esophageal injury during the procedure. We are committed to patient safety, and we worked collaboratively with FDA and obtained approval to resume enrollment in the trial in 2018 starting with 40 patients. All 40 patients have been enrolled and treated. A report of the safety data has been submitted to FDA, and we are awaiting their response. We plan to seek approval to enroll the full cohort of 220 patients, pending FDA's review of additional safety data.

CEASE AF. We are also pursuing a non-IDE trial in Europe to compare staged hybrid ablation treatment (minimally invasive surgical ablation procedure is first performed and the patient undergoes the intracardiac catheter procedure approximately 91-180 days later) versus catheter ablation alone. Enrollment began in November 2015 and remains ongoing.

Sales, Marketing and Medical Education

Our global sales and marketing efforts focus on educating physicians about our unique technologies and their technical benefits. We only promote our products for uses described in their labeling as cleared or approved by the relevant regulatory agencies. We train our sales force on the use of our products to the extent the products are cleared or approved.

Our sales team in the United States has approximately 180 employees supporting approximately 54 sales territories. We select our sales personnel based on their expertise, sales experience and reputation in the medical device industry, and their knowledge of cardiac surgery procedures and technologies.

We market and sell our products in selected countries outside of the United States through a combination of independent distributors and direct sales personnel. Our international sales team includes sales representatives focused on our direct markets, such as Germany, France, the United Kingdom and the Benelux region. We also maintain a network of distributors in Asia, South America and Canada, as well as certain countries in Europe, who market and sell our products. We continue to evaluate opportunities for further expansion into markets outside of the United States.

Competition

Our industry is competitive, subject to change and significantly affected by new product introductions and other activities of industry participants. Most of our competitors have greater financial and human resources than we do and have relationships with our target customers, as well as worldwide distribution channels that are more established and developed than ours. Our primary competitor in the cardiac surgery market is Medtronic, plc, who provides similar products to ours that have been adopted by physicians for the treatment of Afib and related conditions. AtriCure's Isolator Synergy System is the only medical device that is FDA approved to treat Afib in a surgical setting, and the only medical device approved to treat persistent or long-standing persistent Afib in a concomitant setting. Several other companies offer intracardiac catheter devices that are commonly used by electrophysiologists to treat Afib. These catheter devices are FDA-approved to treat the paroxysmal and persistent forms of Afib, but they are not FDA indicated to treat long-standing persistent Afib. AtriCure is monitoring other companies who are conducting clinical trials that may support FDA approval of their devices to treat persistent and long-standing persistent Afib. We believe that our products compare favorably against competing products during both open-heart and minimally invasive procedures, and that our products improve treatment outcomes for patients with non-paroxysmal forms of Afib when combined with intracardiac catheter devices.

To compete effectively, we strive to demonstrate that our products are an attractive alternative or addition to other treatments by differentiating our products on the basis of safety, efficacy, performance, ease of use, reputation, service and price. In addition, we invest heavily in training and education to ensure that our customers understand available devices, techniques, and approaches for optimal treatment. We have encountered and expect to continue to encounter potential customers who prefer products offered by our competitors.

Third-Party Reimbursement

Payment for patient care in the United States is generally made by third-party payors. These payors include private insurers and government insurance programs, such as Medicare and Medicaid. The Medicare program, the largest single payor in the United States, is a federal health benefit program administered by the Centers for Medicare and Medicaid Services (CMS) and covers certain medical care items and services for eligible beneficiaries, such as individuals over 65 years old, as well as chronically disabled individuals. Because Medicare beneficiaries comprise a large percentage of the populations for which our products are used, and private insurers may follow the coverage and payment policies for Medicare, Medicare's coding, coverage and payment policies for cardiothoracic surgical procedures are significant to our business.

Medicare's Part A program pays hospitals for inpatient services, such as cardiothoracic surgery, under the Inpatient Prospective Payment System, which provides a predetermined payment based on the patient's discharge diagnoses and surgical procedure(s). Discharge diagnoses are grouped into Medicare Severity Diagnosis Related Groupings (MS-DRG). There are several cardiac surgery MS-DRGs associated with the surgical treatment of Afib, with and without a concomitant open-heart procedure. When an ablation device and/or LAA exclusion device (LAAM) is used during a concomitant open-heart procedure, Medicare's hospital reimbursement is based upon the patient's primary structural heart surgical procedure. Therefore, any additional procedure concomitant to the primary procedure would not receive incremental hospital payment. In contrast, sole therapy minimally invasive ablation or surgical LAAM procedures typically are reimbursed under a general cardiac surgery MS-DRG. We believe hospital reimbursement rates for sole therapy and concomitant therapy cardiac surgical ablation or LAAM are adequate to cover the cost of our products even when multiple procedures are performed.

Physicians are reimbursed for their services separately under the Medicare Part B physician fee schedule. When performing a surgical cardiac ablation with and without a concomitant open-heart procedure, surgeons report Current Procedural Terminology (CPT) codes to receive a professional fee payment. Multiple CPT codes may be reported by a physician during a procedure if multiple procedures are performed. There are category one CPT codes for both concomitant and standalone surgical Afib treatment. At this time, there are no category one CPT codes for the physician to report surgical LAAM. However, some providers utilize unlisted CPT codes to obtain reimbursement in these situations.

In addition to the Medicare program, many private payors look to CMS policies as a guideline in setting their coverage policies and payment amounts. The current coverage policies of these private payors may differ from the Medicare program, and payment rates may be higher, lower, or the same as the Medicare program. In some cases, certain private payors adopt negative coverage policies with respect to therapies involving our products. We engage third-party reimbursement consultants that provide support to our customers in the event of a coverage denial.

Outside of the United States, third-party reimbursement varies widely by geography and by the type of therapy in which our devices are used. For example, even though a new medical device may have been approved for commercial distribution, we may find limited demand for the device until coverage and sufficient reimbursement levels have been obtained from governmental and private third-party payors. In addition, some private third-party payors require that certain procedures or the use of certain products be authorized in advance as a condition of reimbursement. In some countries, cost containment initiatives and health care reforms include initiatives like governmental reviews of reimbursement rate benchmarks, which may significantly reduce reimbursement for procedures using our medical devices or deny coverage for those procedures altogether. We are actively working to pursue market

access in certain geographies, which includes applying for new reimbursement for therapies in which our devices are being used or pursuing specific reimbursement for utilization of our devices.

Government Regulation

Our products are medical devices and are subject to regulation in the United States by FDA and other federal agencies, and by comparable authorities in the European Union (EU) and other countries worldwide.

US Regulation:

FDA regulations govern nearly all of the activities that we perform, or that are performed on our behalf, to ensure that medical products distributed domestically or exported internationally are safe and effective for their intended uses. FDA regulates the total product lifecycle from early design, development and testing, to manufacturing and commercialization activities, as well as post-market surveillance and reporting, including corrective actions, removals and recalls. Unless an exemption applies, most medical devices distributed in the United States require either 510(k) clearance or PMA from FDA.

510(k) Clearance Pathway. To obtain 510(k) clearance, we must submit a notification to FDA demonstrating that our proposed device is substantially equivalent to a predicate device, i.e., a previously cleared and legally marketed 510(k) device or a device that was in commercial distribution before May 28, 1976, for which FDA has not yet called for the submission of a PMA. Any modification to a 510(k)-cleared device that would constitute a major change in its intended use, or a change in its design or manufacture that could significantly affect the safety or effectiveness of the device, requires a new 510(k) clearance.

Premarket Approval Pathway. A PMA must be submitted to FDA if the device cannot be cleared through the 510(k) process and is not otherwise exempt. A PMA must be supported by extensive data, including but not limited to technical, preclinical, clinical, manufacturing and labeling, to demonstrate the safety and effectiveness of the device for its intended use. A PMA supplement is required for changes affecting the safety or effectiveness of a PMA-approved device, including but not limited to new indications for use, a different manufacturing facility, or changes in the manufacturing process, labeling, or design specifications or components of the device.

Clinical Trials. Clinical trials are required to support a PMA and are sometimes required for 510(k) clearance. Clinical trials are subject to extensive recordkeeping and reporting requirements. Our clinical trials must be conducted under the oversight of an Institutional Review Board (IRB) for the relevant clinical trial sites and must comply with FDA regulations, including, but not limited to, those relating to current good clinical practices. We are also required to obtain the written informed consent of patients in form and substance that complies with both FDA requirements and other human subject protection regulations established by FDA. We must conduct our clinical studies in compliance with state and federal privacy laws, including the Health Insurance Portability and Accountability Act (HIPAA).

Educational Grants. FDA regulates the promotion of medical devices by manufacturers and prohibits the promotion of uses that are not on the approved or cleared labeling of the device. FDA does not regulate the practice of medicine or the conduct or content of medical education conducted by third parties, which may include uses that are not on approved or cleared device labeling, referred to as “off-label” uses. Manufacturers may provide unrestricted financial support for independent third-party medical education programs in the form of educational grants intended to offset the cost of such programs. If the manufacturer controls or unduly influences the content of such programs, FDA considers those programs to be promotional activities by the manufacturer and thus subject to FDA regulation including promotional restrictions. We seek to ensure that our educational grants program is conducted in accordance with FDA criteria for independent educational activities. However, we cannot provide an assurance that FDA or other government authorities would view the third-party programs we have supported as being independent.

Pervasive and Continuing Regulation. There are numerous regulatory requirements that apply after a product is cleared or approved by FDA, including, but not limited to: annual establishment registration and product listing; current good manufacturing practice for devices, referred to as the Quality System Regulation (QSR); labeling requirements, and advertising and promotion guidelines, assessing the significance of any changes to a device, monitoring and reporting serious and adverse events and certain device malfunctions, and reporting certain device corrections and removals. Our manufacturing facilities and processes are also subject to FDA inspections to ensure compliance with QSR.

In addition to FDA regulation, the advertising and promotion of certain medical devices are also regulated by the Federal Trade Commission and by state regulatory and enforcement authorities. On occasion, promotional activities for FDA-regulated products can be the subject of enforcement action brought under healthcare reimbursement laws and consumer protection statutes. In addition, under the Federal Lanham Act and similar state laws, competitors and others can initiate litigation relating to advertising claims.

Fraud, Abuse and False Claims. We are directly and indirectly subject to various federal and state laws governing our relationship with healthcare providers. In particular, the Anti-Kickback Statute is a federal criminal law that applies broadly and prohibits the knowing and willful offer or payment of remuneration to induce or reward patient referrals or the generation of business involving any item or service payable by a federal health care program. The federal False Claims Act (FCA) imposes civil liability on

any person or entity that submits, or causes the submission of, a false or fraudulent claim to the United States government. Damages under the FCA consist of the imposition of fines and penalties and can be significant. The FCA also allows a private individual or entity with knowledge of past or present fraud against the federal government to sue on behalf of the government to recover the civil penalties and treble damages.

AtriCure is a member of the Advanced Medical Technology Association (AdvaMed), a voluntary United States trade association for medical device manufacturers. This association has established guidelines and protocols for medical device manufacturers in their relationships with healthcare professionals on matters including research and development, product training and education, grants and charitable contributions, support of third-party educational conferences and consulting arrangements. Adoption of the AdvaMed Code of Ethics for Interactions with Healthcare Professionals (the "AdvaMed Code") by a medical device manufacturer is voluntary, and while the Office of the Inspector General and other federal and state healthcare regulatory agencies encourage its adoption and may look to the AdvaMed Code, they do not view adoption of the AdvaMed Code as proof of compliance with applicable laws. We have adopted the AdvaMed Code and incorporated its principles in our standard operating procedures, employee training programs, and relationships with medical professionals.

Regulation Outside of the United States:

Sales of medical devices outside of the United States are subject to foreign governmental regulations which vary substantially from country to country. The time required to obtain certification or approval by a foreign country may be longer or shorter than that required for FDA clearance or approval and the requirements may be different, but the general trend is toward increasing regulation and greater requirements for the manufacturer to provide more bench testing and clinical evidence.

While some harmonization of global regulations has occurred, requirements continue to differ significantly. In China, for example, the product must first have approval in the country of origin. In China, successful results from local product safety testing precedes submission of documentation to obtain approval. In addition, regulatory agencies and authorities can halt distribution within the country or otherwise take action in accordance with local laws.

Conformity Assessment Pathway. In the European Union, various directives regulate the design, manufacture and labeling of medical devices, and more stringent conformity assessment requirements have been put in place with the 2017 Medical Device Regulation, effective May 26, 2021. The method for assessing conformity varies depending on the type and class of the product, but typically involves a combination of quality system assessment and product conformity assessment by a third-party notified body, an independent and neutral institution appointed by a country to conduct the conformity assessment. This third-party assessment includes a review of documentation related to the device that may be as extensive as the documentation requirements that the United States FDA requires for higher risk products. The notified body also audits the manufacturer's quality system and performs a detailed review of the testing of the manufacturer's device. Successful completion of a conformity assessment procedure allows a manufacturer to issue a declaration of conformity with the requirements of the relevant directive and affix the CE mark to the device. Devices that bear the CE mark may be commercially distributed throughout the member states of the European Union and other countries that comply with or mirror the medical device directives or medical device regulations.

Pervasive and Continuing Regulation. There are numerous regulatory requirements that apply after a product has been approved by the notified body for CE marking, including, but not limited to: labeling, advertising and promotion, reporting of device modifications, monitoring the safety of the product and performing corrections and removals when necessary, maintaining "state of the art" requirements for the devices through compliance with standards, and obtaining recertification of the quality system and individual device certificates on a periodic basis.

Intellectual Property

Protection of our intellectual property is a priority for our business, and we rely on a combination of patent, copyright, trademark and trade secret laws to protect our interests. Our ability to protect and use our intellectual property rights in the continued development and commercialization of our technologies and products, operate without infringing the proprietary rights of others, and prevent others from infringing our proprietary rights is important to our continued success. We will be able to protect our products and technologies from unauthorized use by third parties only to the extent that they are covered by valid and enforceable patents, trademarks or copyrights, or are effectively maintained as trade secrets, know-how or other proprietary information.

We hold numerous issued United States and international patents. We also have multiple pending United States and international patent applications. We seek patent protection relating to technologies and products we develop in both the United States and in selected foreign countries. While we own much of our intellectual property, including patents, patent applications, trademarks, trade secrets, know-how and proprietary information, we also license patents and related technology of importance to the commercialization of our products. To continue developing and commercializing our current and future products, we may license intellectual property from commercial or academic entities to obtain the rights to technology that is required for our research, development and commercialization activities.

All of our employees and technical consultants are required to execute confidentiality agreements in connection with their employment and consulting relationships with us. We also generally require them to agree to disclose and assign to us all inventions conceived in connection with their relationship with us. We devote significant resources to obtaining patents and other intellectual property and protecting our other proprietary information. If valid and enforceable, these patents may give us a means of blocking competitors from using infringing technology to compete directly with our products. We also have proprietary information that may not be patentable. With respect to proprietary information that is not patentable, we have chosen to rely on trade secret protection and confidentiality agreements to protect our interests.

Manufacturing

We assemble, inspect, test and package the majority of our products at our facilities in Ohio and California, and our products are sterilized by third parties. Purchased components are generally sourced from a single supplier, but alternatives to these suppliers are available in the event this would be needed.

To minimize supply chain risks, we maintain inventory levels of components and raw materials specific to the respective part or device. We assess tooling and equipment on an ongoing basis. Order quantities and lead times for components purchased from outside suppliers are based on our forecasts derived from historical demand and anticipated future demand. Lead times may vary significantly depending on the size of the order, time required to fabricate and test the components, specific supplier requirements and current market demand for the components and subassemblies. To date, we have not experienced significant delays in obtaining any of our components.

We regularly audit our suppliers for compliance with our quality system requirements, the QSR and/or applicable ISO standards. We are an FDA-registered medical device manufacturer and certified to ISO 13485:2016. In addition, we have successfully participated in the Medical Device Single Audit Program (MDSAP) and have been certified accordingly. The MDSAP program is recognized in Australia, Brazil, Canada, Europe, Japan and the United States.

We are subject to numerous federal, state and local laws relating to such matters as laboratory practices, the experimental use of animals, the use and disposal of hazardous or potentially hazardous substances, safe working conditions, manufacturing practices, environmental protection and fire hazard control.

Consulting Relationships

We have developed consulting relationships with scientists and physicians throughout the world to support our research and development, clinical and training and education programs. We work closely with these thought leaders to understand unmet needs and emerging applications for the treatment of Afib.

Our physician consulting agreements are intended to satisfy the requirements of the personal services “Safe Harbor” regulation as well as the AdvaMed Code and the MedTech Europe Code of Ethical Business Practice. As such, they provide for payment of a fair market value fee only for legitimate services rendered to us. We do not expect or require the consultant to utilize or promote our products, and consultants are required to disclose their relationship with us as appropriate, such as when publishing an article in which one of our products is discussed. Amounts paid to physicians in the United States are disclosed by us in annual reports submitted to CMS under the federal “Open Payments” law. Amounts paid to physicians in certain other countries are also disclosed by us in reports submitted to various governmental agencies in those countries, in accordance with the laws of the jurisdictions where those physicians reside or practice, or where the payments are made.

Human Capital Management

Successful execution of our strategy is dependent on attracting, developing and retaining key employees and members of our management team. The skills, experience, and industry knowledge of our employees significantly benefit our operations and performance. We continuously evaluate, modify, and enhance our internal processes to increase employee engagement, productivity, and efficiency.

We had approximately 750 employees as of January 31, 2021. None of the employees were represented by a labor union or covered by a collective bargaining agreement. We have never experienced any employment-related work stoppages and consider our employee relations to be in good standing. At AtriCure, the employee experience is crucial to the ongoing success of the company. We work to provide a culture that augments the intrinsic rewards of our mission – one where employees feel valued and supported every day. We strive to communicate with transparency, engage at every level, and share in personal milestones. Our culture provides opportunities for employees to feel a part of a community through paid leave for volunteering and individual recognition with “Heart of AtriCure” awards. Our employees have voted us as a Top Workplace five times, and our culture is regularly cited in our internal engagement surveys as a leading positive attribute of the company. Our culture is a central asset to our company.

Employee Compensation and Benefits

Competitive compensation and benefits are an integral part of attracting world-class talent to our organization. We are committed to regularly analyzing and evaluating the effectiveness of our compensation and benefit programs and benchmarking our

programs against the market and our industry peers. Annual pay increases and incentive compensation are based on performance, which is communicated to employees and documented through our annual talent review and management process, as well as upon internal transfer and/or promotion.

All U.S.-based employees are eligible for medical, dental, and vision insurance, paid leave for both vacation and illness, a 401(k) plan that includes a discretionary company matching contribution, a stock purchase plan enabling employees to purchase AtriCure stock at a reduced price, life and AD&D insurance, and short- and long-term disability coverage. We also offer a variety of ancillary benefits as enhancements, such as critical illness and accident coverage, telemedicine, adoption assistance, paid time off to volunteer, tuition reimbursement, and a wellness program. International benefits are aligned with local market offerings.

Diversity, Equity, and Inclusion

We have an ongoing commitment to advancing Diversity, Equity, and Inclusion (DE&I) throughout our workplace and the communities in which we operate. By honoring the dignity of each person, we foster a culture of inclusion where everyone is welcome. We do this by embracing diverse voices and experiences, supporting programs and resources that build an authentic and respectful workplace, and providing fair and equitable opportunities for each person to contribute meaningfully in both their work and their personal lives. We believe that everyone should feel confident in bringing their authentic selves to work and contribute to our mission.

We believe our workforce needs to be diverse, and leverage the skills and perspectives of a variety of backgrounds and experiences. To attract a global workforce, we strive to embed a culture where employees can bring their whole selves to work. In addition to established and ongoing workplace harassment training, we recently have expanded our DE&I training company-wide, as well as into new hire orientation, established DE&I committees with employee volunteers, and expanded recruitment outreach to include more organizations, societies, and sources that serve minority communities. In 2020, we provided a paid half-day holiday to all U.S. employees on election day, to offer ample opportunity for voting, and for 2021, we added Martin Luther King Jr. Day as a designated AtriCure U.S. holiday. We have also recently hired a Diversity, Equity, and Inclusion leader to further advance our commitment and programs.

Training and Development

Employee training and development is a priority at AtriCure. We strive to create an environment where employees can realize their potential. We provide a range of training courses and online resources, as well as developmental coaching and mentoring. We have a regular monthly schedule of opportunities that allows employees to access both instructor-led classrooms and self-directed web-based courses. We are committed to identifying and developing the talents of our next-generation leaders. On an annual basis, we conduct a 9-Box Leadership Review, a process in which our Executive Leadership Team and Vice Presidents are closely involved. In that process, we review existing leaders and prospective leaders throughout the organization and determine next best steps for their future development. Developmental plans for employees can range from leadership support to technical skill-building.

We also work to ensure all employees have access to training that is consistent with the competencies that are measured as part of performance management: Delivering Results with Accountability, Initiative and Involvement, Teamwork and Support, and for those who manage people, Develop and Maintain High Performance Teams and Communication.

Safety for All Employees

We are committed to maintaining a safe workplace and promoting the well-being of all of our employees. We have implemented multiple safety programs and regularly perform safety hazard evaluations within our facilities. Programs include our Emergency Site Action Plan for emergencies such as fire response, severe weather threats and shelter in place incidents, as well as our Certified First Responders safety program that include Red Cross training of employees in CPR, AED Usage and First Aid practices. We recognize that the use of tobacco is linked to many adverse health effects, including those that impact the heart, and we offer our employees tobacco cessation programs. Effective January 1, 2021, our Ohio office locations are entirely tobacco- and nicotine-free, and to the extent permitted in the states of our other offices, those locations are also entirely tobacco- and nicotine-free.

Throughout the COVID-19 pandemic, our employees have been our first and foremost focus. We have implemented a number of measures to provide a safe work environment for our employees. Most of our office-based employees began working remotely in March 2020, while field-based sales and clinical employees continue to support cases, utilizing technology to engage with customers in virtual settings when physical access is prohibited. We have modified our manufacturing operations in order to adhere to social distancing requirements dictated by local law and have taken measures to help ensure safety, including requiring temperature checks for employees entering our facilities, wearing face coverings, and other best practices surrounding hygiene to mitigate the spread of viruses by our employees. We have not implemented any temporary or permanent reductions in headcount or to non-executive employee compensation. AtriCure has provided regular, mandatory training for all employees on COVID-19 protocols that are consistent with Center for Disease Control recommendations and state and country-specific guidelines. Such protocols and guidance is continually updated and made available to employees. We have also established decision-making protocols for contact tracing, return to work, and sanitization.

Available Information

Our principal executive offices are located at 7555 Innovation Way, Mason, Ohio and our telephone number is 513-755-4100. We are subject to the reporting requirements under the Securities Exchange Act of 1934. Consequently, we are required to file reports and information with the Securities and Exchange Commission (SEC) including reports on the following forms: Form 10-K, Form 10-Q, Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934. These reports and other information concerning us may be accessed through the SEC's website at http://www.sec.gov. You may also find, free of charge, on our website at http://www.atricure.com, electronic copies of our Form 10-Ks, Form 10-Qs, Form 8-Ks, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934. Such filings are placed on our website as soon as reasonably practicable after they are filed or furnished, as the case may be, with the SEC. Our charters for our Audit, Compensation, Nominating and Corporate Governance, Strategy and Compliance, Quality and Risk Committees and our Code of Conduct are available on our website. In the event that we grant a waiver under our Code of Conduct to any of our officers or directors or make any material amendments to the Code of Conduct, we will publish it on our website within four business days. Information on our website is not deemed to be a part of this Form 10-K.

ITEM 1A. RISK FACTORS

The following discussion of risk factors contains forward-looking statements. These risk factors may be important to understanding other statements in this report. The following information should be carefully considered in addition to the other information set forth in this report, including the Management's Discussion and Analysis of Financial Conditions and Results of Operations section and consolidated financial statements and accompanying notes. If any of the risks or uncertainties described below actually occur or continue to occur, our business, financial condition, results of operations and stock price could be materially and adversely affected. The risks below are not the only risks we face and additional risks not currently known to us or that we presently deem immaterial may emerge or become material at any time and may negatively impact our business, reputation, financial condition, results of operations or stock price. The order in which these factors appear should not be construed to indicate their relative importance or priority.

Risk Factors Summary

The following is a summary of the principal risks that could adversely affect our business, operations, financial results and stock price.

COVID-19 Pandemic Risks

- COVID-19 pandemic may continue to affect the demand for our products, adversely impact our clinical trials and limit our ability to execute our business strategy.

Commercial Execution and Product Performance Risks

- Failure to achieve widespread market acceptance domestically may harm operating results.
- Competition from existing and new products and procedures may decrease our market share.
- Clinical data may be negative, or our trials may not satisfy requirements of regulatory authorities, slowing rate of adoption for our products by the medical community.
- We may not achieve Pre-Market Approval for the EPi-Sense device.
- We may be unable to promptly train sufficient numbers of physicians in the use of our products, resulting in slower market acceptance.
- Reliance on independent distributors to sell our products in some international markets could adversely impact our sales.

Industry Condition Risks

- Rising healthcare costs may result in efforts by government and private payors to contain or reduce healthcare spending, including for procedures that utilize our products.
- Adverse changes in payors' policies toward coverage and reimbursement for surgical procedures would harm our ability to promote and sell our products.
- International sales may decrease if coverage and adequate levels of reimbursement from governmental and third-party payors outside of the United States are not obtained and maintained.

Operational Risks

- Unfavorable publicity relating to our business and industry could negatively impact our operations.
- Reliance upon single and limited source third-party suppliers and logistics providers could harm our business if such third parties cannot provide materials or products or perform services for us in a timely manner.
- Our manufacturing operations are highly centralized and any disruption at our manufacturing facility could harm our business.
- Our business could be negatively impacted if we fail to successfully integrate acquisitions.
- If we fail to properly manage our anticipated growth, our business could suffer.
- If we cannot retain our skilled employees or recruit additional qualified personnel, our business may suffer.
- Disruptions of critical information systems or material breaches in the security of our systems could harm our business, customer relations and financial condition.
- Our insurance may not cover our indemnification obligations and other liabilities associated with our operations.

Legal & Compliance Risks

- We could face substantial penalties if we are unable to fully comply with federal, state and foreign regulations.
- We may be subject to fines, injunctions and penalties if we fail to comply with extensive FDA regulations.
- Unless and until we obtain additional FDA approval for our products, we will not be able to promote most of them to treat Afib or prevent stroke.

- We may be subject to fines, injunctions and penalties if we are found to be promoting our products for unapproved or off-label uses.
- Modifications to our products may require new approvals by the FDA; failure to obtain such approvals could result in a recall of the modified products and limitation on future sales until approved.
- If we or our third-party vendors fail to comply with extensive FDA regulations relating to the manufacturing of our products we may be subject to fines, injunctions and penalties.
- Any adverse finding, allegation, or exercise of enforcement or regulatory discretion against us as a result of the current investigation by the United States Department of Justice could negatively affect our business.
- The use of products we sell may result in injuries or other adverse events that lead to product liability claims.
- Our ability to compete in the marketplace could be affected if our intellectual property rights fail to provide meaningful commercial protection for our products.
- Litigation and administrative proceedings over patent and other intellectual property rights are common in our industry, and any litigation or claim against us may cause us to incur substantial costs.
- We are subject to various regulatory and other risks related to selling our products internationally which could harm our revenue.
- Any allegation or determination of wrongdoing under the Foreign Corrupt Practices Act or other anti-corruption laws could have a material adverse effect on our business.
- Compliance with new European Union medical device regulation may limit our ability to sell our product in European markets.
- The United Kingdom's withdrawal from the European Union may have a negative impact on global economic conditions and our international sales.

Financial Risks

- Our quarterly financial results are likely to fluctuate significantly.
- We have a history of net losses, and we may never become profitable.
- Our income tax expense could increase and adversely impact cash flows if our federal tax net operating loss and general business credit carryforwards expire or are limited.
- Fluctuations in our effective income tax rate could adversely affect our operations, earnings, and earnings per share.
- Regulatory questions of our intercompany transfer pricing policies or changes in transfer pricing laws could increase our effective tax rate.
- Our goodwill or other intangibles assets may become impaired which could adversely affect our financial performance.
- We may take inventory-related charges as a result of inaccurate forecasting or estimates of product life cycles which would negatively affect our gross margins and results of operations.
- We are subject to credit risk from our accounts receivable related to our sales.
- We may be unable to comply with the covenants of our Loan Agreement.

Common Stock Risks

- We may fail to achieve our publicly announced guidance about our business which could cause a decline in our stock price.
- Securities analysts may discontinue coverage for our common stock or issue negative reports which could have a negative impact on the market price of our common stock.
- Our common stock may experience extreme fluctuations in the price and trading volume causing our stockholders to lose some or all of their investment.
- The sale of material amounts of common stock could encourage short sales by third parties and depress the price of our common stock causing our stockholders to lose part or all of their investment.
- Our stock ownership will be diluted if we are required to issue additional shares of our common stock to the former stockholders of SentreHEART as certain milestones in the merger agreement are met.
- Stockholder ownership of our common stock may be diluted if we sell common stock in a capital raising transaction or issue shares in a future acquisition.
- Anti-takeover provisions in our amended and restated certificate of incorporation and amended and restated bylaws and under Delaware law could inhibit a change in control or a change in management that stockholders consider favorable.
- Our stockholders must rely on stock appreciation for any return on investment as we do not expect to pay dividends in the foreseeable future.

COVID-19 Pandemic Risks

The outbreak of coronavirus (COVID-19) is materially and adversely affecting demand for our products and with prolonged delays, could continue to affect the demand for our products and impact our clinical trials, causing disruption to our business and negatively impacting our results of operations and financial condition.

We are subject to risks related to public health crises such as the global pandemic associated with COVID-19. On January 30, 2020, the World Health Organization declared that the recent coronavirus COVID-19 outbreak was a global health emergency, and on March 11, 2020, declared it to be a pandemic. The COVID-19 outbreak has negatively impacted and is expected to continue to negatively impact our operations and revenues and overall financial condition by significantly decreasing the number of procedures performed with our products. The number of procedures performed has significantly decreased as health care organizations globally have deferred non-emergent procedures to preserve resources and prioritized the treatment of patients with COVID-19 and protect patients from potential exposure to COVID-19. For example, in the United States, governmental authorities have recommended, and in certain cases required, that elective, specialty and other procedures and appointments, be suspended or canceled to avoid non-essential patient exposure to medical environments and potential infection with COVID-19 and to focus limited resources and personnel on the treatment of COVID-19. These measures and challenges will likely continue for the duration of the pandemic, which is uncertain, and will significantly reduce our revenue while the pandemic continues.

Numerous state and local jurisdictions have imposed, and others in the future may impose, "shelter-in-place" orders, quarantines, executive orders and similar government orders and restrictions for their residents to control the spread of COVID-19. Such orders or restrictions have resulted in slowdowns and delays, travel restrictions and cancellation of events, among other effects. Other disruptions or potential disruptions include restrictions on our personnel and partners to travel and access customers for training and case support; delays in approvals by regulatory bodies; delays in product development efforts; and additional government requirements or other incremental mitigation efforts that may further impact our or our suppliers' capacity to manufacture, sell and support the use of our products.

We may experience diversion of healthcare resources away from the conduct of clinical trials, including the diversion of hospitals serving as our clinical trial sites. Key clinical trial activities, such as clinical trial site monitoring, subject visits and study procedures, may be interrupted due to limitations imposed or recommended by federal or state governments, trial sites, employers or others. We may also encounter interruption or delays in the operations of FDA or other regulatory authorities, which may impact review and approval timelines.

In addition, the COVID-19 pandemic may impact the trading price of shares of our common stock and could impact our ability to raise additional capital on a timely basis or at all.

The COVID-19 pandemic continues to rapidly evolve. The extent to which COVID-19 may impact our business, including our nonclinical activities, clinical trials and financial condition, will depend on future developments, which are highly uncertain, such as the geographic spread of the disease, the duration of the pandemic, travel restrictions, business closures or business disruptions and the effectiveness of actions taken to contain and treat the disease. To the extent the COVID-19 pandemic adversely affects our business and financial results, it may also have the effect of heightening many of the other risks set forth in this "Risk Factors" section.

Commercial Execution and Product Performance Risks

If our products do not achieve widespread market acceptance in the United States, our operating results will be harmed, and we may not achieve or sustain profitability.

Our success depends in large part on the medical community's acceptance of our products in the United States, which is the largest revenue market in the world for medical devices. Our ablation and our LAA management product sales in the United States generate the majority of our revenue. We expect that sales of these products will continue to account for a majority of our revenue for the foreseeable future and that our future revenue will depend on the increasing acceptance by the medical community of our products as standard of care for treating Afib and managing the LAA. The U.S. medical community's acceptance of our products will depend upon our ability to demonstrate the safety and efficacy, advantages, long-term clinical performance and cost-effectiveness of our products. In addition, acceptance of products for the treatment of Afib is dependent upon, among other factors, the level of awareness and education of the medical community about the surgical treatment of Afib and the existence, effectiveness and safety of our products. Market acceptance and adoption of our products for the treatment of Afib also depends on the level of health insurer (including Medicare) reimbursement to physicians and hospitals for procedures using our products. Negative publicity resulting from incidents involving our products, or similar products could have a significant adverse effect on the overall acceptance of our products. If we encounter difficulties growing the market for our products in the U.S., we may not be able to increase our revenue enough to achieve or sustain profitability, and our business and operating results will be seriously harmed.

Competition from existing and new products and procedures may decrease our market share and may cause our revenue to decline, and could adversely affect our operating results.

The medical device industry, including the market for the treatment of Afib, is highly competitive, is subject to rapid technological change and can be significantly affected by new product introductions and promotional activities. There is no assurance that our products will compete effectively against drugs, catheter-based ablation, implantable devices, other surgical ablation devices, or other products or techniques to occlude the left atrial appendage. Our products may become obsolete prior to the end of their anticipated useful lives, or we may introduce new products or next-generation products prior to the end of the useful life of our current products, either of which may require us to dispose of existing inventory and related capital equipment and/or write off their value or accelerate their depreciation. In addition, other products may be sold at lower prices. Due to the size of the Afib and LAA management markets, we anticipate that new or existing competitors may develop competing products, procedures and/or clinical solutions. There are few barriers to prevent new entrants or existing competitors from developing products to compete directly with ours. Companies also compete with us to attract qualified scientific and technical personnel as well as funding. Most of our competitors and potential competitors have greater financial, manufacturing, marketing and research and development capabilities than we have, and may obtain FDA approval or clearance for their products before we do. The introduction of new products, procedures or clinical solutions, or our competitors obtaining FDA approvals or clearances, may result in price reductions, reduced margins, loss of market share, or may render our products obsolete, which could adversely affect our revenue and future profitability.

Any clinical data that is generated regarding our products may not be positive, and our current and planned clinical trials may not satisfy the requirements of the FDA or other regulatory authorities.

Our clinical trials are expensive to conduct, typically taking many years to complete, and have uncertain outcomes. Delays in patient enrollment or failure of patients to consent or continue to participate in a clinical trial may cause an increase in costs and delays in the approval and attempted commercialization of our products or result in the failure of the clinical trial. Conducting successful clinical studies may require the enrollment of large numbers of clinical sites and patients, and suitable patients may be difficult to identify and recruit. Patient enrollment in clinical trials and completion of patient participation and follow-up depends on many factors, including the size of the patient population; the nature of the trial protocol; the attractiveness of, or the discomforts and risks associated with, the treatments received by enrolled subjects; the availability of appropriate clinical trial investigators, support staff, and proximity of patients to clinical sites; and the ability to comply with the eligibility and exclusion criteria for participation in the clinical trial and patient compliance.

Our products will be measured on their efficacy which is dependent on the number of patients that experience Afib or stroke following treatment with our products and the number of patients that have serious complications resulting from ablations or LAA exclusion using our products. We cannot provide any assurance that the data collected during our clinical trials will be compelling to the medical community because it may not be scientifically meaningful, may identify unexpected safety concerns, and may not demonstrate that procedures utilizing our products are an attractive option when compared against data from alternative procedures and products. Negative data would affect the use of our products and harm our business and prospects.

Conversely, positive results from clinical trial experience should not be relied upon as evidence that any of our clinical trials will succeed or that they will satisfy regulatory requirements for product approval. There can be no assurance that the results of studies conducted by collaborators or other third parties will be viewed favorably or are indicative of our own future study results. We may be required to demonstrate with substantial evidence through well-controlled clinical trials that our product candidates are either (i) safe and effective for use in a diverse population for their intended uses or (ii) are substantially equivalent to predicate devices under section 510(k) of the Food, Drug and Cosmetic Act. Success in early clinical trials does not mean that future clinical trials will be successful because product candidates in later-stage clinical trials may fail to demonstrate sufficient safety and efficacy to the satisfaction of the FDA and other regulatory authorities despite having progressed through initial clinical trials.

Our devices and products may not be approved or cleared even though clinical or other data, in our view, are adequate to support an approval or clearance. The FDA or other regulatory authorities may:

- disagree with our trial design and our interpretation of data from pre-clinical studies and clinical trials;
- change requirements for the approval or clearance of a product candidate even after reviewing and providing comment on a protocol for a pivotal clinical trial;
- approve or clear a product candidate for fewer or more limited indications or uses than we request;
- grant approval or clearance contingent on the performance of costly post-marketing clinical trials; or
- not approve the labeling claims necessary or desirable for the successful commercialization of our product candidates.

These factors would affect the rate at which our products are adopted in the medical community.

Our success depends, in part, on our ability to achieve FDA pre-market approval of the EPi-Sense device for the treatment of Afib and the commercial success of this product.

On May 8, 2020, we announced the results from the CONVERGE IDE clinical trial. The CONVERGE trial achieved its primary efficacy endpoint with an approximately 18% difference in favor of the hybrid Convergent procedure as compared to standalone endocardial catheter ablation.

The CONVERGE trial primary efficacy endpoint is freedom from Afib, atrial tachycardia (AT), and atrial flutter (AFL), absent class I and III anti-arrhythmic drugs (AADs) except for a previously failed or demonstrated intolerance to class I or III AADs, with no increase in dosage following the 3-month blanking period through the 12 months post procedure follow-up visit. The primary safety endpoint is the incidence of major adverse events (MAEs) specified in the protocol for subjects undergoing the Convergent procedure from the time of the intervention through 30-days post intervention. There were no deaths, cardiac perforations, or atrio-esophageal fistulas reported in the CONVERGE trial, and the MAE rate of 7.8% in the treatment arm is lower than the protocol pre-specified performance goal of 12%. However, there can be no assurance that the FDA will grant pre-market approval of the EPi-Sense device based on this data.

Although our CONVERGE IDE device is currently cleared under section 510(k), we are also pursuing a PMA from the FDA. The process for obtaining marketing approval from the FDA or similar foreign governmental agencies is both time-consuming and costly, with no certainty of a successful outcome. The last module of the PMA application was submitted to FDA in December 2019. Throughout 2020, we have conducted several meetings with FDA as they review our PMA submission to complete the regulatory process. In November 2020, we submitted our responses to questions posed by FDA, seeking PMA approval of the EPi-Sense system for an indication for treatment of symptomatic, drug-refractory, long-standing persistent atrial fibrillation, when augmented with an endocardial ablation catheter. There can be no assurance that we will obtain a pre-market approval for the EPi-Sense device on a timely basis, or at all. If we are unable to achieve pre-market approval for the EPi-Sense device, our business will be significantly adversely impacted, which could have a materially adverse effect on our business, financial condition and results of operations.

Our success is dependent on our ability to train surgeons in the safe and effective use of our products. Restrictions on our ability to train surgeons, or unwillingness of surgeons to participate in such training, could reduce the market acceptance of our products.

Our research and development efforts and our marketing strategy depend heavily on obtaining support, physician training assistance and collaboration from experienced physicians at leading commercial and research hospitals, particularly in the U.S. and Europe. We deliver training on the safe and effective use of our products consistent with their FDA (or equivalent regulatory body) approved or cleared indications. While we train providers in the safe and effective use of our products, we do not train them to use any of our products specifically to treat Afib unless the product is FDA-approved specifically for the treatment of Afib. In order for surgeons to learn to use our products, they must attend training sessions to familiarize themselves with the products, and they must be committed to learning the technology. Further, surgeons must utilize the technology on a regular basis to ensure they maintain the skill set necessary to use the products. Continued market acceptance could be delayed by lack of surgeon willingness to attend training sessions, by the time required to complete this training or by state or institutional restrictions on our ability to provide training. If we are unable to gain and/or maintain such support, training services and collaboration, our ability to market our products and, as a result, our financial condition, results of operations and cash flow, could be materially and adversely affected.

We rely on independent distributors to market and sell our products in certain markets outside of the United States, and a failure of our independent distributors to successfully market our products or any disruption in their ability to do so may adversely impact our sales.

We depend on independent third-party distributors to sell our products in certain markets outside of the United States, and if these distributors do not perform, we may be unable to maintain or increase international revenue. We intend to grow our business outside of the United States, and to do so, we will need to attract additional distributors or hire direct sales personnel to expand the territories in which we sell our products. Independent distributors may terminate their relationship with us or devote insufficient sales efforts to our products. We are not able to control our independent distributors, and they may not be successful in marketing our products. In addition, many of our independent distributors outside of the United States initially obtain and maintain foreign regulatory approval for sale of our products in their respective countries. Our failure to maintain our relationships with our independent distributors outside of the United States, or our failure to recruit and retain additional skilled independent distributors in these locations, could have an adverse effect on our operations. Turnover among our independent distributors, even if replaced, may adversely affect our short-term financial results while we transition to new independent distributors or direct sales personnel. The ability of these independent distributors to market and sell our products could also be adversely affected by unexpected events, including, but not limited to, power failures, nuclear events, natural or other disasters and war or terrorist activities. In addition, the ability of our independent distributors to borrow money from their existing lenders or to obtain credit from other sources to purchase our products may be impaired or our independent distributors could experience a significant change in their liquidity or financial condition, all of which could impair their ability to distribute our products and eventually lead to distributor turnover, and may adversely impact our sales.

Industry Conditions Risks

Healthcare costs have risen significantly over the past decade. There have been and may continue to be proposals by legislators, regulators and third-party payors to keep, contain or reduce healthcare costs.

The continuing efforts of governments, insurance companies and other payors of healthcare costs to contain or reduce these costs, combined with closer scrutiny of such costs, could lead to patients being unable to obtain approval for payment from these third-party payors. The cost containment measures that healthcare providers are instituting both in the U.S. and internationally could harm our business. Some healthcare providers in the U.S. have adopted or are considering a managed care system in which the

providers contract to provide comprehensive healthcare for a fixed cost per person. Healthcare providers may attempt to control costs by authorizing fewer elective surgical procedures or by requiring the use of the least expensive devices possible, which could adversely affect the demand for our products or the price at which we can sell our products. Some healthcare providers have sought to consolidate and create new companies with greater market power, including hospitals. As the healthcare industry consolidates, competition to provide products and services has become and will continue to become more intense. This has resulted and likely will continue to result in greater pricing pressures and the exclusion of certain suppliers from important marketing segments.

Adverse changes in payors' policies toward coverage and reimbursement for surgical procedures would harm our ability to promote and sell our products.

Third-party payors are increasingly exerting pressure on medical device companies to reduce their prices. Even to the extent that the use of our products is reimbursed by private payors and governmental payors, adverse changes in payors' policies toward coverage and reimbursement for surgical procedures would also harm our ability to promote and sell our products. Payors continue to review their policies and can, without notice, deny coverage for treatments that include the use of our products. Because each third-party payor individually approves coverage and reimbursement, obtaining these approvals may be time-consuming and costly. In addition, third-party payors may require us to provide scientific and clinical support for the use of our products. Adverse changes in coverage and reimbursement for surgical procedures could harm our business and reduce our revenue.

FDA does not regulate the practice of medicine. Physicians may use our products in circumstances where they deem it medically appropriate, such as for the treatment of Afib or the reduction in stroke risk, even though FDA may not have approved or cleared our products to be marketed specifically for those indications. Some payors may deny coverage or payment for the use of our products for indications not specifically approved or cleared by FDA. Often, these denials can be overcome through an appeals process, but there is no guarantee of success in these cases.

If coverage and adequate levels of reimbursement from governmental and third-party payors outside of the United States are not obtained and maintained, sales of our products outside of the United States may decrease, and we may fail to achieve or maintain significant sales outside of the United States.

Our revenue generated from sales outside of the United States is also dependent upon coverage and reimbursement within prevailing foreign healthcare payment systems. Foreign healthcare payors generally do not provide the same level of reimbursement for sole-therapy minimally invasive procedures utilizing ablation devices and related products as payors in the United States. In addition, healthcare cost containment efforts similar to those we face in the United States are prevalent in many of the other countries in which we sell our products, and these efforts are expected to continue. To the extent that the use of our devices has historically received reimbursement under a foreign healthcare payment system, such reimbursement, if any, has typically been significantly less than the reimbursement provided in the United States. If coverage and adequate levels of reimbursement from governmental and third-party payors outside of the United States are not obtained and maintained, sales of our products outside of the United States may decrease, and we may fail to achieve or maintain significant sales outside of the United States.

Operational Risks

We may experience unfavorable publicity relating to our business and our industry. This publicity could have a negative impact on our ability to attract and retain customers, our sales, clinical studies involving our products, our reputation and our stock price.

We may experience a negative impact on our business from newspaper articles or other media reports relating to, among other things, our compliance with FDA regulations for medical device reporting, adverse patient and clinical outcomes and concerns over disclosure of financial relationships between us and our consultants. We believe that such publicity would potentially have a negative impact on our clinical studies, business, results of operations and financial condition or cause other adverse effects, including a decline in the price of our stock.

We rely upon single and limited source third-party suppliers and third-party logistics providers, making us vulnerable to supply problems and price fluctuations which could harm our business.

We rely on single and limited source third-party vendors for the manufacture and sterilization of components used in our products. For example, we rely on one vendor to manufacture several of our RF generators, as well as separate vendors to manufacture our EPi-Sense Guided Coagulation System with VisiTrax technology and related RF generator. It would be a time consuming and lengthy process to secure these products from an alternative supplier. We have significant concentrations with a limited number of vendors. We also rely on a third party to handle our warehousing and logistics functions for European and Middle Eastern markets on our behalf.

Our reliance on outside manufacturers, sterilizers and suppliers also subjects us to risks that could harm our business, including:

- we may not be able to obtain adequate supply in a timely manner or on commercially reasonable terms;
- we may have difficulty timely locating and qualifying alternative suppliers;
- switching components may require product redesign and new submissions to FDA which could significantly delay production or,

if FDA refuses to approve the changes, completely eliminate our ability to sell our products;

- our suppliers manufacture products for a range of customers, and fluctuations in demand for the products those suppliers manufacture for others may affect their ability to deliver components to us in a timely manner; and
- our suppliers may encounter financial hardships unrelated to our demand for components, which could inhibit their ability to fulfill our orders and meet our requirements.

Identifying and qualifying additional or replacement suppliers for any of the components used in our products or a replacement warehousing and logistics provider, if required, may not be accomplished quickly and could involve significant additional costs. Any interruption or delay in the supply of components, materials or warehousing and logistics, or our inability to obtain components or materials from alternate sources at acceptable prices in a timely manner, 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 manufacturing operations are primarily conducted at a single location, and any disruption at our manufacturing facility could increase our expenses and decrease our revenue.

Our manufacturing operations are primarily conducted at a single location in Ohio, with select products manufactured in California. While we take precautions at the Ohio location, we do not maintain a backup manufacturing facility, making us dependent on the current facility and production workers for the continued operation of our business. A natural or other disaster could damage or destroy our manufacturing equipment and cause substantial delays in our manufacturing operations, which could lead to additional expense and decreased revenue due to lack of supply. The insurance we maintain may not be adequate to cover our losses. With or without insurance, damage to our facility or our other property due to a natural disaster or casualty event could have a material adverse effect on our business, financial condition and results of operations.

Our business growth strategy involves the potential for significant acquisitions. Acquisitions have inherent uncertainties and involve risks and difficulties in integrating that may adversely affect our business, results of operations and financial condition.

All acquisitions involve inherent uncertainties, which may include, among other things, our ability to:

- successfully identify targets for acquisition;
- negotiate reasonable terms;
- properly perform due diligence and determine significant risks associated with a particular acquisition;
- properly evaluate target company management capabilities; and
- successfully transition and integrate the acquired company into our business and achieve the desired performance.

We may acquire businesses with unknown liabilities, contingent liabilities or internal control deficiencies. We have plans and procedures in place to conduct reviews of potential acquisition candidates for compliance with applicable regulations and laws prior to acquisition. Despite these efforts, realization of any of these liabilities or deficiencies may increase our expenses, adversely affect our financial position through the initiation, pendency or outcome of litigation or otherwise, or cause us to fail to meet our public financial reporting obligations.

We have consummated three significant acquisitions since 2013 and in the future may continue to invest a substantial amount of capital in acquisitions. We continue to evaluate potential acquisition opportunities to support, strengthen and grow our business. There can be no assurance that we will be able to locate suitable acquisition candidates, acquire possible acquisition candidates, acquire such candidates on commercially reasonable terms, or integrate acquired businesses successfully in the future. In addition, any governmental review or investigation of our proposed acquisitions, such as by the Federal Trade Commission, may impede, limit or prevent us from proceeding with an acquisition. Future acquisitions may require us to incur additional debt and contingent liabilities, which may adversely affect our business, results of operations and financial condition. The process of integrating acquired businesses into our existing operations may result in operating, contract and supply chain difficulties, such as the failure to retain customers or management personnel. Such difficulties may divert significant financial, operational and managerial resources from our existing operations and make it more difficult to achieve our operating and strategic objectives.

If we fail to properly manage our anticipated growth, our business could suffer.

We may experience periods of rapid growth and expansion, which could place a significant strain on our personnel, information technology systems and other resources. In particular, the increase in our direct sales force requires significant management and other supporting resources. Any failure by us to manage our growth effectively could have an adverse effect on our ability to achieve our development and commercialization goals.

To achieve our revenue goals, we must successfully increase production output as required by customer demand. In the future, we may experience difficulties in increasing production, including problems with production yields and quality control, component

supply and shortages of qualified personnel. These problems could result in delays in product availability and increases in expenses. Any such delay or increased expense could adversely affect our ability to generate revenues.

Future growth will also impose significant added responsibilities on management, including the need to identify, recruit, train and integrate additional employees. In addition, rapid and significant growth will place a strain on our administrative and operational infrastructure. In order to manage our operations and growth, we will need to continue to improve our operational and management controls, reporting and information technology systems and financial internal control procedures. If we are unable to manage our growth effectively, it may be difficult for us to execute our business strategy and our operating results and business could 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 President and Chief Executive Officer, Michael H. Carrel, and certain other officers and key employees. We do not have any insurance in the event of the death or disability of key personnel. Our officers and key employees, with the exception of our President and Chief Executive Officer, do not have employment agreements, and they may terminate their employment and work elsewhere without notice and without cause or good reason. Currently we have non-compete agreements with our officers and other employees. Due to the specialized knowledge of each of our officers with respect to our products and our 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.

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 expanded FDA clearances and approvals, achieve market acceptance for our products and further develop products, while managing anticipated growth by implementing effective planning, manufacturing and operating processes. Managing this growth will require us to attract and retain additional management and technical personnel. We rely primarily on direct sales employees to sell our products in the United States and failure to adequately train them in the use and benefits of our products will prevent us from achieving our market share and revenue growth goals. We have key relationships with physicians that involve procedure, product, market and clinical development. If any of these physicians end their relationship with us, our business could be negatively impacted. We cannot assure you that we will be able to attract and retain the personnel and physician relationships necessary to grow and expand our business and operations. If we fail to identify, attract, retain and motivate these highly skilled personnel and physicians, we may be unable to continue our development and sales activities.

Disruptions of critical information systems or material breaches in the security of our systems could harm our business, customer relations and financial condition.

In the ordinary course of our business, we collect and store sensitive data, including intellectual property, our proprietary business information and that of our customers, suppliers and business partners, and personally identifiable information of our customers and employees in our data centers and on our networks. The secure processing, maintenance and transmission of this information is critical to our operations and business strategy. Despite our security measures, our information technology and infrastructure may be vulnerable to attacks by hackers or breached due to employee error, malfeasance or other disruptions. Any such breach could compromise our networks and the information stored there could be accessed, publicly disclosed, lost or stolen. Any such access, disclosure or other loss of information could result in legal claims or proceedings, liability under laws that protect the privacy of personal information, regulatory penalties, disrupt our operations and the services we provide to customers, and damage our reputation and cause a loss of confidence in our products and services, which could adversely affect our business, operating margins, revenues and competitive position.

We also rely in part on information technology to store information, interface with customers, maintain financial accuracy, secure our data and accurately produce our financial statements. If our information technology systems do not effectively and securely collect, store, process and report relevant data for the operation of our business, whether due to equipment malfunction or constraints, software deficiencies, human error or cyber incident, our ability to effectively plan, forecast and execute our business plan and comply with applicable laws and regulations would be materially impaired. Any such impairment could have a material adverse effect on our results of operations, financial condition and the timeliness with which we report our operating results.

Our insurance may not cover our indemnification obligations and other liabilities associated with our operations.

We maintain insurance designed to provide coverage for ordinary risks associated with our operations and our ordinary indemnification obligations, which we believe to be customary for our industry. The coverage provided by such insurance may not be adequate for claims we may make or may be contested by our insurance carriers. If our insurance is not adequate or available to pay liabilities associated with our operations, or if we are unable to purchase adequate insurance at reasonable rates in the future, our business, financial condition, results of operations or cash flows may be materially adversely impacted.

Legal & Compliance Risks

We spend considerable time and money complying with federal, state and foreign regulations in addition to FDA regulations, and, if we are unable to fully comply with such regulations, we could face substantial penalties.

We are subject to extensive regulation by the federal government and foreign countries in which we conduct business. The laws that affect our ability to operate our business in addition to the FDCA and FDA regulations include, but are not limited to, the following:

- the Federal Anti-Kickback Statute, which prohibits persons from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in cash or in kind, to induce either the referral of an individual, or furnishing or arranging for a good or service, for which payment may be made under federal healthcare programs such as the Medicare and Medicaid Programs;
- the Federal False Claims Act, which prohibits submitting a false claim or causing the submission of a false claim to the government;
- Medicare laws and regulations that prescribe the requirements for coverage and payment, including the amount of such payment, and laws prohibiting false claims for reimbursement under Medicare and Medicaid;
- state consumer protection, fraud and business practice laws, including the California Consumer Privacy Act ("CCPA"), which became effective on January 1, 2020, which among other things, requires new disclosures to California consumers and provides consumers new abilities to opt out of certain sales of personal information;
- state laws that prohibit the practice of medicine by non-doctors and by doctors not licensed in a particular state, and fee-splitting arrangements between doctors and non-doctors, as well as state law equivalents to the Anti-Kickback Statute and the Stark Law, which may not be limited to government-reimbursed items;
- federal and state healthcare fraud and abuse laws or laws protecting the privacy of patient medical information, including the Health Insurance Portability and Accountability Act (HIPAA) which protects medical records and other personal health information by limiting their use and disclosure, giving individuals the right to access, amend and seek accounting reasonably necessary to accomplish the intended purpose;
- laws and regulations with respect to the collection, use, disclosure, transfer, and storage of personal data that we may collect from our employees, consultants or in conjunction with clinical trials such as the General Data Protection Regulation in the European Union;
- the Federal Trade Commission Act and similar laws regulating advertising and consumer protection; and
- similar and other regulations outside the United States.

Healthcare fraud and abuse regulations are complex, and even minor, inadvertent irregularities can potentially give rise to claims that a law has been violated. Any violations of these laws could result in a material adverse effect on our business, financial condition and results of operations. If there is a change in law, regulation or administrative or judicial interpretations, we may have to change our business practices or our existing business practices could be challenged as unlawful, which could have a material adverse effect on our business, financial condition and results of operations.

Our manufacturing operations and research and development activities involve the use of biological materials and hazardous substances and are subject to a variety of federal, state and local environmental laws and regulations relating to the storage, use, discharge, disposal, remediation of and human exposure to hazardous substances. Our research and development and manufacturing operations may produce biological waste materials, such as animal tissues and certain chemical waste. These operations are permitted by regulatory authorities, and the resultant waste materials are disposed of in compliance with environmental laws and regulations. Compliance with these laws and regulations may be expensive, and non-compliance could result in substantial liabilities. In addition, we cannot eliminate the risk of accidental contamination or injury to third parties from the use, storage, handling or disposal of these materials. In the event of contamination or injury, we could be held liable for any resulting damages, and any liability could exceed any applicable insurance coverage we may have. Our manufacturing operations may result in the release, discharge, emission or disposal of hazardous substances that could cause us to incur substantial liabilities, including costs for investigation and remediation.

If our past or present operations are found to be in violation of any of the laws described above or the other governmental regulations to which we, our distributors or our customers are subject, we may be subject to the applicable penalty associated with the violation, including civil and criminal penalties, damages, fines, exclusion from Medicare, Medicaid and other government programs and the curtailment or restructuring of our operations. If we are required to obtain permits or licensure under these laws that we do not already possess, we may become subject to substantial additional regulation or incur significant expense. Any penalties, damages, fines, curtailment or restructuring of our operations would adversely affect our ability to operate our business and our financial results. The risk of our being found in violation of these laws is increased by the fact that many of them have not been fully or clearly interpreted by the regulatory authorities or the courts, and their provisions are subject to a variety of interpretations and additional legal or regulatory change. Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses, divert our management's attention from the operation of our business and damage our reputation.

If we fail to comply with the extensive FDA regulations relating to our business, we may be subject to fines, injunctions and penalties, and our ability to commercially distribute and promote our products may be hurt.

Our products are classified by FDA as medical devices and, as such, are subject to extensive regulation by FDA and numerous other federal, state and foreign governmental authorities. FDA regulations, guidance, notices and other issuances specific to medical devices are broad and regulate numerous aspects of our business. Compliance with FDA, state and other regulations can be complex, expensive and time-consuming. FDA and other authorities have broad enforcement powers. Furthermore, changes in the applicable governmental regulations could prevent further commercialization of our products and technologies and could materially harm our business.

If a serious failure to comply with applicable regulatory requirements was determined, it could result in enforcement action by FDA or other state or federal agencies, including the DOJ, which may include any of the following sanctions, among others:

- warning letters, fines, injunctions, consent decrees and civil penalties;
- repair, replacement, refunds, recall or seizure of our products;
- operating restrictions, partial suspension or total shutdown of production;
- suspension or termination of our clinical trials;
- refusing or delaying our pending requests for 510(k) clearance or PMAs, new intended uses or modifications to existing products;
- withdrawing 510(k) clearance or PMAs that have already been granted; and
- criminal prosecution.

If any of these events were to occur, we could lose customers and our production, product sales, business, results of operations and financial condition would be harmed.

We are also subject to medical device reporting regulations that require us to file reports with FDA if our products may have caused or contributed to a death or serious injury or, in the event of product malfunction, that if such malfunction were to recur, would likely cause or contribute to a death or serious injury. There have been incidents, including patient deaths, which have occurred during or following procedures using our products that we have not reported to FDA because we determined that our products did not malfunction and did not cause or contribute to the outcomes in these incidents. If FDA disagrees with us, however, and determines that we should have submitted reports for these adverse events, we could be subject to significant regulatory fines or other penalties. In addition, the number of medical device reports we make, or the magnitude of the problems reported, could cause us or FDA to terminate or modify our clinical trials or recall or cease the sale of our products, and could hurt commercial acceptance of our products and harm our reputation with customers.

Unless and until we obtain additional FDA approval for our products, we will not be able to promote most of them to treat Afib or to prevent stroke, and our ability to maintain and grow our business could be harmed. We may be subject to fines, penalties, injunctions and other sanctions if we are deemed to be promoting the use of our products for unapproved, or off-label, uses.

Our business and future growth depend on the continued use of our products for the treatment of Afib or prevention of stroke. Unless the products are approved or cleared by FDA specifically for the treatment of Afib or prevention of stroke, we may not make claims about the safety or effectiveness of our products for such uses. In order to obtain additional FDA approvals to promote our products for the treatment of Afib or reduction in stroke risk, we will need to demonstrate in clinical trials that our products are safe and effective for such use. Development of sufficient and appropriate clinical protocols to demonstrate quality, safety and efficacy may be required and we may not adequately develop such protocols to support approval. We cannot assure you that any of our clinical trials will be completed in a timely manner or successfully or that the results obtained will be acceptable to FDA. We, FDA or the IRB may suspend a clinical trial at any time for various reasons, including a belief that the risks to study subjects outweigh the anticipated benefits.

These limitations present a material risk that FDA or other federal or state law enforcement authorities could determine that the nature and scope of our sales, marketing and/or support activities, though designed to comply with all FDA requirements, constitute the promotion of our products for an unapproved use in violation of the FDCA. We also face the risk that FDA or other governmental authorities might pursue enforcement based on past activities that we have discontinued or changed, including sales activities, arrangements with institutions and doctors, educational and training programs and other activities. Investigations concerning the promotion of unapproved uses and related issues, are typically expensive, disruptive and burdensome and generate negative publicity. If our promotional activities are found to be in violation of the law, we may face significant fines and penalties and may be required to substantially change our sales, promotion, grant and educational activities. There is also a possibility that we could be enjoined from selling some or all of our products for any unapproved use.

Although our Isolator Synergy System received FDA approval for the treatment of some forms of Afib in certain procedures, we have not received FDA clearance or approval to promote our other products for the treatment of Afib or the prevention of stroke. Unless and until we obtain FDA clearance or approval for the use of our other products to treat Afib or prevent stroke, we, and others

acting on our behalf, may not claim in the U.S. that such products are safe and effective for such uses or otherwise promote them for such uses. Similar restrictions exist outside of the U.S. There is no assurance that future clearances or approvals of our products will be granted or that current or future clearances or approvals will not be withdrawn. Failure to obtain a clearance or approval or loss of an existing clearance or approval, could hurt our ability to maintain and grow our business.

Modifications to our products may require new clearances or approvals or may require us to cease promoting or to recall the modified products until such clearances or approvals are obtained and FDA may not agree with our conclusions regarding whether new clearances or approvals were required.

Any modification to a 510(k)-cleared device that would constitute a change in its intended use, design or manufacture could require a new or supplemental 510(k) clearance or, possibly, submission and FDA approval of a PMA application. FDA requires every medical device company to make the determination as to whether a 510(k) must be filed, but FDA may review any medical device company's decision. We have made modifications to our products and concluded that such modifications did not require us to submit a new or supplemental 510(k). FDA may not agree with our decisions regarding whether submissions were required.

If FDA were to disagree with us and require us to submit a 510(k), PMA or a PMA supplement for then-existing modifications, we could be required to cease promoting or to recall the modified product until we obtain clearance or approval. In addition, we could be subject to significant regulatory fines or other penalties. Furthermore, our products could be subject to recall if FDA determines, for any reason, that our products are not safe or effective or that appropriate regulatory submissions were not made. Delays in receipt or failure to receive clearances or approvals, the loss of previously received clearances or approvals or the failure to comply with existing or future regulatory requirements could reduce our sales, profitability and future growth prospects.

If we or our third-party vendors fail to comply with extensive FDA regulations relating to the manufacturing of our products or any component part, we may be subject to fines, injunctions and penalties, and our ability to commercially distribute and sell our products may be hurt.

Our manufacturing facilities and the manufacturing facilities of any of our third-party component manufacturers, critical suppliers or third-party sterilization facility are required to comply with FDA's 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. FDA may evaluate our compliance with the QSR, among other ways, 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, an FDA investigator observes conditions or practices believed to violate the QSR, the investigator may document their observations on a Form FDA-483 that is issued at the conclusion of the inspection. A manufacturer that receives an FDA-483 may respond in writing and explain any corrective actions taken in response to the inspectional observations. FDA will typically review the facility's written response and may re-inspect to determine the facility's compliance with the QSR and other applicable regulatory requirements. Failure to take adequate and timely corrective actions to remedy objectionable conditions listed on an FDA-483 could result in FDA taking administrative or enforcement actions. Among these may be FDA's issuance of a Warning Letter to a manufacturer, which informs the manufacturer that FDA considers the observed violations to be of "regulatory significance" that, if not corrected, could result in further enforcement action. FDA enforcement actions, which include seizure, injunction and criminal prosecution, could result in total or partial suspension of a facility's production and/or distribution, product recalls, fines, suspension of FDA's review of product applications and 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 FDA approval of our products and could have an adverse effect on our production, sales and financial condition.

We and any of our third-party vendors may also encounter other problems during manufacturing including failure to follow specific protocols and procedures, equipment malfunction and environmental factors, any of which could delay or impede our ability to meet demand. The manufacture of our product also subjects us to risks that could harm our business, including problems relating to the sterilization of our products or facilities and errors in manufacturing 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.

We are currently under investigation by the United States Department of Justice, and any adverse finding, allegation, or exercise of enforcement or regulatory discretion by the DOJ could materially and adversely affect our business, financial condition or results of operations.

As previously disclosed, on December 11, 2017, the Company received a Civil Investigative Demand (CID) from the U.S. Department of Justice (DOJ) stating that it is investigating the Company to determine whether the Company has violated the False Claims Act, relating to the promotion of certain medical devices related to the treatment of atrial fibrillation for off-label use and submitted or caused to be submitted false claims to certain federal and state health care programs for medically unnecessary healthcare services related to the treatment of Afib. The CID covers the period from January 2010 to December 2017 and requires the production of documents and answers to written interrogatories. The Company had no knowledge of the investigation prior to receipt of the CID.

The Company maintains rigorous policies and procedures to promote compliance with the False Claims Act and other applicable regulatory requirements. The Company provided the DOJ with documents and answers to the written interrogatories and is cooperating with the investigation. However, the Company cannot predict when the investigation will be resolved, the outcome of the investigation or its potential impact on the Company. While the Company believes its practices are lawful, there can be no assurance that the DOJ's ongoing investigation or future exercise of its enforcement, regulatory, discretionary or other powers will not result in findings or alleged violations of federal laws that could lead to enforcement actions, proceedings or litigation and the imposition of damages, fines, penalties, restitution, other monetary liabilities, sanctions, settlements or changes to the Company's business practices or operations that could have a material adverse effect on the Company's business, financial condition or results of operations or eliminate altogether the Company's ability to operate its business or on terms substantially similar to those on which it currently operates.

The use of products we sell may result in injuries or other adverse events that lead to product liability suits, which could be costly to our business or our customers' businesses.

The use of our products may result in a variety of serious complications, including damage to the heart, internal bleeding, death or other adverse events. Serious complications are commonly encountered in connection with surgical procedures. If products we sell are defectively designed, manufactured or labeled, contain inadequate warnings, contain defective components, are misused or are associated with serious injuries or deaths, we may become subject to costly litigation by our customers or their patients. We carry product liability insurance that is limited in scope and amount and may not be adequate to fully protect us against product liability claims. We could be required to pay damages that exceed our insurance coverage, and such amounts could be significant. Any product liability claim, with or without merit, could also result in an increase in our insurance rates or our inability to secure coverage on reasonable terms, if at all. Even in the absence of a claim, our insurance rates may rise in the future. Any product liability claim, even a meritless or unsuccessful one, would be time-consuming and expensive to defend and could result in the diversion of our management's attention from our business and result in adverse publicity, withdrawal of clinical trial participants, injury to our reputation and loss of revenue. Any of these events could negatively affect our financial condition.

Our intellectual property rights may not provide meaningful commercial protection for our products, which could enable third parties to use our technology or methods, or very similar technology or methods, and could reduce our ability to compete.

Our success depends significantly on our ability to protect our proprietary rights to the technologies used in our products. 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 patent applications may not issue as patents at all or in a form that will be advantageous to us. Our issued patents and those that may be issued in the future may be challenged, invalidated or circumvented, which could limit our ability to stop competitors from marketing related products.

Although we have taken steps to protect our intellectual property and proprietary technology, we cannot assure you that third parties will not be able to design around our patents or, if they do infringe upon our technology, that we will be successful in or will have sufficient resources to pursue a claim of infringement against those third parties. We believe that third parties may have developed or are developing products that could infringe upon our patent rights. Any pursuit of an infringement claim by us may involve substantial expense or diversion of management attention. In addition, although we have generally entered into confidentiality agreements and intellectual property assignment agreements with our employees, consultants, investigators and advisors, such agreements may be breached, may not be enforceable or may not provide meaningful protection for our trade secrets or other proprietary information in the event of unauthorized use or disclosure or other breaches of the agreements. Additionally, as is common in the medical device industry, some of these individuals were previously employed at other medical equipment or biotechnology companies, including our competitors. Although no claims are currently pending against us, we may be subject to claims that these individuals have used or disclosed trade secrets or other proprietary information of their former employers.

The laws of foreign countries may not protect our intellectual property rights to the same extent as the laws of the United States. Foreign countries generally do not allow patents to cover methods for performing surgical procedures. If our intellectual property does not provide significant protection against foreign or domestic competition, our competitors could compete more directly with us, which could result in a decrease in our revenue and market share. All of these factors may harm our competitive position.

The medical device industry is characterized by extensive litigation and administrative proceedings over patent and other intellectual property rights and any litigation or claim against us may cause us to incur substantial costs, could place a significant strain on our financial resources, divert the attention of management from our business and harm our reputation.

Despite measures taken to protect our intellectual property, unauthorized parties might copy aspects of our products or obtain and use information that we regard as proprietary. Whether a product infringes a patent involves complex legal and factual issues, the determination of which is often uncertain. Any patent dispute, even one without merit or an unsuccessful one, would be time-consuming and expensive to defend and could result in the diversion of our management's attention from our business and result in adverse publicity, the disruption of development and marketing efforts, injury to our reputation and loss of revenue. Litigation also

puts our patent applications at risk of being rejected and our patents at risk of being invalidated or interpreted narrowly and may provoke third parties to assert claims against us. Any of these events could negatively affect our financial condition.

In the event of a patent dispute, if a third party's patents were upheld as valid and enforceable and we were found to be infringing, or found to be inducing infringement by others, we could be prevented from selling our products unless we were able to obtain a license to use technology or ideas covered by such patent or are able to redesign our system to avoid infringement, or we may be ordered to pay substantial damages to the patent holders. A license may not be available at all or on terms acceptable to us, and we may not be able to redesign our products to avoid any infringement. Modification of our products or development of new products could require us to conduct additional clinical trials and to revise our filings with FDA and other regulatory bodies, which would be time-consuming and expensive. If we are not successful in obtaining a license or redesigning our products, we may be unable to sell our products and our business could suffer.

We sell our products outside of the United States, and we are subject to various regulatory and other risks relating to international operations, which could harm our revenue and profitability.

Doing business outside of the United States exposes us to risks distinct from those we face in our domestic operations. For example, our operations outside of the United States are subject to different regulatory requirements in each jurisdiction where we operate or have sales. Our failure, or the failure of our distributors, to comply with current or future foreign regulatory requirements, or the assertion by foreign authorities that we or our distributors have failed to comply, could result in adverse consequences, including enforcement actions, fines and penalties, recalls, cessation of sales, civil and criminal prosecution, and the consequences could be disproportionate to the relative contribution of our international operations to our results of operations. Moreover, if political or economic conditions deteriorate in these countries, or if any of these countries are affected by a natural disaster or other catastrophe, our ability to conduct our international operations or collect on international accounts receivable could be limited and our costs could be increased, which could negatively affect our operating results. Engaging in business outside of the United States inherently involves a number of other difficulties and risks, including, but not limited to:

- export restrictions and controls relating to technology;
- pricing pressure that we may experience internationally;
- difficulties in enforcing agreements and collecting receivables through certain foreign legal systems;
- political and economic instability;
- consequences arising from natural disasters and other similar catastrophes, such as hurricanes, tornados, earthquakes, floods and tsunamis;
- potentially adverse tax consequences, tariffs and other trade barriers;
- the need to hire additional personnel to promote our products outside of the United States;
- international terrorism and anti-American sentiment;
- fluctuations in exchange rates for future sales denominated in foreign currency, which represent a portion of our sales outside of the United States; and
- difficulty in obtaining and enforcing intellectual property rights.

Our exposure to each of these risks may increase our costs and require significant management attention. We cannot assure you that one or more of these factors will not harm our business.

Due to the global nature of our business, we may be exposed to liabilities under the Foreign Corrupt Practices Act and various other anti-corruption laws, and any allegation or determination that we violated these laws could have a material adverse effect on our business.

Our business practices in foreign countries must comply with anti-corruption laws, including the Foreign Corrupt Practices Act (FCPA), the UK Anti-Bribery Act of 2010 and other U.S. and foreign anti-corruption laws, which prohibit companies from engaging in bribery including corruptly or improperly offering, promising, or providing money or anything else of value to foreign officials and certain other recipients. In addition, the FCPA imposes certain books, records and accounting control obligations on public companies and other issuers. We operate in parts of the world in which corruption can be common and compliance with anti-bribery laws may conflict with local customs and practices. Our global operations face the risk of unauthorized payments or offers being made by employees, consultants, sales agents and other business partners outside of our control or without our authorization.

We have a compliance program in place designed to reduce the likelihood of potential violations of the FCPA and other U.S. and foreign anti-bribery and anti-corruption laws. It is our policy to implement safeguards (including mandatory training) to prohibit these practices by our employees and business partners with respect to our operations. However, irrespective of these safeguards, or as a result of monitoring compliance with such safeguards, it is possible that we or certain other parties may discover or receive information at some point that certain employees, consultants, sales agents, or other business partners may have engaged in corrupt conduct for which we might be held responsible.

Violations of the FCPA or other foreign anti-corruption laws may result in restatements of, or irregularities in, our financial statements as well as severe criminal or civil sanctions, and we may be subject to other liabilities, which could negatively affect our business, operating results and financial condition. In some cases, companies that violate the FCPA may be debarred by the U.S. government and/or lose their U.S. export privileges. Changes in anti-corruption laws or enforcement priorities could also result in increased compliance requirements and related costs which could adversely affect our business, financial condition and results of operations. In addition, the U.S. or other governments may seek to hold us liable for successor liability FCPA violations or violations of other anti-corruption laws committed by companies in which we invest or that we acquired or will acquire.

Compliance with developing European Union medical device regulations may limit our ability to maintain sales of our products in European markets or to introduce new products into European markets.

Many foreign countries where we market or may market our products have regulatory bodies and restrictions similar to those of FDA. International sales are subject to foreign government regulation, the requirements of which vary substantially from country to country. The time required to obtain approval by a foreign country may be longer or shorter than that required for FDA clearance and the requirements may differ. In particular, marketing of medical devices in the EU is subject to compliance with the Medical Device Directive 93/92/EEC (MDD). A medical device may be placed on the market within the EU only if it conforms to certain "essential requirements" and bears the CE Mark. The most fundamental and essential requirement is that a medical device must be designed and manufactured in such a way that it will not compromise the clinical condition or safety of patients, or the safety and health of users and others. In addition, the device must achieve the essential performance intended by the manufacturer and be designed, manufactured and packaged in a suitable manner.

In May 2017, the EU adopted a new Medical Device Regulation (EU) 2017/745 (MDR), which will repeal and replace the MDD effective May 26, 2021. The MDR clearly envisages, among other things, stricter controls of medical devices, including strengthening of the conformity assessment procedures, increased expectations with respect to clinical data for devices and pre-market regulatory review of high-risk devices. The MDR also envisages greater control over notified bodies and their standards, increased transparency, more robust device vigilance requirements and clarification of the rules for clinical investigations. Under transitional provisions, medical devices with notified body certificates issued under the MDD prior to May 26, 2021 may continue to be placed on the market for the remaining validity of the certificate, until May 26, 2024 at the latest. After the expiry of any applicable transitional period, only devices that have been CE marked under the MDR may be placed on the market in the EU. If we fail to comply with the new MDR, we may not be able to continue to sell existing products in the EU or introduce new products for sale in the EU, either of which could materially harm our results of operations and financial condition.

The United Kingdom's withdrawal from the European Union (EU) may have a negative effect on global economic conditions, financial markets and our business.

The United Kingdom (U.K.) left the EU on January 31, 2020. The withdrawal (known as "Brexit") has created significant uncertainty about the future relationship between the United Kingdom and the EU, including with respect to the laws and regulations that will apply as the United Kingdom determines which EU laws to replace or replicate to facilitate the withdrawal. From a regulatory perspective, the United Kingdom's withdrawal gives rise to significant complexity and risks. Since the medical device regulatory framework in the United Kingdom is derived from the EU Medical Devices Directive, the United Kingdom's withdrawal could materially impact the continued marketing of EU medical devices in the United Kingdom.

The U.K. and the EU reached a free trade agreement on December 24, 2020, which included regulatory and customs cooperation mechanisms, as well as provisions supporting open and fair competition. Under the trade agreement, the U.K. is free to set its own trade policy and can negotiate with other countries that do not currently have free trade deals with the EU. Although the full impact of the trade agreement is uncertain, it is possible that the recent changes to the trading relationship between the U.K. and the EU due to the trade agreement could result in increased cost of goods imported into and exported from the U.K., which may decrease the profitability of our operations. Additional currency volatility could drive a weaker British pound, which could increase the cost of goods imported into the U.K. and may decrease the profitability of our operations. A weaker British pound versus the U.S. dollar may also cause local currency results of our operations to be translated into fewer U.S. dollars during a reporting period.

The U.K.'s withdrawal from the EU has resulted in significant changes to the movement of goods and personnel between the United Kingdom and the remaining member states of the EU. Products will be subject to additional inspections and documentation checks, leading to possible delays at ports of entry and departure. The withdrawal could also adversely impact the operations of our vendors and of our other partners. Additionally, we face new regulations regarding trade, aviation, tax, security and employees, among others, in the United Kingdom. Compliance with such regulations could be costly, negatively impacting our business, results of operations and financial condition. Brexit could also adversely affect European and worldwide economic and market conditions and could contribute to instability in global financial markets.

Given the lack of precedent, it is unclear what financial, trade, regulatory and legal implications the trade agreement will have on our business; however, Brexit and its related effects could potentially have an adverse impact on our financial position and results of operations. Our management team has evaluated a range of possible outcomes, identified areas of concerns, and implemented strategies to help mitigate these concerns. It is possible that these strategies may not be adequate to mitigate any adverse impacts of Brexit, and that these impacts could further adversely affect our business and results of operations.

Financial Risks

Our quarterly financial results are likely to fluctuate significantly because our sales prospects are uncertain.

Due to current worldwide economic conditions, natural disasters and other factors discussed in this "Risk Factors" section which may impact our sales results, our quarterly operating results are difficult to predict and may fluctuate significantly from quarter to quarter or from prior year to current year periods. These fluctuations may also affect our annual operating results and may cause those results to fluctuate unexpectedly from year to year.

We have a history of net losses, and we may never become profitable.

We have incurred net losses each year since our inception, including, most recently, net losses of $48,155 in 2020, $35,194 in 2019 and $21,137 in 2018. As of December 31, 2020, we had an accumulated deficit of $330,352.

Our net losses have resulted principally from costs and expenses relating to sales, training and promotional efforts, research and development, clinical trials, seeking regulatory clearances and approvals and general operating expenses. We expect to continue to incur substantial expenditures and to potentially incur additional operating losses in the future as we further develop and commercialize our products. If sales of our products do not continue to grow as we anticipate, we will not be able to achieve profitability. Our expansion efforts may prove to be more expensive than we currently anticipate, and we may not succeed in increasing our revenue sufficiently to offset these higher expenses. Our losses have had, and are expected to continue to have, an adverse impact on our working capital, total assets and accumulated deficit.

Our federal tax net operating loss (NOL) and general business credit carryforwards generated or acquired may expire or will be limited because we experienced an ownership change of more than 50 percent, which could result in greater future income tax expense and adversely impact future cash flows.

On June 30, 2001, we experienced an ownership change as defined by Section 382 of the Internal Revenue Code of 1986. Section 382 imposes limitations (Section 382 limitation) on a company's ability to use net operating loss and general business credit carryforwards if a company experiences a more-than-50-percent ownership change over a three-year testing period. Additionally, in connection with acquisitions, certain acquired NOLs are also subject to Section 382 limitation. The Section 382 limitations could limit the availability of our net operating loss and general business credit carryforwards to offset any future taxable income, which may increase our future income tax expense and adversely impact future cash flows. Net operating losses generated prior to 2018 are also subject to expiration under current IRS regulations. We have total federal income tax net operating loss carryforwards that have begun to expire in 2020 and research and development credit carryforwards that will begin to expire in 2022. We have available net operating loss and research and development credit carryforwards, subject to expiration of $339,699 and $9,365 as of December 31, 2020.

Our effective income tax rate may fluctuate, which may adversely affect our operations, earnings and earnings per share.

Our effective income tax rate is influenced by our projected profitability in the various taxing jurisdictions in which we operate. The global nature of our business increases our tax risks. In addition, revenue authorities in many of the jurisdictions in which we operate are known to have become more active in their tax collection activities. Changes in the distribution of profits and losses among taxing jurisdictions may have a significant impact on our effective income tax rate, which in turn could have an adverse effect on our net income and earnings per share. The application of tax laws in various taxing jurisdictions, including the United States, is subject to interpretation, and tax authorities in various jurisdictions may have diverging and sometimes conflicting interpretations of the application of tax laws. Changes in tax laws or tax rulings, in the United States or other tax jurisdictions in which we operate, could materially impact our effective tax rate.

Factors that may affect our effective income tax rate include, but are not limited to:

- the requirement to exclude from our quarterly worldwide effective income tax calculations losses in jurisdictions where no income tax benefit can be recognized;
- actual and projected full year pre-tax income, including differences between actual and anticipated income before taxes in various jurisdictions;
- changes in tax laws, or in the interpretation or application of tax laws, in various taxing jurisdictions;
- changes in the relative mix and staffing levels in various tax jurisdictions;
- audits or other challenges by taxing authorities; and
- the establishment of valuation allowances against a portion or all of certain deferred income tax assets if we determined that it is more likely than not that future income tax benefits will not be realized.

These changes may cause fluctuations in our effective income tax rate that could adversely affect our results of operations and cause fluctuations in our earnings and earnings per share.

Governmental authorities may question our intercompany transfer pricing policies or change their laws in a manner that could increase our effective tax rate or otherwise harm our business.

As a U.S. company doing business in international markets through subsidiaries, we are subject to foreign tax and intercompany pricing laws, including those relating to the flow of funds between the parent and subsidiaries. Tax authorities in the United States and in foreign markets closely monitor our corporate structure and how we account for intercompany fund transfers. If tax authorities challenge our corporate structure, transfer pricing mechanisms or intercompany transfers, our operations may be negatively impacted and our effective tax rate may increase. Tax rates vary from country to country and if regulators determine that our profits in one jurisdiction should be increased, we might not be able to fully offset any associated increase in tax expense in the other jurisdiction, which would increase our effective tax rate. Additionally, the Organization for Economic Cooperation and Development, or OECD, has issued certain proposed guidelines regarding base erosion and profit sharing. As these guidelines are formally adopted by the OECD, it is possible that separate taxing jurisdictions may also adopt some form of these guidelines. In such case, we may need to change our approach to intercompany transfer pricing in order to maintain compliance under the new rules. Our effective tax rate may increase or decrease depending on the current location of global operations at the time of the change. Finally, we might not always be in compliance with all applicable customs, exchange control, Value Added Tax and transfer pricing laws despite our efforts to be aware of and to comply with such laws. In such case, we may need to adjust our operating procedures and our business could be adversely affected.

If our goodwill or other intangible assets become impaired, it could materially reduce the value of our assets and reduce our net income or increase our net loss for the year in which the impairment occurs.

As of December 31, 2020, we had $234,781 in goodwill related to acquisitions, which represents the purchase price we paid in excess of the fair value of the net assets we acquired. The Financial Accounting Standards Board's (FASB) Accounting Standards Codification (ASC) 350, "Goodwill and Other Intangible Assets" requires that goodwill be tested for impairment at least annually (absent any impairment indicators). The testing includes comparing the fair value of each reporting unit with its carrying value. We may have future impairment adjustments to our recorded goodwill. Any finding that the value of our goodwill has been impaired would require us to record an impairment charge which could materially reduce the value of our assets and reduce our net income or increase our net loss for the year in which the impairment charge occurs and increase our accumulated deficit.

In Process Research and Development (IPR&D) valued at $126,321 was recorded as an intangible asset in connection with the nContact and SentreHEART acquisitions. If we do not obtain the regulatory approvals that would confirm the technological feasibility of the respective IPR&D projects, or if the IPR&D projects are abandoned for any other reason, we could have an impairment adjustment of this asset that could require us to write off a portion or all of the recorded asset value. Additionally, and similar to goodwill, if the IPR&D asset is deemed to be impaired as a result of the estimated fair value being less than carrying value, we would be required to write off the impaired portion of the IPR&D asset. This would materially reduce the value of our assets and reduce our net income or increase our net loss for the year in which the write off occurs and increase our accumulated deficit.

An inability to forecast future revenue or estimate life cycles of products may result in inventory-related charges that would negatively affect our gross margins and results of operations.

To mitigate the risk of supply interruptions, we may choose to maintain additional inventory of our products or component parts. Managing our inventory levels is important to our cash position and results of operations and is challenging in the current economic environment. As we grow and expand our product offerings, managing our inventory levels becomes more difficult, particularly as we expand into new product areas and bring product enhancements to market. While we rely on our personnel and information technology systems for inventory management, our personnel and information technology systems may fail to adequately perform these functions or may experience an interruption. An excessive amount of inventory reduces our cash available for operations and may result in excess or obsolete materials. Conversely, inadequate inventory levels may make it difficult for us to meet customer product demand, resulting in decreased revenue. An inability to forecast future revenue or estimated life cycles of products may result in inventory-related charges that would negatively affect our gross margins and results of operations and increase our accumulated deficit.

We are subject to credit risk from our accounts receivable related to our sales, which include sales to countries outside the United States that may experience economic turmoil.

The majority of our accounts receivable arise from sales in the United States. However, we also have significant receivable balances from customers within the European Union and Asia. Our accounts receivable in the United States are primarily due from public and private hospitals. Our accounts receivable outside the United States are primarily due from public and private hospitals and from 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 operate in certain countries where economic conditions continue to present challenges to their businesses, and, thus, could place the amounts due 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 negatively affect the length of time that it will take us to collect associated accounts receivable or impact the likelihood of ultimate collection.

We may be unable to comply with the covenants of our Loan Agreement.

Our Loan Agreement with Silicon Valley Bank ("SVB") contains a minimum liquidity covenant and other customary terms and conditions. The occurrence of an event of default could result in an increase to the applicable interest rate by 3.0%, an acceleration of all obligations, an obligation to repay all obligations in full and a right by SVB to exercise all remedies available to them. If we are unable to pay those amounts, SVB could proceed against the collateral granted to it pursuant to the Loan Agreement, and we may in turn lose access to our current source of borrowing availability.

Common Stock Risks

We may fail to meet our publicly announced guidance or other expectations about our business and future operating results, which could cause a decline in our stock price.

We provide financial guidance about our business and future operating results. In developing this guidance, our management makes certain assumptions and judgments about our future operating performance, including projected hiring of sales professionals, continued increase of our market share, and continued stability of the macro-economic environment in our key markets. Furthermore, analysts and investors may develop and publish their own projections of our business, which may form a consensus about our future performance. Our business results may vary significantly from such guidance or that consensus due to a number of factors, many of which are outside of our control, and which could adversely affect our operations and operating results. Furthermore, if we make downward revisions of our previously announced guidance, or if our publicly announced guidance of future operating results fails to meet expectations of securities analysts, investors, or other interested parties, the market price of our common stock could decline.

Securities analysts may not continue, or additional securities analysts may not initiate, coverage for our common stock or may issue negative reports. This may have a negative impact on the market price of our common stock.

Several securities analysts provide research coverage of our common stock. Some analysts have already published statements that do not portray our technology, products or procedures using our products in a positive light and others may do so in the future. If we are unable to educate those who publicize such reports about the benefits we believe our business provides, or if one or more of the analysts who elects to cover us downgrades our stock, our stock price would likely decline rapidly. If one or more of these analysts ceases coverage of our company, we could lose visibility in the market, which in turn could cause our stock price to decline. The trading market for our common stock may be affected in part by the research and reports that industry or financial analysts publish about us or our business. If sufficient securities analysts do not cover our common stock, the lack of research coverage may adversely affect the market price of our common stock. It may be difficult for companies such as ours, with smaller market capitalizations, to attract and maintain sufficient independent financial analysts that will cover our common stock. This could have a negative effect on the market price of our stock.

The price and trading volume of our common stock may experience extreme fluctuations and our stockholders could lose some or all of their investment.

Because we operate within the medical device segment of the healthcare industry, our stock price is likely to be volatile. The market price of our common stock may have and has had a history of substantial fluctuation due to a variety of factors, including, but not limited to those risk factors described in the "Risk Factors" section herein. These factors, some of which are not within our control, may cause the price of our stock to fluctuate substantially. We believe the quarterly and annual comparisons of our financial results are not necessarily meaningful and should not be relied upon as an indication of our future performance.

The market prices of the securities of medical device companies, particularly companies like ours without consistent revenue and earnings, have been highly volatile and are likely to remain highly volatile in the future. This volatility has often been unrelated to the operating performance of these particular companies. In the past, companies that experience volatility in the market price of their securities have often faced securities class action litigation. Whether or not meritorious, litigation brought against us could result in substantial costs, divert our management's attention and resources and harm our ability to grow our business.

The sale of material amounts of common stock could encourage short sales by third parties and depress the price of our common stock. As a result, our stockholders may lose all or part of their investment.

The downward pressure on our stock price caused by the sale of a significant number of shares of our common stock or the perception that such sales could occur by any of our significant stockholders could cause our stock price to decline, thus allowing short sellers of our stock an opportunity to take advantage of any decrease in the value of our stock. The presence of short sellers in our common stock may further depress the price of our common stock. Some of our directors and executive officers have entered into, or may enter into, Rule 10b5-1 trading plans pursuant to which they may sell shares of our stock from time to time in the future. Actual or potential sales by these insiders, including those under a pre-arranged Rule 10b5-1 trading plan, could be interpreted by the market as an indication that the insider has lost confidence in our stock and adversely impact the market price of our stock.

We may be obligated to issue additional shares of our common stock to the former stockholders of SentreHEART as a result of our satisfaction of certain milestones set forth in the merger agreement, resulting in dilution of our current stock ownership.

Under the terms the SentreHEART merger agreement, we could issue additional shares of our common stock, or make payments in cash, to the former stockholders of SentreHEART as contingent consideration upon our satisfaction of milestones described in the

merger agreements. The SentreHEART merger agreement limits the total number of shares of AtriCure common stock issued in connection with the acquisition to 7,021, of which 699 shares were issued at the closing of the SentreHEART acquisition on August 13, 2019. Issuing additional shares of our common stock in satisfaction of contingent consideration dilutes the ownership interests of holders of our common stock on the dates of such issuances. If we are unable to realize the strategic, operational and financial benefits anticipated from our acquisition of SentreHEART, our stockholders may experience dilution of their ownership interests in our company upon any such future issuances of shares of our common stock without receiving any commensurate benefit.

Sales of common stock by us in a capital raising transaction or our issuances of shares in an acquisition may dilute stockholder ownership of common stock and cause a decline in the market price of our common stock.

We may need to raise capital in the future to fund our operations or new initiatives or reduce or pay in full our indebtedness. If we raise funds by issuing equity securities, our stock price may decline and our existing stockholders may experience significant dilution. Furthermore, we may enter into capital raising transactions or issue shares in acquisitions at prices that represent a substantial discount to market price. A negative reaction by investors and securities analysts to any sale of our equity securities could result in a decline in the trading price of our common stock.

Anti-takeover provisions in our amended and restated certificate of incorporation and amended and restated bylaws and under Delaware law could inhibit a change in control or a change in management that stockholders consider favorable.

Provisions in our certificate of incorporation and bylaws could delay or prevent a change of control or change in management that would provide a premium to the market price of common stock. These provisions include those:

- authorizing the issuance without further approval of "blank check" preferred stock that could be issued by our board of directors to increase the number of outstanding shares and thwart a takeover attempt;
- prohibiting cumulative voting in the election of directors, which would otherwise allow less than a majority of stockholders to elect director candidates;
- limiting the ability of stockholders to call special meetings of stockholders;
- prohibiting stockholder action by written consent, thereby requiring all stockholder actions to be taken at a meeting of stockholders; and
- establishing advance notice requirements for nominations for election to the board of directors or for proposing matters that can be acted upon by stockholders at stockholder meetings.

In addition, Section 203 of the Delaware General Corporation Law limits business combination transactions with 15% stockholders that have not been approved by our board of directors. These provisions and others could make it difficult for a third party to acquire us, or for members of our board of directors to be replaced, even if doing so would be beneficial to our stockholders. Because our board of directors is responsible for appointing the members of our management team, these provisions could, in turn, affect any attempt to replace the current management team. If a change of control or change in management is delayed or prevented, stockholders may lose an opportunity to realize a premium on shares of common stock or the market price of our common stock could decline.

We do not expect to pay dividends in the foreseeable future. As a result, stockholders must rely on stock appreciation for any return on investment.

We do not anticipate paying cash dividends on our common stock in the foreseeable future. Any payment of cash dividends will also depend on our financial condition, results of operations, capital requirements and other factors and will be at the discretion of our board of directors. Accordingly, stockholders will have to rely on capital appreciation, if any, to earn a return on investment in our common stock. Furthermore, pursuant to our credit facility, we are currently subject to restrictions on our ability to pay dividends and we may in the future become subject to other contractual restrictions on, or prohibitions against, the payment of dividends.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

The Company maintains its headquarters in Mason, Ohio in a leased facility totaling approximately 92,000 square feet. The facility contains the Company's administrative, regulatory, engineering, product development, distribution and manufacturing functions. The Company also leases the following principal locations:

- Mason, Ohio – This secondary location in Mason, Ohio is primarily used for warehousing and distribution activities. The facility is approximately 40,000 square feet.

- Minnetonka, Minnesota – This location includes both administrative and product development space. The office is approximately 27,500 square feet.
- Redwood City, California – This location is primarily used for product development and manufacturing activities for the LARIAT System and is approximately 10,000 square feet.
- Amsterdam, Netherlands – This location is primarily for the administration of our European subsidiaries and is approximately 9,000 square feet.

The Company believes that its existing facilities are adequate to meet its immediate needs and that suitable additional space will be available in the future on commercially reasonable terms as needed.

ITEM 3. LEGAL PROCEEDINGS

The Company is not party to any material pending or threatened litigation. We may from time to time become a party to additional legal proceedings that arise in the ordinary course of business. See Note 12 – Commitments and Contingencies to our Consolidated Financial Statements.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

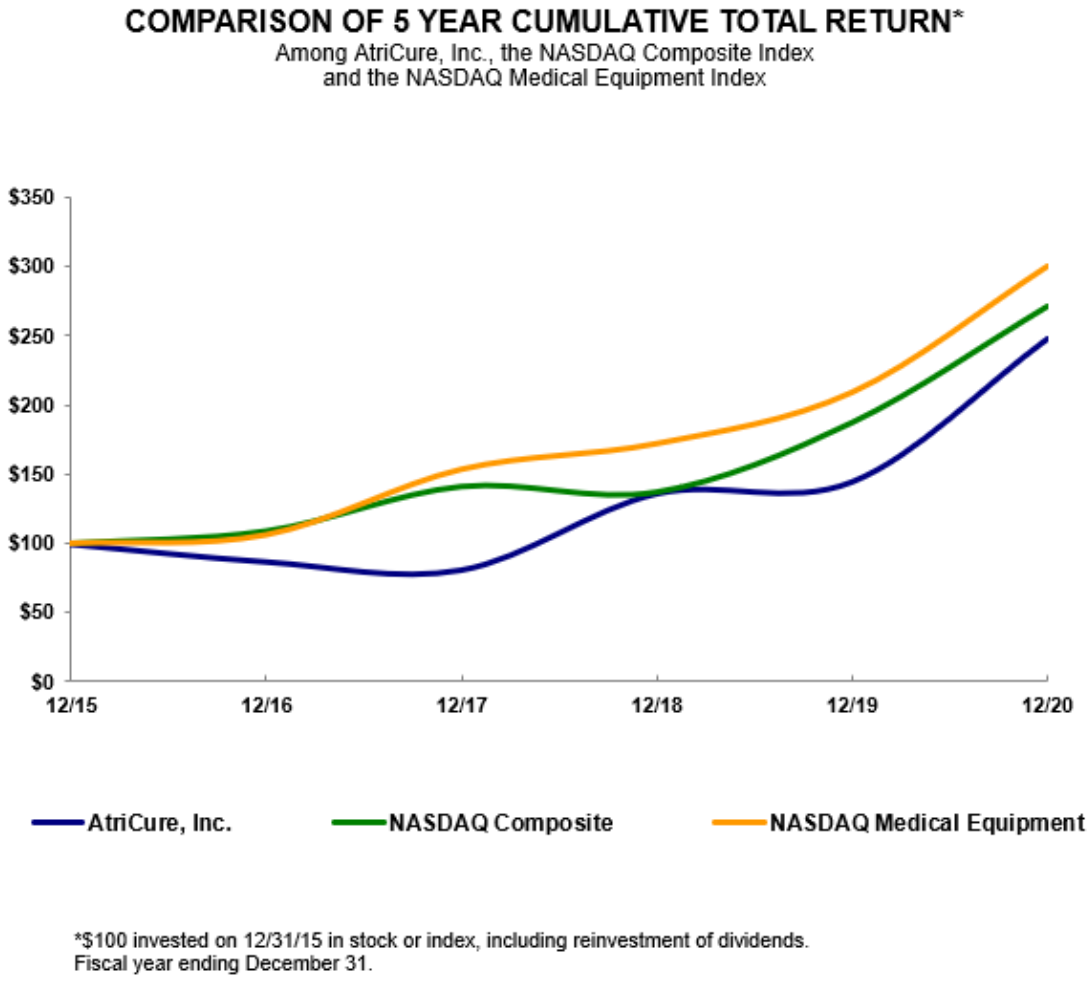
ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Common Stock Market Price

Our common stock is traded on the NASDAQ Global Market under the symbol "ATRC". As of February 24, 2021, the closing price of our common stock on the NASDAQ Global Market was $62.41 per share, and the number of stockholders of record was 82.

Performance Graph

The following graph compares the cumulative total stockholder return on our common stock with the cumulative total return of the NASDAQ Composite and the NASDAQ Medical Equipment Index for the period beginning on December 31, 2015 and ending on December 31, 2020.



This graph assumes that $100.00 was invested on December 31, 2015 in our common stock, the NASDAQ Composite Index and the NASDAQ Medical Equipment Index, and that all dividends are reinvested. No dividends have been declared or paid on our common stock. Stock performance shown in the above chart for our common stock is historical and should not be considered indicative of future price performance.

	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020
AtriCure, Inc.	$ 87.21	$ 81.28	$ 136.36	$ 144.88	$ 248.08
NASDAQ Composite	$ 108.87	$ 141.13	$ 137.12	$ 187.44	$ 271.64
NASDAQ Medical Equipment	$ 106.07	$ 153.41	$ 171.99	$ 209.03	$ 300.10

ITEM 6. SELECTED FINANCIAL DATA

The following table reflects selected financial data derived from our Consolidated Financial Statements for each of the last five years. The operating results data for the years ended December 31, 2020, 2019 and 2018 and the financial position data as of December 31, 2020 and 2019 are derived from our audited financial statements included in this Form 10-K. The operating results data for the years ended December 31, 2017 and 2016 and the financial position data as of December 31, 2018, 2017 and 2016 are derived from our audited financial statements not included in this Form 10-K. Historical results are not necessarily indicative of future results. The selected financial data set forth below should be read in conjunction with our financial statements, the related notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations" included elsewhere in this Form 10-K.

	Year Ended December 31,				
	2020 (1)	2019 (2)	2018 (3)	2017	2016
	(in thousands, except per share data)				
Operating Results:					
Revenue	$ 206,531	$ 230,807	$ 201,630	$ 174,716	$ 155,109
Gross profit	$ 149,309	$ 170,335	$ 147,120	$ 126,163	$ 111,101
Gross margin	72.3%	73.8%	73.0%	72.2%	71.6%
Net loss	$ (48,155)	$ (35,194)	$ (21,137)	$ (26,892)	$ (33,338)
Basic and diluted net loss per share	$ (1.14)	$ (0.94)	$ (0.62)	$ (0.83)	$ (1.05)
Weighted average shares outstanding	42,125	37,589	34,087	32,387	31,609
Financial Position:					
Cash, cash equivalents and investments	$ 258,396	$ 94,476	$ 124,402	$ 34,451	$ 47,009
Working capital	257,600	93,244	134,457	50,355	56,889
Total assets	714,539	557,880	356,759	267,704	276,421
Long-term debt and leases	65,584	74,204	47,743	36,861	37,205
Stockholders' equity	412,394	247,343	249,381	161,166	168,442

(1) The challenging environment resulting from the COVID-19 pandemic adversely impacted our 2020 results of operations and financial condition. In May 2020, we strengthened our liquidity position through a public offering of 4,574 shares of common stock and received net proceeds of $188,958.

(2) We acquired SentreHEART on August 13, 2019. Total consideration paid at the acquisition date was $18,008 in cash and 699 shares of AtriCure common stock valued at approximately $20,307. The purchase price also included $171,300 of contingent consideration liabilities.

We adopted FASB ASC 842, "Leases" using the transition method provided by Accounting Standard Update (ASU) 2018-11, "Leases (Topic 842): Targeted Improvements" on January 1, 2019. Under this method, we applied the new requirements to leases that existed as of January 1, 2019. As a result of the adoption, the Company recorded operating right-of-use assets and operating lease liabilities of approximately $1,884 and $2,189 as of January 1, 2019.

(3) In October 2018, we raised $82,870 in net proceeds in a public offering of 2,875 shares of common stock.

We adopted FASB ASC 606, "Revenue from Contracts with Customers" using the modified retrospective method effective January 1, 2018. The adoption of ASC 606 did not have a material impact on the amount and timing of revenue recognized in the Consolidated Financial Statements.

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

(Dollar and share amounts referenced in this Item 7 are in thousands, except per share amounts.)

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the accompanying consolidated financial statements and notes thereto contained in Item 8, "Financial Statements and Supplementary Data," to provide an understanding of our results of operations, financial condition and cash flows. This section of this Form 10-K generally discusses 2020 and 2019 items and year-to-year comparisons between 2020 and 2019. This discussion and analysis contains forward-looking statements that involve risks, uncertainties and assumptions. The actual results may differ from those anticipated in these forward-looking statements as a result of many factors, including but not limited to those set forth under Item 1A "Risk Factors," the cautionary statement regarding forward-looking statements at the beginning of Part I and elsewhere in this Form 10-K.

Year Ended December 31, 2019 compared to December 31, 2018

For a comparison of our results of operations for the fiscal years ended December 31, 2019 and December 31, 2018, see "Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" of our annual report on Form 10-K for the fiscal year ended December 31, 2019, filed with the SEC on February 24, 2020.

Overview

We are a leading innovator in treatments for atrial fibrillation (Afib) and left atrial appendage (LAA) management. We believe that we are currently the market leader in the surgical treatment of Afib. Our Isolator Synergy System is approved by FDA for the treatment of persistent and long-standing persistent Afib concomitant to other open-heart surgical procedures. All of our other ablation devices are cleared for sale in the United States under FDA 510(k) clearances, including our other radio frequency (RF) and cryoablation products, which are indicated for the ablation of cardiac tissue and/or the treatment of cardiac arrhythmias. In addition, certain of our cryoablation probes are cleared for managing pain by temporarily ablating peripheral nerves. Our AtriClip products are 510(k)-cleared with an indication for the exclusion of the LAA, performed under direct visualization and in conjunction with other cardiac surgical procedures. The LARIAT® system is cleared for soft tissue ligation. Several of our products are currently being studied to expand labeling claims or to support indications specifically for the treatment of Afib. Many of our products bear the CE mark and may be commercially distributed throughout the member states of the European Union and other countries that comply with or mirror the Medical Device Directive. Certain products are also available in select Asia-Pacific countries. We anticipate that substantially all of our revenue for the foreseeable future will relate to products we currently sell, or are in the process of developing.

We sell our products to medical centers through our direct sales force in the United States and in certain international markets, such as Germany, France, the United Kingdom and the Benelux region. We also sell our products to distributors who in turn sell our products to medical centers in other international markets. Our business is primarily transacted in U.S. Dollars with the exception of transactions with our European customers, which are transacted primarily in the Euro or the British Pound.

The challenging environment resulting from the COVID-19 pandemic adversely impacted our 2020 results of operations and financial condition. We experienced a significant decrease in demand for our products as non-emergent procedures are being indeterminately deferred in order to preserve resources for COVID-19 patients and caregivers and to protect patients from potential exposure to COVID-19. In the second half of 2020, we began to see some hospitals resuming elective procedures although do not believe that most hospitals were operating at the same levels as they had historically. We continue to be impacted by the COVID-19 pandemic and believe the effect on the Company's business differs by geography and procedure type.

We adjusted our operating plan and expect to continuously evaluate and as may be necessary, amend our operating plan as a result of the COVID-19 pandemic. We have elected to delay certain capital investments, and implemented other expense-reduction measures, including ceasing non-essential travel and conference activity, and suspending work on certain research and development projects. Adjustments to the operating plan did not include temporary or permanent reductions in headcount or to non-executive employee compensation. However, we are unable to ensure the operating plan adjustments we have made will be sufficient or sustained due to the inherent uncertainty of the unprecedented and rapidly evolving situation. We strengthened our liquidity position through a public offering and sale of our common stock. In May 2020, we completed an underwritten public offering of 4,574 shares of common stock and received net proceeds of $188,958.

Despite the challenging environment of the COVID-19 pandemic, we continued to build on our strategic initiatives of product innovation, investing in clinical science and providing training and education. Throughout 2020, we conducted several meetings with FDA as they review our PMA submission for the EPi-Sense system, and we continue to actively work with FDA to complete the regulatory process. In November 2020, we submitted our responses to FDA, seeking PMA approval of the EPi-Sense system for an indication for treatment of symptomatic, drug-refractory, long-standing persistent atrial fibrillation, when augmented with an endocardial ablation catheter. AtriCure is currently waiting for feedback from FDA. We also made meaningful progress on the aMAZE IDE trial, continuing twelve-month post treatment follow-up with patients. We have not yet experienced a significant delay in patient follow-up. In addition to the progress in clinical science initiatives, we are also progressing towards 510(k) clearance of the

new ENCOMPASS® clamp and preparing for subsequent market launch. Our professional education and marketing teams have adapted to the pandemic by offering online and mobile trainings for physicians.

For the year ended December 31, 2020 we reported annual revenues of $206,531, a decrease of 10.5% when compared to our prior year. Our net loss for fiscal year 2020 was $48,155 as compared to $35,194 for fiscal year 2019, primarily as a result of our decrease in revenues as a result of the COVID-19 pandemic. See the "Results of Operations" section below for additional analysis of our 2020 results.

Results of Operations

Year Ended December 31, 2020 compared to December 31, 2019

The following table sets forth, for the periods indicated, our results of operations expressed as dollar amounts and as percentages of total revenue:

	Year Ended December 31,			
	2020		2019	
	Amount	% of Revenue	Amount	% of Revenue
	(dollars in thousands)			
Revenue	$ 206,531	100.0 %	$ 230,807	100.0 %
Cost of revenue	57,222	27.7	60,472	26.2
Gross profit	149,309	72.3	170,335	73.8
Operating expenses:				
Research and development expenses	43,070	20.9	41,230	17.9
Selling, general and administrative expenses	150,472	72.9	162,227	70.3
Total operating expenses	193,542	93.7	203,457	88.2
Loss from operations	(44,233)	(21.4)	(33,122)	(14.4)
Other income (expense)	(3,808)	(1.8)	(1,873)	(0.8)
Loss before income tax expense	(48,041)	(23.3)	(34,995)	(15.2)
Income tax expense	114	0.1	199	0.1
Net loss	$ (48,155)	(23.3) %	$ (35,194)	(15.2) %

Revenue. Total revenue decreased 10.5% (10.7% on a constant currency basis) due to the deferral of non-emergent procedures as a result of the COVID-19 pandemic. Revenue from customers in the United States decreased $16,585, or 8.9%, and revenue from international customers decreased $7,691, or 17.1% (18.3% on a constant currency basis). Sales in the United States declined across all product categories. Open ablation sales decreased $4,806, or 6.0% minimally invasive (MIS) ablation sales decreased $9,195, or 26.4% and appendage management sales decreased $1,185, or 1.7%. The more severe decline in MIS ablation sales reflects the typically non-emergent nature of these procedures. However, both the AtriClip Flex·V® LAA Exclusion System (included in appendage management sales) and cryoSPHERE probe (included in open ablation sales) continued to grow in volume in 2020 despite the continued pressure of the COVID-19 pandemic. International revenue declined in both open ablation and MIS ablation products throughout our major European and Asia markets as a result of the global pandemic, offset by increases in the appendage management product line driven from increased volume of the AtriClip line.

Revenue reported on a constant currency basis is a non-GAAP measure and is calculated by applying previous period foreign currency (Euro) exchange rates, which are determined by the average daily Euro to Dollar exchange rate, to each of the comparable periods. Revenue is analyzed on a constant currency basis to better measure the comparability of results between periods. Because changes in foreign currency exchange rates have a non-operating impact on revenue, we believe that evaluating growth in revenue on a constant currency basis provides an additional and meaningful assessment of revenue to both management and investors.

Cost of revenue and gross margin. Cost of revenue decreased $3,250 driven primarily by reductions in sales. Partially offsetting the decline in cost of revenue from reduced sales are charges during the second quarter as a result of production volumes below normal operating levels and continued absorption of SentreHEART operations acquired in August 2019.

Research and development expenses. Research and development expenses increased $1,840, or 4.5%. The increase in research and development expenses is a result of $1,156 increase in share-based compensation and $777 increase in clinical activity primarily driven by the aMAZE IDE clinical trial. Increases in product development project costs offset declines in regulatory submissions and filing fees.

Selling, general and administrative expenses. Selling, general and administrative expenses decreased $11,755, or 7.2%. Personnel costs decreased $14,726 due to a decline in variable compensation and travel as a result of decreased sales and travel restrictions. Trade show, marketing and meeting costs decreased $4,384 as activities moved to remote platforms. Other decreases in expenses included $3,840 of acquisition-related expenses, $1,179 of professional services fees, $533 in bad debt expense and $322 of

recruiting fees. These decreases were offset by $6,000 expense recorded for the accrual of the value of the legal settlement with the former nContact stockholders, increase of $3,001 in share-based compensation and $4,559 fluctuation in the contingent consideration liability adjustment. See Note 12 – Commitments and Contingencies in the Consolidated Financial Statements for further discussion of the nContact legal settlement. See Note 3 – Fair Value in the Consolidated Financial Statements for further discussion of contingent consideration liabilities.

Other income and expense. Other income and expense consists primarily of net interest expense and foreign currency transaction gains and losses. Net interest expense was $3,784 for 2020 and $1,713 for 2019. Interest expense relates to our term loan and finance lease obligations, as well as the amortization of financing costs. Interest income reflects returns on our investments, including gains and losses on investments sold during the period. The increase in net interest expense was driven by $1,297 lower interest income from lower investment yields and $774 increase in interest expense reflecting higher borrowings on the term loan due to the August 2019 amendment for the SentreHEART acquisition.

Liquidity and Capital Resources

As of December 31, 2020, we had cash, cash equivalents and investments of $258,396. All cash equivalents and investments and most of our operating cash are held in United States financial institutions. A minor portion of our cash is held in foreign banks for the operation of our international subsidiaries. Our outstanding debt was $60,000 and we had unused borrowing capacity of $8,750 under our revolving credit facility. We had net working capital of $257,600 and an accumulated deficit of $330,352 as of December 31, 2020.

Cash flows used in operating activities. We used $19,869 of net cash in operating activities during 2020, reflecting our net loss of $48,155 offset by $34,925 of non-cash expenses and a net decrease in cash used related to changes in operating assets and liabilities of $6,639. Non-cash expenses primarily included $22,642 in share-based compensation and $9,548 of depreciation and amortization. The net decrease in cash used related to changes in operating assets and liabilities was driven by the impact of COVID-19, including lower customer receivables from reduced sales volumes; increased investment in inventories to protect against potential future production disruptions; and lower payables and accrued liabilities from lower variable compensation and reduced operating activities.

Cash flows used in investing activities. We used $156,198 of net cash in investing activities during 2020, reflecting $151,739 investment activity in available-for-sale securities largely stemming from the proceeds of our May 2020 equity offering and investment of $5,259 in property and equipment to support our new product introductions and maintenance and expansion of our existing manufacturing and distribution facilities.

Cash flows provided by financing activities. We generated $189,392 of net cash from financing activities during 2020. This was primarily a result of the $188,958 net proceeds from the May 2020 public stock offering. Equity compensation plan activity included $10,835 proceeds from stock option exercises and $3,330 proceeds for the issuance of common stock under our employee stock purchase plan, offset by $13,029 shares repurchased for payment of taxes on stock awards.

Credit facility. Our Loan and Security Agreement with Silicon Valley Bank (SVB), as amended, (Loan Agreement), provides for a $60,000 term loan and a $20,000 revolving line of credit. The term loan and revolving credit facility both mature or expire, as applicable, on August 1, 2024. Principal payments on the term loan are to be made ratably commencing March 1, 2021 through the loan's maturity date. If the Company meets certain conditions, as specified in the Loan Agreement, the commencement of the term loan principal payments may be deferred by an additional six months. Our term loan accrues interest at the greater of the Prime Rate or 5.00%, plus 0.75% and is subject to an additional 3.00% fee on the $60,000 term loan principal amount, payable at maturity or upon acceleration or prepayment of the term loan. Our borrowing availability under the revolving credit facility is based on the lesser of $20,000 or a borrowing base calculation as defined by the Loan Agreement. Borrowing availability under the revolving credit facility is further limited by a cap on total debt outstanding under the Loan Agreement, including outstanding letters of credit, of $70,000. As of December 31, 2020, we had no borrowings under the revolving credit facility, and we had borrowing availability of $8,750. The Loan Agreement also provides for certain prepayment and early termination fees only if the term loan is repaid before August 2024 and establishes a minimum liquidity ratio and dividend restrictions, along with other customary terms and conditions. Specified assets have been pledged as collateral. We are in compliance with the covenants of the Loan Agreement as of December 31, 2020.

On February 8, 2021, the Company and SVB entered into an amendment to the Loan Agreement which modified conditions which allow the Company to request to defer the term loan principal payments an additional six months, commencing in September 2021, if such conditions are so satisfied. Subsequent to the amendment, the conditions were satisfied by the Company and the Company requested such deferral. As a result, borrowings outstanding under the existing term loan agreement have been classified to reflect the deferral of principal payments in the Consolidated Balance Sheet as of December 31, 2020.

Our corporate headquarters lease agreement requires a $1,250 letter of credit which renews annually and remains outstanding as of December 31, 2020.

Uses of liquidity and capital resources. Our future capital requirements depend on a number of factors, including market acceptance of our current and future products; the resources we devote to developing and supporting our products; future expenses to expand and support our sales and marketing efforts; costs relating to changes in regulatory policies or laws that affect our operations and cost of filings; costs associated with clinical trials and securing regulatory approval for new products; costs associated with acquiring and integrating businesses; costs associated with prosecuting, defending and enforcing our intellectual property rights; and possible acquisitions and joint ventures. Global economic turmoil, including the impact of the COVID-19 pandemic, has evolved rapidly over the past year and may continue to adversely impact our revenue, thus having an adverse impact on our operating results and financial condition. We continue to evaluate additional measures to maintain financial flexibility, and we will continue to closely monitor our liquidity and capital resources through the disruption caused by COVID-19.

We have on file with the SEC a shelf registration statement which allows us to sell any combination of senior or subordinated debt securities, common stock, preferred stock, warrants, depository shares and units in one or more offerings should we choose to do so in the future. We expect to maintain the effectiveness of this shelf registration statement for the foreseeable future. In May 2020, we completed a public offering of 4,574 shares of our common stock, and received net proceeds of $188,958 after underwriting discounts and commissions and offering costs.

We believe that our current cash, cash equivalents and investments, along with the cash we expect to generate or use for operations or access via our term loan and revolving line of credit, will be sufficient to meet our anticipated cash needs for working capital and capital expenditures for at least the next twelve months. The SentreHEART acquisition provides for contingent consideration to be paid upon PMA approval before December 2023 and CPT reimbursement before December 2026. Subject to the terms and conditions of the SentreHEART merger agreement, such contingent consideration will be paid in AtriCure common stock and cash, up to a specified maximum number of shares. Over the next twelve months, we do not expect our cash requirements to include significant payments of contingent consideration based on terms of the acquisition agreement and progress towards achievement of the related milestones.

If our sources of cash are insufficient to satisfy our liquidity requirements, we may seek to sell additional equity or debt securities or obtain a revised or additional credit facility. The sale of additional equity or convertible debt securities could result in dilution to our stockholders. If additional funds are raised through the issuance of debt securities, these securities could have rights senior to those associated with our common stock and could contain covenants that would restrict our operations. Finally, our term loan agreement and revolving line of credit require compliance with certain financial and other covenants. If we are unable to maintain these financing arrangements, we may be required to reduce the scope of our planned research and development, clinical activities and selling, training, education and marketing efforts.

Contractual Obligations and Commitments

The following table sets forth our approximate aggregate obligations at December 31, 2020 for future payments under contracts and other contingent commitments:

Contractual Obligations	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Long-term debt[1]	$ 60,000	$ 6,667	$ 40,000	$ 13,333	$ —
Finance leases[2]	16,360	1,608	3,281	3,299	8,172
Operating leases[3]	2,302	927	876	499	—
Royalty obligations[4]	2,599	2,599	—	—	—
Restricted grants	656	656	—	—	—
Total contractual obligations	$ 81,917	$ 12,457	$ 44,157	$ 17,131	$ 8,172

(1) Long-term debt represents principal repayments related to our term loan. See Note 10 – Indebtedness regarding applicable interest and fee payments.

(2) Finance leases consist of principal and interest payments related to our Mason, Ohio headquarters and computer equipment. See Note 11 – Leases.

(3) Represents lease commitments under various operating leases, primarily for office and warehouse space. See Note 11 – Leases.

(4) Represents obligations for royalty agreements ranging from 3% to 5% of specified product sales estimated using 2020 sales. Royalty obligations beyond one year have not been included as payments are based on specified product sales and not estimable at this time. See Note 12 – Commitments and Contingencies to our Consolidated Financial Statements.

We have contractual obligations for contingent consideration payments related to the SentreHEART acquisition. Subject to the terms and conditions of the SentreHEART merger agreement, such contingent consideration will be paid in AtriCure common stock and cash, up to a specified maximum number of shares. The SentreHEART milestones expire on December 31, 2023 and December 31, 2026. See Note 3 – Fair Value.

Off-Balance-Sheet Arrangements

We are not a party to any off-balance sheet arrangements that have, or are reasonably likely to have, a current or future material effect on our financial condition, changes in financial condition, sales or expenses, results of operations, liquidity, capital expenditures or capital resources.

Inflation

Inflation has not had a significant impact on our historical operations, and we do not expect it to have a significant impact on our results of operations or financial condition in the foreseeable future.

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations is based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of consolidated financial statements requires management to make estimates and judgments that affect the reported amounts of assets and liabilities, revenue and expenses, and disclosures of contingent assets and liabilities at the date of the financial statements. On a periodic basis, we evaluate our estimates, using authoritative pronouncements, historical experience and other assumptions as the basis for making estimates. Actual results could differ from those estimates under different assumptions or conditions. We have described our significant accounting policies in Note 1 – Description of Business and Summary of Significant Accounting Policies to our consolidated financial statements included in this Form 10-K.

We believe the following critical accounting policies affect our more significant judgments and estimates used in the preparation of our consolidated financial statements.

Revenue Recognition— Revenue is generated primarily from the sale of medical devices. We recognize revenue in an amount that reflects the consideration we expect to be entitled to in exchange for those devices when control of promised devices is transferred to customers. At contract inception, we assess the products promised in contracts with customers and identify a performance obligation for each promise to transfer to the customer a product that is distinct. Our devices are distinct and represent performance obligations. These performance obligations are satisfied and revenue is recognized at a point in time upon shipment or delivery of products. Sales of devices are categorized as follows: open ablation, minimally invasive ablation, appendage management and valve tools. Shipping and handling activities performed after control over products transfers to customers are considered activities to fulfill the promise to transfer the products rather than as separate promises to customers. Products are sold primarily through our direct sales

force and through distributors in certain international markets. Terms of sale are generally consistent for both end-users and distributors, except that payment terms are generally net 30 days for end-users and net 60 days for distributors, with limited exceptions. We do not maintain any post-shipping obligations to customers. No installation, calibration or testing of products is performed by the Company subsequent to shipment in order to render products operational.

We account for revenue in accordance with FASB ASC 606, "Revenue from Contracts with Customers". Significant judgments and estimates involved in the Company's recognition of revenue include the estimation of a provision for returns. We estimate the provision for sales returns and allowances using the expected value method based on historical experience and other factors that we believe could impact our expected returns, including defective or damaged products and invoice adjustments. In the normal course of business, we generally do not accept product returns unless a product is defective as manufactured, and we do not provide customers with the right to a refund.

Allowance for Credit Losses on Accounts Receivable—We evaluate the expected credit losses of accounts receivable, considering historical credit losses, current customer-specific information and other relevant factors when determining the allowance. An increase to the allowance for credit losses results in a corresponding increase in selling, general and administrative expenses. We charge off uncollectible receivables against the allowance when all attempts to collect the receivable have failed. Our history of write-offs has not been significant.

Inventories—Our inventories are stated at the lower of cost or net realizable value based on the first-in, first-out cost method (FIFO) and consist of raw materials, work in process and finished goods. Our industry is characterized by rapid product development and frequent new product introductions. Uncertain timing of product approvals, variability in product launch strategies and variation in product use all impact inventory reserves for excess, obsolete and expired products. An increase to inventory reserves results in a corresponding increase in cost of revenue. Inventories are written off against the reserve when they are physically disposed.

Property and Equipment—We state property and equipment at cost less accumulated depreciation. Depreciation is computed using the straight-line method and applied over the estimated useful lives of the assets. Included in property and equipment are generators and other capital equipment (such as our RF and cryo generators) that are placed with direct customers that use our disposable products. These generators and other capital equipment are depreciated over a period of one to three years, which approximates their useful lives, and such depreciation is included in cost of revenue. We estimate the useful lives of this equipment based on anticipated usage by our customers and the timing and impact of our expected new technology rollouts. To the extent we experience changes in the usage of this equipment or the introductions of new technologies, the estimated useful lives of this equipment may change in a future period.

IPR&D Intangible Asset—In Process Research and Development (IPR&D) represents the value of acquired technology which has not yet reached technological feasibility. The primary basis for determining the technological feasibility is obtaining specific regulatory approvals. IPR&D is accounted for as an indefinite-lived intangible asset until completion or abandonment of the IPR&D project. Upon completion of the development project, the IPR&D will be amortized over its estimated useful life. The IPR&D asset represents an estimate of the fair value of the PMA that may result from the CONVERGE IDE and aMAZE IDE clinical trials. We review intangible assets for impairment annually on October 1, or more often if impairment indicators are present, using our best estimates based on reasonable and supportable assumptions and projections of expected future cash flows. If the IPR&D project is abandoned or regulatory approvals are not obtained, we may have a full or partial impairment charge related to the IPR&D, calculated as the excess carrying value of the IPR&D assets over the estimated fair value.

Goodwill— Goodwill represents the excess of purchase price over the fair value of the net assets acquired in business combinations. Our goodwill is accounted for in a single reporting unit representing the Company as a whole. We test goodwill for impairment annually on October 1 or more often if impairment indicators are present. The impairment test requires a comparison of the estimated fair value of the reporting unit to the carrying value of the assets and liabilities of that reporting unit. If the carrying value of the reporting unit exceeds the fair value of the reporting unit, the carrying value of the reporting unit's goodwill is reduced to its fair value through an impairment charge to adjust the goodwill balance. The estimates of fair value and the determination of reporting units requires management judgment.

Share-Based Employee Compensation—We account for share-based compensation for all share-based payment awards, including stock options, restricted stock awards, restricted stock units, performance share awards, and stock purchases related to an employee stock purchase plan, based on their estimated fair values. We estimate the fair value of time-based options on the date of grant using the Black-Scholes option pricing model (Black-Scholes model). Our determination of fair value of share-based payment awards is affected by our stock price, as well as assumptions regarding a number of subjective variables. These variables include but are not limited to our expected stock price volatility over the term of the awards and actual and projected employee stock option exercise behaviors. The value of the portion of the awards that is ultimately expected to vest is recognized as expense over the requisite service periods in our Consolidated Statements of Operations and Comprehensive Loss.

We estimate the fair value of restricted stock awards, restricted stock units and performance share awards based upon the grant date closing market price of our common stock. The estimated fair value of the performance share awards may be adjusted over the performance period based on estimates of performance target achievement.

We also have an employee stock purchase plan (ESPP) which is available to all eligible employees as defined by the plan document. Under the ESPP, shares of our common stock may be purchased at a discount. We estimate the number of shares to be purchased under the ESPP at the beginning of the purchase period and calculate estimated compensation expense using the Black-Scholes model based upon the fair value of the stock at the beginning of the purchase period. Compensation expense is recognized over each purchase period, and expense is adjusted at the time of stock purchase.

***Contingent Consideration*—**Contingent consideration arrangements obligate the Company to pay former shareholders of acquired companies certain amounts if specified future events occur or conditions are met, such as the achievement of certain regulatory milestones or reimbursement milestones. We measure such liabilities using unobservable inputs by applying the probability-weighted scenario method. Various key assumptions, such as the probability and timing of achievement of the agreed milestones, are used in the determination of fair value of contingent consideration arrangements and are not observable in the market. Subsequent revisions to key assumptions, which impact the estimated fair value of contingent consideration liabilities, are reflected in selling, general and administrative expenses.

***Income Taxes*—**Deferred income tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. We measure deferred income tax assets and liabilities using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred income tax assets and liabilities from changes in tax rates is recognized in the period that includes the enactment date.

Our estimate of the valuation allowance for deferred tax assets requires us to make significant estimates and judgments about our future operating results. Deferred income tax assets are reduced by valuation allowances if, based on the consideration of all available evidence, it is more-likely-than-not that some portion of the deferred tax asset will not be realized. Significant weight is given to evidence that can be objectively verified. We evaluate deferred income tax assets on an annual basis to determine if valuation allowances are required by considering all available evidence. Deferred income tax assets are realized by having sufficient future taxable income to allow the related tax benefits to reduce taxes otherwise payable. The sources of taxable income that may be available to realize the benefit of deferred tax assets are future reversals of existing taxable temporary differences, future taxable income, exclusive of reversing temporary differences and carryforwards and tax planning strategies that are both prudent and feasible. In evaluating whether to record a valuation allowance, the applicable accounting standards deem that the existence of cumulative losses in recent years is a significant piece of objectively verifiable negative evidence that must be overcome by objectively verifiable positive evidence to avoid the need to record a valuation allowance. We have recorded a valuation allowance against substantially all net deferred income tax assets as it is more-likely-than-not that the benefit of such deferred income tax assets will not be recognized in future periods.

We believe our critical accounting policies regarding revenue recognition, allowance for credit losses on accounts receivable, inventories, property and equipment, IPR&D intangible asset, goodwill, share-based employee compensation, contingent consideration and income taxes affect our more significant judgments and estimates used in the preparation of our consolidated financial statements. We base our judgments and estimates on historical experience, current conditions and other reasonable factors.

Recent Accounting Pronouncements

See Note 2 – Recent Accounting Pronouncements to our Consolidated Financial Statements for further information.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

(Amounts referenced in this Item 7A are in thousands, except per share amounts.)

The Company is exposed to various market risks, which include potential losses arising from adverse changes in market rates and prices, such as foreign exchange fluctuations and changes in interest rates. Interest on the term loan and revolving credit facility accrue at a variable rate based on the Prime Rate.

Products sold by AtriCure Europe, B.V. accounted for 10.9% and 11.7% of the Company's total revenue for the years ended December 31, 2020 and 2019. Since such revenue was primarily denominated in Euros or British Pounds, the Company is exposed to exchange rate fluctuations between the Euro and the U.S. Dollar and between the British Pound and the Euro. For the years ended December 31, 2020 and 2019, foreign currency transaction gains of $44 and $180 were recorded primarily in connection with settlements of the intercompany balances and invoices transacted in British Pounds. For revenue denominated in Euros, if there is an increase in the rate at which Euros are exchanged for U.S. Dollars, it will require more Euros to equal a specified amount of U.S. Dollars than before the rate increase. In such cases, and if products are priced in Euros, the Company will receive less in U.S. Dollars than was received before the rate increase went into effect. The Euro to U.S. Dollar conversion rate fluctuations may impact our reported revenue and expenses. In other international markets, the Company denominates sales in U.S. Dollars. If products are priced in U.S. Dollars and competitors price their products in the local currency, an increase in the relative strength of the U.S. Dollar could result in the Company's price not being competitive in a market where business is not transacted in U.S. Dollars.

The Company invests its cash primarily in money market accounts, repurchase agreements, U.S. government and agency obligations, corporate bonds, asset-backed securities and commercial paper. Although the Company believes its cash to be invested in a conservative manner, with cash preservation being the primary investment objective, the value of the securities held will fluctuate with changes in the financial markets including, among other things, changes in interest rates, credit quality and general volatility. This risk is managed by investing in high quality investment grade securities.

Financial instruments that potentially subject the Company to credit risk consist of cash and cash equivalents balances and investments in corporate bonds. Certain of AtriCure's cash and cash equivalents balances exceed FDIC insured limits or are invested in money market accounts with investment banks that are not FDIC-insured. The Company places its cash and cash equivalents in what it believes to be credit-worthy financial institutions. As of December 31, 2020, $41,694 of the cash and cash equivalents balance was in excess of FDIC limits.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

ATRICURE, INC. AND SUBSIDIARIES

INDEX TO FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the stockholders and the Board of Directors of
AtriCure, Inc.
Mason, Ohio

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of AtriCure, Inc. and subsidiaries (the "Company") as of December 31, 2020 and 2019, the related consolidated statements of operations and comprehensive loss, stockholders' equity, and cash flows, for each of the three years in the period ended December 31, 2020, and the related notes and the schedule listed in the Index at Item 15 (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2020 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2020, in conformity with accounting principles generally accepted in the United States of America.

We have also 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, 2020, 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 February 26, 2021, expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion

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

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

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current-period audit of the financial statements that were communicated or required to be communicated to the audit committee and that (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Valuation of Contingent Consideration Pursuant to the SentreHEART Merger Agreement - Refer to Note 3 to the financial statements

Critical Audit Matter Description

The Company has a contingent consideration arrangement of $184.8 million as of December 31, 2020 arising from the 2019 SentreHEART acquisition which obligates the Company to pay former shareholders of the acquired company certain amounts if specified future events occur or conditions are met, such as the achievement of certain regulatory or reimbursement milestones ("milestones"). The Company measured the liability associated with the contingent consideration arrangement at fair value, using unobservable inputs by applying the probability-weighted scenario method. Various key assumptions, including the probability and timing of achievement of regulatory or reimbursement milestones ("key assumptions"), are used in the determination of fair value of the contingent consideration arrangement and are not observable in the market, thus representing a Level 3 measurement within the fair value hierarchy. Given that the valuation of the contingent consideration arrangement is based on unobservable inputs and is sensitive to changes in the probability and timing of achievement of the milestones, auditing these key assumptions required a high degree of auditor judgment and an increased extent of effort.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the Company's key assumptions used in the determination of the fair value of the contingent consideration arrangement included the following, among others:

- We inquired of management and the Company's clinical research personnel to understand each milestone and key assumptions, including current progress and any clinical results received to date.
- We tested the design and operating effectiveness of the Company's internal controls over management's estimates of key assumptions used in the valuation of the contingent consideration arrangement, including consideration of the impact on assumptions from the COVID-19 pandemic.
- We evaluated management's ability to accurately project the key assumptions by comparing actual progress to management's historical projections.
- We evaluated the reasonableness of the key assumptions by comparing them to (1) internal communications to management and the Board of Directors and (2) information included in the Company's external communications.
- We examined regulatory trends to consider the impact of changes in the regulatory environment on the key assumptions.
- We independently corroborated the reasonableness of the key assumptions by verifying the process and timing necessary to achieve each milestone.

Valuation of the In Process Research and Development Intangible Asset Pursuant to the nContact Merger Agreement — Refer to Note 6 to the financial statements

Critical Audit Matter Description

The Company has an in process research and development (IPR&D) intangible asset arising from the 2015 nContact acquisition in the amount of $44.0 million. On at least an annual basis, the Company performs impairment testing on the IPR&D intangible asset, by comparing the carrying value to the estimated fair value. An impairment charge is required if the carrying value of the IPR&D intangible asset is in excess of the estimated fair value. Estimated fair value is measured using the excess earnings method and key cash flow assumptions, such as revenue growth rates, related profit margins, and obsolescence rates ("key cash flow assumptions"). Given that the determination of the estimated fair value of the IPR&D intangible asset required management to make significant estimates related to key cash flows assumptions, auditing these key cash flow assumptions required a high degree of auditor judgment and an increased extent of effort, including the need to involve our fair value specialists.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the Company's key assumptions used in the determination of the fair value of the IPR&D intangible asset arising from the 2015 nContact acquisition included the following, among others:

- We inquired of management and the Company's commercial personnel to understand the key cash flow assumptions.
- We tested the design and operating effectiveness of the Company's internal controls over management's estimates of key cash flow assumptions used in the valuation of the IPR&D intangible asset.
- We evaluated whether the key cash flow assumptions used were reasonable by considering industry data and current market forecasts, including consideration of the effects of the COVID-19 pandemic, and whether such assumptions were consistent with evidence obtained in other areas of the audit.
- We evaluated management's ability to accurately project the key cash flow assumptions by comparing actual progress to management's historical projections.
- With the assistance of our fair value specialists, we evaluated the reasonableness of the significant valuation assumptions and calculations by:
    - Evaluating the excess earnings method,
    - Testing the reasonableness of the valuation assumptions utilized, including the discount rate, and
    - Testing the mathematical accuracy of the discounted cash flows used to determine the estimated fair value of the IPR&D intangible asset.

/s/ Deloitte & Touche LLP

Cincinnati, Ohio
February 26, 2021

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

ATRICURE, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
DECEMBER 31, 2020 and 2019
(In Thousands, Except Per Share Amounts)

	2020	2019
Assets		
Current assets:		
Cash and cash equivalents	$ 41,944	$ 28,483
Short-term investments	202,274	53,318
Accounts receivable, less allowance for credit losses of $1,096 and $1,124	23,146	28,046
Inventories	35,026	29,414
Prepaid and other current assets	4,347	3,899
Total current assets	306,737	143,160
Property and equipment, net	28,290	32,646
Operating lease right-of-use assets	1,914	4,032
Long-term investments	14,178	12,675
Intangible assets, net	128,199	129,881
Goodwill	234,781	234,781
Other noncurrent assets	440	705
Total Assets	$ 714,539	$ 557,880
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 12,736	$ 14,948
Accrued liabilities	27,984	32,750
Other current liabilities and current maturities of debt and leases	8,417	2,218
Total current liabilities	49,137	49,916
Long-term debt	53,435	59,634
Finance lease liabilities	10,969	11,774
Operating lease liabilities	1,180	2,796
Contingent consideration and other noncurrent liabilities	187,424	186,417
Total Liabilities	302,145	310,537
Commitments and contingencies (Note 12)		
Stockholders' Equity:		
Common stock, $0.001 par value, 90,000 shares authorized; 45,346 and 39,655 issued and outstanding	45	40
Additional paid-in capital	742,389	529,658
Accumulated other comprehensive income (loss)	312	(158)
Accumulated deficit	(330,352)	(282,197)
Total Stockholders' Equity	412,394	247,343
Total Liabilities and Stockholders' Equity	$ 714,539	$ 557,880

See accompanying notes to consolidated financial statements.

ATRICURE, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
YEARS ENDED DECEMBER 31, 2020, 2019 and 2018
(In Thousands, Except Per Share Amounts)

	2020	2019	2018
Revenue	$ 206,531	$ 230,807	$ 201,630
Cost of revenue	57,222	60,472	54,510
Gross profit	149,309	170,335	147,120
Operating expenses:			
Research and development expenses	43,070	41,230	34,723
Selling, general and administrative expenses	150,472	162,227	129,524
Total operating expenses	193,542	203,457	164,247
Loss from operations	(44,233)	(33,122)	(17,127)
Other income (expense):			
Interest expense	(4,885)	(4,111)	(4,607)
Interest income	1,101	2,398	1,006
Other	(24)	(160)	(183)
Loss before income tax expense	(48,041)	(34,995)	(20,911)
Income tax expense	114	199	226
Net loss	$ (48,155)	$ (35,194)	$ (21,137)
Basic and diluted net loss per share	$ (1.14)	$ (0.94)	$ (0.62)
Weighted average shares outstanding – basic and diluted	42,125	37,589	34,087
Comprehensive loss:			
Unrealized (loss) gain on investments	$ (46)	$ 137	$ (31)
Foreign currency translation adjustment	516	(96)	(202)
Other comprehensive income (loss)	470	41	(233)
Net loss	(48,155)	(35,194)	(21,137)
Comprehensive loss, net of tax	$ (47,685)	$ (35,153)	$ (21,370)

See accompanying notes to consolidated financial statements.

ATRICURE, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
YEARS ENDED DECEMBER 31, 2020, 2019, and 2018
(In Thousands)

	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity
	Shares	Amount				
Balance—December 31, 2017	34,586	$ 35	$ 386,963	$ (225,866)	$ 34	$ 161,166
Issuance of common stock through public offering	2,875	3	82,870	—	—	82,873
Issuance of common stock for settlement of contingent consideration	232	—	6,279	—	—	6,279
Issuance of common stock under equity incentive plans	781	1	1,554	—	—	1,555
Issuance of common stock under employee stock purchase plan	130	—	2,383	—	—	2,383
Share-based employee compensation expense	—	—	16,495	—	—	16,495
Other comprehensive loss	—	—	—	—	(233)	(233)
Net loss	—	—	—	(21,137)	—	(21,137)
Balance—December 31, 2018	38,604	$ 39	$ 496,544	$ (247,003)	$ (199)	$ 249,381
Issuance of common stock for SentreHEART acquisition	699	1	20,306	—	—	20,307
Issuance of common stock under equity incentive plans	248	—	(7,831)	—	—	(7,831)
Issuance of common stock under employee stock purchase plan	104	—	2,662	—	—	2,662
Share-based employee compensation expense	—	—	17,977	—	—	17,977
Other comprehensive income	—	—	—	—	41	41
Net loss	—	—	—	(35,194)	—	(35,194)
Balance—December 31, 2019	39,655	40	529,658	(282,197)	(158)	247,343
Issuance of common stock through public offering	4,574	5	188,953	—	—	188,958
Issuance of common stock under equity incentive plans	1,013	—	(2,194)	—	—	(2,194)
Issuance of common stock under employee stock purchase plan	104	—	3,330	—	—	3,330
Share-based employee compensation expense	—	—	22,642	—	—	22,642
Other comprehensive income	—	—	—	—	470	470
Net loss	—	—	—	(48,155)	—	(48,155)
Balance—December 31, 2020	45,346	$ 45	$ 742,389	$ (330,352)	$ 312	$ 412,394

See accompanying notes to consolidated financial statements.

ATRICURE, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
YEARS ENDED DECEMBER 31, 2020, 2019 and 2018
(In Thousands)

	2020	2019	2018
Cash flows from operating activities:			
Net loss	$ (48,155)	$ (35,194)	$ (21,137)
Adjustments to reconcile net loss to net cash used in operating activities:			
Share-based compensation expense	22,642	17,977	16,495
Depreciation	7,866	7,423	7,244
Amortization of intangible assets	1,682	1,943	1,510
Amortization of deferred financing costs	509	375	515
Loss on disposal of property and equipment and impairment of assets	277	604	323
Amortization (accretion) of investments	1,236	(922)	(362)
Change in fair value of contingent consideration	(357)	(4,916)	(10,825)
Other non-cash adjustments to income	1,070	1,514	763
Payment of contingent consideration in excess of purchase accounting amount	—	—	(96)
Changes in operating assets and liabilities, net of amounts acquired:			
Accounts receivable	5,087	(3,201)	(2,837)
Inventories	(5,265)	(5,151)	(146)
Other current assets	(477)	(1,199)	(367)
Accounts payable	(1,560)	2,790	(2,398)
Accrued liabilities	(4,908)	3,108	7,016
Other noncurrent assets and liabilities	484	(962)	131
Net cash used in operating activities	(19,869)	(15,811)	(4,171)
Cash flows from investing activities:			
Purchases of available-for-sale securities	(227,045)	(73,249)	(106,588)
Sales and maturities of available-for-sale securities	75,306	100,485	27,389
Purchases of property and equipment	(5,259)	(12,182)	(6,211)
Proceeds from sale of property and equipment	—	39	6
Proceeds from capital grant	800	—	—
Cash paid for SentreHEART business combination	—	(17,240)	—
Net cash used in investing activities	(156,198)	(2,147)	(85,404)
Cash flows from financing activities:			
Proceeds from sale of stock, net of offering costs of $218, $0, $229	188,958	—	82,873
Proceeds from debt borrowings	—	20,000	17,381
Payments on debt and finance leases	(667)	(629)	(1,755)
Payment of debt fees	(35)	(329)	(1,136)
Proceeds from stock option exercises	10,835	1,202	6,012
Shares repurchased for payment of taxes on stock awards	(13,029)	(9,033)	(4,457)
Proceeds from issuance of common stock under employee stock purchase plan	3,330	2,662	2,383
Payment of contingent consideration liability previously established in purchase accounting	—	—	(1,125)
Proceeds from economic incentive loan	—	500	—
Net cash provided by financing activities	189,392	14,373	100,176
Effect of exchange rate changes on cash and cash equivalents	136	(163)	(179)
Net increase (decrease) in cash and cash equivalents	13,461	(3,748)	10,422
Cash and cash equivalents—beginning of period	28,483	32,231	21,809
Cash and cash equivalents—end of period	$ 41,944	$ 28,483	$ 32,231
Supplemental cash flow information:			
Cash paid for interest	$ 4,366	$ 3,719	$ 3,870
Cash paid for income taxes	217	259	65
Non-cash investing and financing activities:			
Contingent consideration in business combinations	—	171,300	—
Stock issuance in business combinations	—	20,307	—
Share-settled portion of contingent consideration	—	—	6,279
Accrued purchases of property and equipment	298	1,053	348
Assets obtained in exchange for finance lease obligations	22	270	24
Finance lease early termination	—	—	(6)

See accompanying notes to consolidated financial statements.

1. DESCRIPTION OF BUSINESS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Nature of the Business—The "Company" or "AtriCure" consists of AtriCure, Inc. and its wholly-owned subsidiaries. The Company is a leading innovator in treatments for atrial fibrillation (Afib) and left atrial appendage (LAA) management and sells its products to medical centers globally through its direct sales force and distributors.

Principles of Consolidation—The Consolidated Financial Statements include the accounts of AtriCure, Inc. and our wholly-owned subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation.

Cash and Cash Equivalents—The Company considers highly liquid investments with maturities of three months or less at the date of purchase as cash equivalents. Cash equivalents include demand deposits, money market funds and repurchase agreements on deposit with certain financial institutions.

Investments—The Company makes investments primarily in U.S. government and agency obligations, corporate bonds, commercial paper and asset-backed securities and classifies all investments as available-for-sale. Investments with maturities of less than one year are classified as short-term. Investments are recorded at fair value, with unrealized gains and losses recorded as accumulated other comprehensive income (loss). Gains and losses are recognized using the specific identification method when securities are sold and are included in interest income.

Revenue Recognition—The Company recognizes revenue when control of promised goods is transferred to customers in an amount that reflects the consideration the Company expects to be entitled to in exchange for those goods. This generally occurs upon shipment of goods to customers. See Note 13 for further discussion on revenue.

Sales Returns and Allowances—The Company maintains a provision for potential returns of defective or damaged products, and invoice adjustments. The Company adjusts the provision using the expected value method based on historical experience. Increases to the provision result in a reduction of revenue, and the provision is included in accrued liabilities.

Allowance for Credit Losses on Accounts Receivable—The Company evaluates the expected credit losses of accounts receivable, considering historical credit losses, current customer-specific information and other relevant factors when determining the allowance. An increase to the allowance for credit losses results in a corresponding increase in selling, general and administrative expenses. The Company charges off uncollectible receivables against the allowance when all attempts to collect the receivable have failed. The Company's history of write-offs has not been significant.

Inventories—Inventories are stated at the lower of cost or net realizable value based on the first-in, first-out cost method and consist of raw materials, work in process and finished goods. The Company's industry is characterized by rapid product development and frequent new product introductions. Uncertain timing of product approvals, variability in product launch strategies and variation in product use all impact inventory reserves for excess, obsolete and expired products. An increase to inventory reserves results in a corresponding increase in cost of revenue. Inventories are written off against the reserve when they are physically disposed.

Property and Equipment—Property and equipment is stated at cost less accumulated depreciation. Depreciation is computed using the straight-line method over the estimated useful lives of assets (see Note 8). The Company reassesses the useful lives of property and equipment at least annually and retires assets if they are no longer in service. Maintenance and repair costs are expensed as incurred.

The Company's RF and cryo generators are generally placed with customers served by our direct sales force. The estimated useful lives of this equipment are based on anticipated usage by customers and the timing and impact of expected new technology rollouts by the Company and may change in a future period if the Company experiences changes in the usage of the equipment or introduces new technologies. Depreciation related to generators and other capital equipment is recorded in cost of revenue.

The Company reviews property and equipment for impairment at least annually using its best estimates based on reasonable and supportable assumptions and projections of expected future cash flows. Property and equipment impairments recorded by the Company have not been significant.

Leases—The Company determines if an arrangement is a lease at inception of the contract. The Company applies the short-term lease recognition exemption, recognizing lease payments in profit or loss for leases that have a lease term of 12 months or less at commencement and do not include a purchase option whose exercise is reasonably certain. Operating leases are included in operating lease right-of-use (ROU) assets, other current liabilities and current maturities of debt and leases, and operating lease liabilities. Finance leases are included in property and equipment, other current liabilities and current maturities of debt and leases, and finance lease liabilities.

ROU assets represent the right to use an underlying asset for the lease term, and lease liabilities represent the obligation to make lease payments arising from the lease. Operating lease ROU assets and liabilities are measured and recorded at the commencement date based on the present value of lease payments over the lease term. The operating lease ROU asset excludes lease incentives. The Company uses the implicit rate when readily determinable, however, most of the leases do not provide an implicit rate and therefore, the Company uses the incremental borrowing rate based on the information available at measurement. The lease terms may include options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. For real estate and equipment leases, the Company accounts for the lease and non-lease components as a single lease component. Additionally, the portfolio approach is applied to effectively account for the operating lease ROU assets and liabilities based on the term of the underlying lease. Lease expense is recognized on a straight-line basis over the lease term. See Note 11 for further discussion.

Intangible Assets—Intangible assets with determinable useful lives are amortized on a straight-line basis over the estimated periods benefited. The Company reassesses the useful lives of intangible assets annually.

Included in intangible assets is In Process Research and Development (IPR&D), representing the value of acquired technologies which have not yet reached technological feasibility. The primary basis for determining the technological feasibility is obtaining specific regulatory approvals. IPR&D is accounted for as an indefinite-lived intangible asset until completion or abandonment of the IPR&D project. Upon completion of the development project, the IPR&D will be amortized over its estimated useful life. The IPR&D assets represent estimates of the fair value of the pre-market approval (PMA) that could result from the CONVERGE IDE and aMAZE IDE clinical trials. If the IPR&D project is abandoned or regulatory approvals are not obtained, the Company may have a full or partial impairment charge related to the IPR&D, calculated as the excess carrying value of the IPR&D assets over the estimated fair value.

The Company reviews intangible assets for impairment using its best estimates based on reasonable and supportable assumptions and projections of expected future cash flows. The Company performs impairment testing annually on October 1 or more often if impairment indicators are present.

Goodwill—Goodwill represents the excess of purchase price over the fair value of the net assets acquired in business combinations. The Company's goodwill is accounted for in a single reporting unit representing the Company as a whole. The Company tests goodwill for impairment annually on October 1, or more often if impairment indicators are present.

Contingent Consideration and other Noncurrent Liabilities—This balance consists of the contingent consideration recorded in business combinations, as well as deferred payroll taxes as a result of the Coronavirus Aid, Relief, and Economic Security Act (CARES Act), deferred revenues, asset retirement obligations and other contractual obligations. The contingent consideration balance is included in noncurrent liabilities as such settlement is both required and expected to be made primarily in shares of the Company's common stock pursuant to the SentreHEART merger agreement.

Other Income (Expense)—Other income (expense) consists of foreign currency transaction gains and losses generated by settlements of intercompany balances denominated in Euros and invoices transacted in British Pounds.

Income Taxes— Deferred income tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred income 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 be recovered or settled. The effect on deferred income tax assets and liabilities from a change in tax rates is recognized in the period that includes the enactment date.

The Company's estimate of the valuation allowance for deferred income tax assets requires significant estimates and judgments about future operating results. Deferred income tax assets are reduced by valuation allowances if, based on the consideration of all available evidence, it is more-likely-than-not that the deferred income tax asset will not be realized. Significant weight is given to evidence that can be objectively verified. The Company evaluates deferred income tax assets on an annual basis to determine if valuation allowances are required. Deferred income tax assets are realized by having sufficient future taxable income to allow the related tax benefits to reduce taxes otherwise payable. The sources of taxable income that may be available to realize the benefit of deferred income tax assets are future reversals of existing taxable temporary differences, future taxable income, exclusive of reversing temporary differences and carryforwards, and tax planning strategies that are both prudent and feasible. In evaluating the need for a valuation allowance, the existence of cumulative losses in recent years is significant objectively verifiable negative evidence that must be overcome by objectively verifiable positive evidence to avoid the need to record a valuation allowance. The Company has recorded a valuation allowance against substantially all net deferred income tax assets as it is more-likely-than-not that the benefit of the deferred income tax assets will not be recognized in future periods. The Tax Cut and Jobs Act (Tax Reform Act) allows companies an election to reclassify the income tax effects of the Tax Reform Act on items within accumulated other comprehensive income (loss) to retained earnings. The Company has not made this election due to its full valuation allowance.

(In Thousands, Except Per Share Amounts)

***Net Loss Per Share*—**Basic and diluted net loss per share is computed by dividing the net loss by the weighted average number of common shares outstanding during the period. Since the Company has experienced net losses for all periods presented, net loss per share excludes the effect of 2,301, 3,623 and 3,869 stock options, restricted stock awards, restricted stock units and performance share awards as of December 31, 2020, 2019 and 2018 because they are anti-dilutive. Therefore, the number of shares calculated for basic net loss per share is also used for the diluted net loss per share calculation.

***Comprehensive Income (Loss) and Accumulated Other Comprehensive Income (Loss)*—**In addition to net losses, the comprehensive income/loss includes foreign currency translation adjustments and unrealized gains and losses on investments.

Accumulated other comprehensive (loss) income consisted of the following (net of tax):

	2020	2019	2018
Total accumulated other comprehensive (loss) income at beginning of period	$ (158)	$ (199)	$ 34
Unrealized gains (losses) on investments			
Balance at beginning of period	$ 100	$ (37)	$ (6)
Other comprehensive (loss) income before reclassifications	(70)	137	(31)
Amounts reclassified from accumulated other comprehensive (loss) income to interest income	24	—	—
Balance at end of period	$ 54	$ 100	$ (37)
Foreign currency translation adjustment			
Balance at beginning of period	$ (258)	$ (162)	$ 40
Other comprehensive income (loss) before reclassifications	555	(277)	(367)
Amounts reclassified from accumulated other comprehensive (loss) income to other (expense) income	(39)	181	165
Balance at end of period	$ 258	$ (258)	$ (162)
Total accumulated other comprehensive income (loss) at end of period	$ 312	$ (158)	$ (199)

***Research and Development Costs*—**Research and development costs are expensed as incurred. These costs include compensation and other internal and external costs associated with the development of and research related to new and existing products or concepts, preclinical studies, clinical trials, scientific and regulatory affairs.

***Advertising Costs*—** The Company expenses advertising costs as incurred. Advertising expense was $655, $635 and $785 during the years ended December 31, 2020, 2019 and 2018.

***Share-Based Compensation*—**The Company records share-based compensation for all share-based payment awards, including stock options, restricted stock, performance shares and stock purchases related to an employee stock purchase plan, based on estimated fair values.

The Company estimates the fair value of share-based payment awards on the date of grant. The value of the portion of the award that is ultimately expected to vest is recognized as expense over the requisite service periods in the Consolidated Statements of Operations and Comprehensive Loss. The Company estimates forfeitures at the time of grant and revises them, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

The Company estimates the fair value of time-based options on the date of grant using the Black-Scholes option-pricing model (Black-Scholes model). The Company's determination of fair value is affected by the Company's stock price, as well as assumptions regarding several subjective variables. These variables include, but are not limited to, the Company's expected stock price volatility over the term of the awards and actual and projected employee stock option exercise behaviors. The value of the portion of the awards that is ultimately expected to vest is recognized as expense over the requisite service periods in the Consolidated Statements of Operations and Comprehensive Loss. The Company estimates the fair value of restricted stock awards, restricted stock units and performance share awards based upon the grant date closing market price of the Company's common stock. The estimated fair value of performance share awards may be adjusted over the performance period based on changes to estimates of performance target achievement.

The Company also has an employee stock purchase plan (ESPP) which is available to all eligible employees as defined by the plan document. Under the ESPP, shares of the Company's common stock may be purchased at a discount. The Company estimates the number of shares to be purchased under the ESPP at the beginning of each purchase period based upon the fair value of the stock at the beginning of the purchase period using the Black-Scholes model and records estimated compensation expense during the period. Expense is adjusted at the time of stock purchase.

***Use of Estimates*—**The preparation of the financial statements in conformity with accounting principles generally accepted in the United States of America (GAAP) requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expense during the reporting period. Actual results could differ from those estimates.

Fair Value Disclosures— The Company classifies cash investments in U.S. government and agency obligations, accounts receivable, short-term other assets, accounts payable and accrued liabilities as Level 1. The carrying amounts of these assets and liabilities approximate their fair value due to their relatively short-term nature. Cash equivalents and investments in corporate bonds, repurchase agreements, commercial paper and asset-backed securities are classified as Level 2 within the fair value hierarchy. The fair value of fixed term debt is estimated by calculating the net present value of future debt payments at current market interest rates and is classified as Level 2. The book value of the Company's fixed term debt approximates its fair value because the interest rate varies with market rates. Significant unobservable inputs with respect to the fair value measurements of the Level 3 contingent consideration liabilities are developed using Company data. See Note 3 – Fair Value for further information on fair value measurements.

2. RECENT ACCOUNTING PRONOUNCEMENTS

In June 2016, the FASB issued Accounting Standard Update (ASU) 2016-13, "Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments" (ASU 2016-13). This guidance requires that financial assets measured at amortized costs, such as trade receivables and contract assets, be presented net of expected credit losses, which may be estimated based on relevant information such as historical experience, current conditions and future expectations for each pool of similar financial assets. The Company has applied the new requirements by calculating and recording an allowance for credit losses on trade receivables as of January 1, 2020. As a result of the adoption, the Company adjusted its allowance for credit losses on trade receivables; however, the adjustment did not have a material impact on its consolidated financial statements and related disclosures.

In January 2017, the FASB issued ASU 2017-04, "Intangibles – Goodwill and Other (Topic 350): Simplifying the Accounting for Goodwill Impairment" (ASU 2017-04). The guidance removes the requirement to perform a hypothetical purchase price allocation to measure goodwill impairment. Under ASU 2017-04, a goodwill impairment will be the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying amount of goodwill. The guidance becomes effective for annual reporting periods beginning after December 15, 2019 and interim periods within those fiscal years, with early adoption permitted, and applied prospectively. The Company has adopted this guidance as of January 1, 2020, and the adoption of this standard did not have a material impact on its consolidated financial statements and related disclosures.

3. FAIR VALUE

FASB ASC 820, "Fair Value Measurements and Disclosures" (ASC 820), defines fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. The fair value hierarchy is based on three levels of inputs, of which the first two are considered observable and the last unobservable, that may be used to measure fair value:

- Level 1—Quoted prices in active markets for identical assets or liabilities that the Company has the ability to access at the measurement date. An active market for the asset or liability is a market in which transactions for the asset or liability occur with sufficient frequency and volume to provide pricing information on an ongoing basis. The valuation under this approach does not entail a significant degree of judgment.
- Level 2—Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities. The valuation technique for the Company's Level 2 assets is based on quoted market prices for similar assets from observable pricing sources at the reporting date.
- Level 3—Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities. Unobservable inputs shall be used to measure fair value to the extent that observable inputs are not available, thereby allowing for situations in which there is little, if any, market activity for the asset or liability at the measurement date.

(In Thousands, Except Per Share Amounts)

The following table represents the Company's fair value hierarchy for its financial assets and liabilities measured at fair value on a recurring basis as of December 31, 2020:

	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Other Unobservable Inputs (Level 3)	Total
Assets:				
Money market funds	$ —	$ 38,452	$ —	$ 38,452
Commercial paper	—	76,914	—	76,914
U.S. government and agency obligations	45,399	—	—	45,399
Corporate bonds	—	73,730	—	73,730
Asset-backed securities	—	20,409	—	20,409
Total assets	$ 45,399	$ 209,505	$ —	$ 254,904
Liabilities:				
Contingent consideration	$ —	$ —	$ 184,800	$ 184,800
Total liabilities	$ —	$ —	$ 184,800	$ 184,800

The following table represents the Company's fair value hierarchy for its financial assets and liabilities measured at fair value on a recurring basis as of December 31, 2019:

	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Other Unobservable Inputs (Level 3)	Total
Assets:				
Money market funds	$ —	$ 14,502	$ —	$ 14,502
Repurchase agreements	—	10,000	—	10,000
Commercial paper	—	13,755	—	13,755
U.S. government and agency obligations	8,539	—	—	8,539
Corporate bonds	—	24,852	—	24,852
Asset-backed securities	—	18,847	—	18,847
Total assets	$ 8,539	$ 81,956	$ —	$ 90,495
Liabilities:				
Contingent consideration	$ —	$ —	$ 185,157	$ 185,157
Total liabilities	$ —	$ —	$ 185,157	$ 185,157

There were no changes in the levels or methodology of measurement of financial assets and liabilities during the years ended December 31, 2020 and 2019.

Contingent Consideration. The Company has contingent consideration arrangements arising from the nContact and SentreHEART acquisitions.

Contingent consideration arrangements under the nContact merger agreement obligated the Company to pay former shareholders of nContact up to $50,000 for the completion of enrollment of the CONVERGE IDE trial (Trial Enrollment Milestone) and corresponding PMA approval by December 31, 2020 (Regulatory Milestone). nContact shareholders were also entitled to additional sales-based contingent consideration on revenue in excess of an annual growth rate of more than 25% over a specified baseline through 2019 (Commercial Milestone). No payments were made under the Commercial Milestone for calendar years 2016 through 2019 as revenues did not exceed the targets for these years. The Company completed patient enrollment on August 21, 2018, and cash payment of $1,221 and issuance of 232 shares of common stock was made to former nContact shareholders for the Trial Enrollment Milestone on September 20, 2018. No payments were made for the Regulatory Milestone as the Company did not obtain PMA approval from FDA for the Epi-Sense Guided Coagulation System as of December 31, 2020. Therefore, as of December 31, 2020, the terms of the contingent consideration arrangements under the nContact merger agreement expired and the underlying fair value is $0.

(In Thousands, Except Per Share Amounts)

Contingent consideration arrangements under the SentreHEART merger agreement obligate the Company to pay former shareholders of SentreHEART for the following milestones, if achieved:

- *PMA Milestone* – up to $140,000 upon receiving PMA from FDA for the LARIAT system with an approved indication allowing commercial distribution in the United States for the exclusion of the LAA for treatment of atrial fibrillation. The full contingent consideration amount is only received if PMA approval is received on or before December 31, 2022. The potential contingent consideration is reduced by 4.17% (or one-twenty-fourth) each month following December 2022 and is reduced to zero if the milestone is achieved after December 31, 2023. Payment of $25,000 of the PMA milestone may be accelerated upon achievement of an Interim Success Milestone as defined by the merger agreement.
- *CPT Reimbursement Milestone* – up to $120,000 upon American Medical Association approval of a Medicare Category 1 Current Procedural Terminology (CPT) Code. The full contingent consideration amount is only received if approval of the CPT Code is received on or before December 31, 2025. The potential contingent consideration is reduced by 4.17% (or one-twenty-fourth) each month following December 2025 and is reduced to zero if the milestone is achieved after December 31, 2026.

Subject to the terms and conditions of the merger agreement, all contingent consideration would be paid in cash and stock at the discretion of the Company, subject to certain limitations, with the maximum number of shares that may be issued after closing limited to 6,322, representing total shares that may be issued in connection with the merger of 7,021 less 699 shares paid at closing. The maximum contingent consideration payable by AtriCure will not exceed $260,000.

The Company measures contingent consideration liabilities using unobservable inputs by applying the probability-weighted scenario method, an income approach. Various key assumptions, such as the probability and timing of achievement of the agreed milestones, are used in the determination of fair value of contingent consideration arrangements and are not observable in the market, thus representing a Level 3 measurement within the fair value hierarchy.

The recurring Level 3 fair value measurements of the contingent consideration liabilities include the following significant inputs as of December 31, 2020:

	Fair Value	Valuation Technique	Input	Range	Weighted average by relative fair value
			Probability of payment	70.00 - 85.00 %	80.62 %
Regulatory & Reimbursement milestones	$ 184,800	Probability-weighted scenario approach	Projected year of payment	2022 - 2025	n/a
			Discount rate	5.56 %	5.56 %

Contingent consideration liabilities are periodically remeasured. Changes in the discount rate, time until payment and probabilities of payment may result in materially different fair value measurements. A decrease in the discount rate would result in a higher fair value measurement, while a decrease in the probability of payment would result in a lower fair value measurement. Movement in the forecasted timing of achievement to later in the milestone periods also causes a decrease in the fair value measurement. Subsequent revisions in key assumptions, which impact the estimated fair value of contingent consideration liabilities are recorded in selling, general and administrative expenses. The nContact contingent consideration was remeasured to $0 during 2020 and expired as of December 31, 2020 without meeting the regulatory milestone. The fair value of the SentreHEART contingent consideration was remeasured during 2020 resulting in an increase in fair value due to accretion and changes in estimates related to the forecasted timing of achievement of the milestones.

The following table represents the Company's Level 3 fair value measurements using significant other unobservable inputs for acquisition-related contingent consideration for each of the years ended December 31:

	2020	2019	2018
Beginning Balance – January 1	$ 185,157	$ 18,773	$ 37,098
Amounts acquired	—	171,300	—
Settlement of trial enrollment milestone	—	—	(7,500)
Changes in fair value included in selling, general and administrative expenses	(357)	(4,916)	(10,825)
Ending Balance – December 31	$ 184,800	$ 185,157	$ 18,773

Contingent consideration liabilities are classified as noncurrent liabilities primarily based on expected timing of payments and the Company expects to settle the majority of the milestone payments in stock.

(In Thousands, Except Per Share Amounts)

4. INVESTMENTS

Investments as of December 31, 2020 consisted of the following:

	Cost Basis	Unrealized Gains (Losses)	Fair Value
Corporate bonds	$ 73,702	$ 28	$ 73,730
U.S. government and agency obligations	45,385	14	45,399
Commercial paper	76,914	—	76,914
Asset-backed securities	20,397	12	20,409
Total	$ 216,398	$ 54	$ 216,452

Investments as of December 31, 2019 consisted of the following:

	Cost Basis	Unrealized Gains (Losses)	Fair Value
Corporate bonds	$ 24,796	$ 56	$ 24,852
U.S. government and agency obligations	8,529	10	8,539
Commercial paper	13,755	—	13,755
Asset-backed securities	18,813	34	18,847
Total	$ 65,893	$ 100	$ 65,993

The Company has not experienced any significant realized gains or losses on its investments in the years ended December 31, 2020, 2019 and 2018.

5. BUSINESS COMBINATIONS

On August 13, 2019, the Company acquired 100% of the outstanding equity interests of SentreHEART. Founded in 2005 and based in Redwood City, California, SentreHEART developed innovative technology for remote delivery of a suture for closure of anatomic structures including the left atrial appendage (LAA). This technology is currently being studied in the aMAZE IDE clinical trial, an FDA-approved, prospective, multicenter, randomized controlled trial. The objective of the aMAZE IDE trial is to demonstrate that the LARIAT® device for LAA closure, plus a Pulmonary Vein Isolation (PVI) ablation, will lead to a reduced incidence of recurrent Afib compared to PVI alone. Management believes the acquisition of SentreHEART will significantly expand the Company's addressable markets with a product designed for electrophysiologists, and the acquisition of SentreHEART deepens the Company's commitment to provide the broadest possible offering of ablation and LAA management solutions to patients and customers.

The total consideration paid to SentreHEART's former shareholders at the acquisition date was $18,008 in cash and 699 shares of AtriCure common stock valued at approximately $20,307. The cash paid at acquisition was subject to adjustment for net working capital balances outside of a specified range, resulting in a $768 adjustment received by the Company in November 2019. The merger agreement also provides for the Company to pay contingent consideration to former shareholders of SentreHEART if specified milestones are met related to the aMAZE IDE clinical trial, including PMA approval and reimbursement for the therapy involving SentreHEART's devices. In connection with the acquisition of SentreHEART, fair value of $171,300 was recorded for the SentreHEART contingent consideration. See Note 3 for further details regarding the SentreHEART acquisition-related contingent consideration. Subject to the terms and conditions of the merger agreement, all contingent consideration would be paid in cash and stock at the discretion of the Company, subject to certain limitations, including the total number of shares that may be issued in connection with the merger. The maximum contingent consideration payable by AtriCure will not exceed $260,000.

The Company accounted for the acquisition in accordance with ASC 805, "Accounting for Business Combinations". The assets acquired, liabilities assumed and the estimated contingent consideration obligations are recorded at their respective fair values as of the date of acquisition. The process of estimating fair values of identifiable assets, certain intangible assets and assumed liabilities requires significant assumptions and estimates. The judgments used to determine the fair value assigned to each class of assets acquired and liabilities assumed, as well as asset lives, can materially impact the amounts recorded and the Company's results of operations.

(In Thousands, Except Per Share Amounts)

The components of the aggregate purchase price for the SentreHEART acquisition are as follows:

Fair value of AtriCure common stock issued at closing	$ 20,307
Cash	17,240
Fair value of contingent consideration liabilities	171,300
Total purchase price	$ 208,847

The fair value of the contingent consideration liabilities was determined by applying the probability-weighted scenario method. Key assumptions in the valuation of the contingent consideration liabilities are based on management's judgment and estimates and include the probability of achievement of each of the milestones, timing of achievement and discount rates, reflecting the inherent risks of achieving the respective milestones. Most assumptions are not observable in the market, and thus represent a Level 3 measurement within the fair value hierarchy. See Note 3 for discussion of unobservable inputs.

The following table summarizes the fair values of the assets acquired and the liabilities assumed based on the information that was available as of the acquisition date:

	August 13, 2019
Inventories	$ 1,848
Current assets	328
Operating lease right-of-use asset	2,929
Property and equipment	94
Intangible assets	82,570
Other assets	202
Total identifiable assets	$ 87,971
Current liabilities	$ 5,719
Operating lease liability	2,929
Total liabilities assumed	$ 8,648
Net identifiable assets acquired	$ 79,323
Goodwill	129,524
Total consideration	$ 208,847

During the measurement period, the Company recorded adjustments for the fair value of consideration transferred, including settlement of working capital, and the evaluation of certain tax attributes. Net deferred tax assets of $20,590 and offsetting valuation allowances were also recognized at the acquisition date for the future tax consequences attributable to differences between the above financial statement carrying amounts of existing assets and liabilities and their respective tax bases and acquired operating loss and tax credit carryforwards of SentreHEART. At acquisition, SentreHEART had approximately $184,036 of federal and state net operating loss carryforwards, which begin to expire in 2026 and $37,906 of federal net operating loss carryforwards which have no expiration as a result of the Tax Reform Act. A portion of the net operating loss carryforwards are subject to certain limitations under Internal Revenue Code Section 382. The Company recorded a full valuation allowance against the net deferred tax assets at acquisition. The goodwill recorded is not deductible for tax purposes.

The valuation of the intangible assets acquired and related amortization periods are as follows:

	Valuation	Amortization Term (in years)
Developed technology	$ 270	15
IPR&D	82,300	Indefinite
Total	$ 82,570	

The fair value of the LARIAT developed technology was estimated using the relief-from-royalty method, an income approach. The LARIAT developed technology asset is amortized on a straight-line basis over its estimated useful life. The IPR&D asset was estimated using the excess earnings method, also an income approach. The IPR&D asset represents an estimate of the fair value of the

(In Thousands, Except Per Share Amounts)

PMA approval from the in-process aMAZE IDE clinical trial and is accounted for as an indefinite-lived intangible asset until completion or abandonment of the project.

The Company recorded the excess of the aggregate purchase price over the estimated fair values of the identifiable net assets acquired as goodwill. Goodwill is primarily attributable to the benefits the Company expects to realize by enhancing its product offering and addressable markets, thereby contributing to an expanded revenue base. As discussed in Note 1, the Company accounts for goodwill in a single reporting unit representing the Company as a whole.

The 2019 operating results of SentreHEART, including $1,280 of appendage management revenue and $8,505 of net loss, are included in the Consolidated Statements of Operations and Comprehensive Loss beginning August 14, 2019. The Consolidated Balance Sheet as of December 31, 2019 reflects the acquisition of SentreHEART. The Company recognized approximately $138 and $3,978 of acquisition-related costs in the years ended December 31, 2020 and 2019, consisting of legal, audit, tax and other due diligence expenses. Acquisition-related costs are included in selling, general and administrative expenses.

The following supplemental pro forma information presents the financial results of the Company for the twelve months ended December 31, 2019 and 2018 as if the acquisition of SentreHEART had occurred on January 1, 2018.

	Year Ended December 31, (unaudited)	
	2019	2018
Revenue	$ 232,768	$ 205,725
Net loss	(40,970)	(42,959)
Basic and diluted net loss per share	$ (1.09)	$ (1.23)

Certain pro forma adjustments have been made when calculating the amounts above to reflect the impact of the purchase transaction, primarily consisting of the exclusion of SentreHEART's interest expense incurred on debt paid off or converted to equity in the acquisition, exclusion of fair value adjustments for SentreHEART's derivative liabilities and preferred warrants settled as part of the acquisition, adjustments for amortization of intangible assets with determinable lives and exclusion of contingent consideration remeasurement. The Company also eliminated transaction expenses incurred by both AtriCure and SentreHEART. The supplemental pro forma information has been prepared for comparative purposes and does not purport to be indicative of what would have occurred had the acquisition been made on January 1, 2018, nor is it indicative of any future results. The pro forma information does not include any adjustments for potential revenue enhancements, cost synergies or other operating efficiencies that could result from the acquisition.

6. INTANGIBLE ASSETS AND GOODWILL

The following table provides a summary of the Company's intangible assets at December 31:

		2020		2019	
	Estimated Useful Life	Cost	Accumulated Amortization	Cost	Accumulated Amortization
Technology	5-15 years	$ 11,691	$ 9,813	$ 11,691	$ 8,131
IPR&D		126,321	—	126,321	—
Total		$ 138,012	$ 9,813	$ 138,012	$ 8,131

Amortization expense related to intangible assets with definite lives, which excludes the IPR&D asset, was $1,682, $1,943 and $1,510 for the years ended December 31, 2020, 2019 and 2018.

(In Thousands, Except Per Share Amounts)

Future amortization expense is projected as follows:

2021	$ 951
2022	718
2023	18
2024	18
2025	18
2026 and thereafter	155
Total	$ 1,878

The Company expects to begin amortizing the $44,021 IPR&D asset that represents the fair value of the PMA approval from the CONVERGE IDE clinical trial in 2021.

The following table provides a summary of the Company's goodwill, which is not amortized, but rather tested annually for impairment:

Net carrying amount as of December 31, 2018	$ 105,257
Additions	129,524
Net carrying amount as of December 31, 2019	234,781
Additions	—
Net carrying amount as of December 31, 2020	$ 234,781

7. INVENTORIES

Inventories consisted of the following at December 31:

	2020	2019
Raw materials	$ 11,966	$ 11,126
Work in process	2,424	1,260
Finished goods	20,636	17,028
Inventories	$ 35,026	$ 29,414

8. PROPERTY AND EQUIPMENT

Property and equipment consisted of the following at December 31:

	Estimated Useful Life	2020	2019
Generators and other capital equipment	1-3 years	$ 18,669	$ 20,167
Building under finance lease	15 years	14,250	14,250
Computer and other office equipment	3 years	8,045	7,606
Machinery, equipment and vehicles	3-7 years	6,697	5,905
Furniture and fixtures	3-7 years	5,849	5,009
Leasehold improvements	5-15 years	8,645	6,078
Construction in progress	N/A	2,067	5,708
Land	N/A	502	502
Equipment under finance leases	3-5 years	409	483
Total		65,133	65,708
Less accumulated depreciation		(36,843)	(33,062)
Property and equipment, net		$ 28,290	$ 32,646

Property and equipment depreciation expense was $7,866, $7,423 and $7,244 for the years ended December 31, 2020, 2019 and 2018. Depreciation related to generators and other capital equipment was $2,503, $2,910 and $3,191 for fiscal years 2020, 2019 and 2018. As of December 31, 2020 and 2019, the net carrying value of generators and other capital equipment was $3,410 and $4,272.

(In Thousands, Except Per Share Amounts)

9. ACCRUED LIABILITIES

Accrued liabilities consisted of the following at December 31:

	2020	2019
Accrued payroll and employee-related expenses	$ 8,576	$ 6,748
Accrued legal settlement	6,000	—
Accrued commissions	4,765	8,734
Accrued bonus	4,389	10,840
Sales returns and allowances	1,889	3,979
Accrued taxes and value-added taxes payable	1,256	1,658
Accrued royalties	703	732
Other accrued liabilities	406	59
Total	$ 27,984	$ 32,750

10. INDEBTEDNESS

Credit Facility. The Company has a Loan and Security Agreement (Loan Agreement) with Silicon Valley Bank (SVB), which includes a $60,000 term loan and $20,000 revolving line of credit. The total combined term loan and revolving line of credit outstanding under the Loan Agreement cannot exceed $70,000 at any time prior to SVB's consent. The term loan and revolving credit facility both mature or expire, as applicable, on August 1, 2024.

Principal payments of the term loan are to be made ratably commencing March 1, 2021 through the loan's maturity date. If the Company meets certain conditions, as specified by the Loan Agreement, the commencement of term loan principal payments may be deferred by an additional six months. The term loan accrues interest at the greater of the Prime Rate or 5.00%, plus 0.75% and is subject to an additional 3.00% fee on the $60,000 term loan principal payable at maturity or upon acceleration or prepayment of the term loan. The Company is accruing the 3.00% fee over the term of the Loan Agreement, with $495 accrued in the outstanding loan balance as of December 31, 2020. Additionally, the unamortized original financing costs related to the term loan of $393 are netted against the outstanding loan balance in the Consolidated Balance Sheets and are amortized ratably over the term of the Loan Agreement.

The revolving line of credit is subject to an annual facility fee of 0.15% of the revolving line of credit, and any borrowings thereunder bear interest at the greater of the Prime Rate or 5.00%. Borrowing availability under the revolving credit facility is based on the lesser of $20,000 or a borrowing base calculation as defined by the Loan Agreement. As of December 31, 2020, the Company had no borrowings under the revolving credit facility and had borrowing availability of $8,750. Financing costs related to the revolving line of credit are included in other assets in the Consolidated Balance Sheets and amortized ratably over the twelve-month period of the annual fee.

On April 29, 2020, the Company and SVB entered into an amendment to the Loan Agreement which modified a covenant related to the Company's liquidity ratio through the third quarter 2020 testing date and increased the early termination fees for both the term loan and revolving line of credit. The amendment was treated as a debt modification.

On February 8, 2021, the Company and SVB entered into an amendment to the Loan Agreement which modified conditions which allow the Company to request to defer the term loan principal payments an additional six months, commencing in September 2021, if such conditions were satisfied. Additionally, the covenant reporting requirements were modified. The amendment was treated as a debt modification. Subsequent to the amendment, the conditions were satisfied by the Company and the Company requested such deferral. As a result, borrowings outstanding under the existing term loan agreement have been classified to reflect the deferral of principal payments in the Consolidated Balance Sheet as of December 31, 2020.

Future principal payments of long-term debt are projected as follows:

2021	$ 6,667
2022	20,000
2023	20,000
2024	13,333
Total long-term debt, of which $6,667 is current and $53,333 is noncurrent	$ 60,000

The Loan Agreement also provides for certain prepayment and early termination fees, as well as establishes a minimum liquidity covenant and dividend restrictions, along with other customary terms and conditions. Specified assets have been pledged as collateral.

(In Thousands, Except Per Share Amounts)

11. LEASES

The Company has operating and finance leases for corporate offices, manufacturing and warehouse facilities and computer equipment. The Company's leases have remaining lease terms of one year to ten years. Options to renew or extend leases beyond their initial term have been excluded from measurement of the ROU assets and lease liabilities for the majority of leases as exercise is not reasonably certain.

The weighted average remaining lease term and the discount rate for the reporting periods is as follows:

	As of December 31, 2020	As of December 31, 2019
Operating Leases		
Weighted average remaining lease term (years)	3.2	3.5
Weighted average discount rate	5.68 %	5.94 %
Finance leases		
Weighted average remaining lease term (years)	9.7	11.0
Weighted average discount rate	6.91 %	7.05 %

In connection with the terms of the Company's corporate headquarters lease, a letter of credit for $1,250 was issued to the building lessor in October 2015. The letter of credit is renewed annually and remains outstanding as of December 31, 2020.

The components of lease expense are as follows:

	Year Ended December 31, 2020	Year Ended December 31, 2019
Operating lease cost	$ 1,237	$ 952
Finance lease cost:		
Amortization of right-of-use assets	1,050	998
Interest on lease liabilities	844	872
Total finance lease cost	$ 1,894	$ 1,870

Short term lease expense was not significant during the twelve months ended December 31, 2020 and 2019.

Supplemental cash flow information related to leases is as follows:

	Year Ended December 31, 2020	Year Ended December 31, 2019
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows for operating leases	$ 1,236	$ 1,026
Operating cash flows for finance leases	844	872
Financing cash flows for finance leases	664	629
Right-of-use assets obtained in exchange for lease obligations:		
Operating Leases	1,421	1,884
Finance Leases	22	270
Operating lease right-of-use asset obtained in business combination	—	2,929
Early termination of operating lease	2,743	—

(In Thousands, Except Per Share Amounts)

Supplemental balance sheet information related to leases is as follows:

	As of December 31, 2020	As of December 31, 2019
Operating Leases		
Operating lease right-of-use assets	$ 1,914	$ 4,032
Other current liabilities and current maturities of debt and leases	927	1,465
Operating lease liabilities	1,180	2,796
Total operating lease liabilities	$ 2,107	$ 4,261
Finance Leases		
Property and equipment, at cost	$ 14,659	$ 14,733
Accumulated depreciation	(5,247)	(4,197)
Property and equipment, net	$ 9,412	$ 10,536
Other current liabilities and current maturities of debt and leases	$ 823	$ 753
Finance lease liabilities	10,969	11,774
Total finance lease liabilities	$ 11,792	$ 12,527

Maturities of lease liabilities as of December 31, 2020 are as follows:

	Operating Leases	Finance Leases
2021	$ 927	$ 1,608
2022	637	1,629
2023	239	1,652
2024	246	1,674
2025	253	1,625
2026 and thereafter	—	8,172
Total payments	$ 2,302	$ 16,360
Less imputed interest	(195)	(4,568)
Total	$ 2,107	$ 11,792

12. COMMITMENTS AND CONTINGENCIES

Royalty Agreements. The Company has royalty agreements in place with terms that include payment of royalties of 3% to 5% of specified product sales. One royalty agreement remains in effect through 2025, while the other agreement remains in effect the later of 2023 or until expiration of the underlying patents or patent applications. Parties to the royalty agreements have the right at any time to terminate the agreement immediately for cause. Royalty expense of $2,596, $2,892 and $2,715 was recorded as part of cost of revenue for the years ended December 31, 2020, 2019 and 2018.

Purchase Agreements. The Company enters into standard purchase agreements with certain vendors in the ordinary course of business, generally with terms that allow cancellation.

Legal. The Company may, from time to time, become a party to legal proceedings. Such matters are subject to many uncertainties and to outcomes of which the financial impacts are not predictable with assurance and that may not be known for extended periods of time. When management has assessed that a loss is probable and an amount can be reasonably estimated, the Company records a liability.

The Company received a Civil Investigative Demand (CID) from the U.S. Department of Justice (USDOJ) in December 2017 stating that it is investigating the Company to determine whether the Company has violated the False Claims Act, relating to the promotion of certain medical devices related to the treatment of atrial fibrillation for off-label use and submitted or caused to be submitted false claims to certain federal and state health care programs for medically unnecessary healthcare services related to the treatment of atrial fibrillation. The CID covers the period from January 2010 to December 2017 and requires the production of documents and answers to written interrogatories. The Company had no knowledge of the investigation prior to receipt of the CID. The Company maintains rigorous policies and procedures to promote compliance with the False Claims Act and other applicable regulatory requirements. The Company provided the USDOJ with documents and answers to the written interrogatories and is

cooperating with its investigation. However, the Company cannot predict when the investigation will be resolved, the outcome of the investigation or its potential impact on the Company.

The Company acquired nContact Surgical, Inc. pursuant to a merger agreement dated October 4, 2015. The merger agreement provides for contingent consideration or "earnout" to be paid upon attaining specified regulatory approvals and clinical and revenue milestones. The merger agreement's earnout provisions required the Company to deliver periodic earnout reports to a designated representative of former nContact stockholders. In response to the reports delivered in and after February 2018, the Company received letters from representatives purporting to serve as "earnout objection statements" (as that term is defined in the merger agreement) and claim that for purposes of determining the commercial milestone payment, the Company should be including revenues of certain additional items and products that the Company has not included in its earnout statements. During February 2021, the Company entered into a settlement agreement with the former nContact stockholders requiring payment of $6,000. The Company has recorded the $6,000 settlement as a component of current liabilities as of December 31, 2020 as the underlying cause occurred prior to December 31, 2020.

13. REVENUE

Revenue is generated primarily from the sale of medical devices. The Company recognizes revenue in an amount that reflects the consideration the Company expects to be entitled to in exchange for those devices when control of promised devices is transferred to customers. At contract inception, the Company assesses the products promised in its contracts with customers and identifies a performance obligation for each promise to transfer to the customer a product that is distinct. The Company's devices are distinct and represent performance obligations. These performance obligations are satisfied, and revenue is recognized at a point in time upon shipment or delivery of products. Sales of devices are categorized as follows: open ablation, minimally invasive ablation, appendage management and valve tools. Shipping and handling activities performed after control over products transfers to customers are considered activities to fulfill the promise to transfer the products rather than as separate promises to customers. Revenue includes shipping and handling revenue of $1,192, $1,485 and $1,236 in 2020, 2019 and 2018.

Products are sold primarily through a direct sales force and through distributors in certain international markets. Terms of sale are generally consistent for both end-users and distributors, except that payment terms are generally net 30 days for end-users and net 60 days for distributors, with limited exceptions. The Company does not maintain any post-shipping obligations to customers. No installation, calibration or testing of products is performed by the Company subsequent to shipment in order to render products operational.

Significant judgments and estimates involved in the Company's recognition of revenue include the estimation of a provision for returns. We estimate the provision for sales returns and allowances using the expected value method based on historical experience and other factors that we believe could impact our expected returns, including defective or damaged products and invoice adjustments. In the normal course of business, the Company generally does not accept product returns unless a product is defective as manufactured. The Company does not provide customers with the right to a refund.

The Company expects to be entitled to the total consideration for the products ordered by customers as product pricing is fixed according to the terms of customer contracts and payment terms are short. Payment terms fall within the one-year guidance for the practical expedient which allows the Company to forgo adjustment of the promised amount of consideration for the effects of a significant financing component. The Company excludes taxes assessed by governmental authorities on revenue-producing transactions from the measurement of the transaction price.

Costs associated with product sales include commissions and royalties. Considering that product sales are performance obligations in contracts that are satisfied at a point in time, commission expense associated with product sales and royalties paid based on sales of certain products is incurred at that point in time rather than over time. Therefore, the Company applies the practical expedient and recognizes commissions and royalties as expense when incurred because the expense is incurred at a point in time and the amortization period is less than one year. Commissions are recorded as selling expense and royalties are recorded as cost of revenue.

See Note 18 for disaggregated revenue by geographic area and by product category.

(In Thousands, Except Per Share Amounts)

14. INCOME TAXES

The Company files federal, state, local and foreign income tax returns in jurisdictions with varying statutes of limitations. Income taxes are computed using the asset and liability method in accordance with FASB ASC 740, "Income Taxes", under which deferred income taxes are provided for the temporary differences between the financial reporting basis and the tax basis of the Company's assets and liabilities. Deferred taxes are measured using provisions of currently enacted tax laws. A valuation allowance against deferred tax assets is recorded when it is more likely than not that such assets will not be fully realized. The Company has recorded a valuation allowance against substantially all its net deferred tax assets as it is more likely than not that the benefit of the deferred tax assets will not be recognized in future periods.

The Company's provision for income taxes for each of the years ended December 31 is as follows:

	2020	2019	2018
Current Tax Expense			
Federal	$ (26)	$ (26)	$ (51)
State	78	34	28
Foreign	74	165	198
Total current tax expense	126	173	175
Deferred Tax Expense			
Federal	$ (10,304)	$ (7,655)	$ (3,048)
State	(1,686)	(1,368)	178
Foreign	(3,071)	(1,690)	45
Change in valuation allowance	15,049	10,739	2,876
Total deferred tax expense	(12)	26	51
Total tax expense	$ 114	$ 199	$ 226

The detail of deferred tax assets and liabilities at December 31 is as follows:

	2020	2019
Deferred tax assets (liabilities):		
Net operating loss carryforward	$ 123,556	$ 111,000
Research and development and AMT credit carryforwards, net	9,365	8,193
Deferred interest	1,598	909
Equity compensation	8,623	8,233
Accruals and reserves	3,739	3,513
Inventories	1,360	1,007
Intangible assets	(30,773)	(30,996)
Property and equipment, net	(1,315)	(1,482)
Finance and operating lease liabilities	3,164	4,016
Right-of-use assets	(2,547)	(3,476)
Other, net	293	287
Subtotal	117,063	101,204
Less valuation allowance	(117,025)	(101,178)
Total	$ 38	$ 26

The Company has federal net operating loss carryforwards of $339,699 which have expirations between 2021 and 2037 and $116,485 which has no expiration. The Company has state and local net operating loss carryforwards of $301,983 with varying expirations from 2021 to 2040. A portion of the Company's federal and state net operating loss carryforwards are subject to certain limitations under Internal Revenue Code Sections 382 and 383. The Company has federal research and development credit carryforwards of $9,365 which have expirations between 2022 and 2040. Additionally, the Company has foreign net operating loss carryforwards of approximately $49,714 which have expirations between 2021 and 2027. On January 1, 2019 the Company adopted ASC 842 and recognized $400 of operating lease liability deferred tax assets and $400 of offsetting right-of-use asset deferred tax liabilities.

(In Thousands, Except Per Share Amounts)

The Company's 2020, 2019 and 2018 effective income tax rates differ from the federal statutory rate as follows:

	2020		2019		2018	
Federal tax at statutory rate	21.00 %	$ (10,088)	21.00 %	$ (6,950)	21.00 %	$ (4,391)
Federal and Foreign tax rate change	2.97	(1,425)	1.40	(462)	(6.84)	1,430
Federal R&D credit	2.05	(985)	2.53	(837)	4.39	(918)
Federal deferred adjustment	2.77	(1,328)	3.28	(1,085)	(10.77)	2,253
Valuation allowance	(31.33)	15,048	(32.45)	10,739	(13.75)	2,876
State income taxes	3.35	(1,607)	4.02	(1,334)	(0.99)	206
Foreign NOL rate change	0.92	(441)	(1.17)	388	(1.22)	256
Foreign tax rate differential	0.57	(274)	(0.38)	126	(0.60)	125
Permanent differences and other	(2.53)	1,214	1.17	(386)	7.70	(1,611)
Effective tax rate	(0.23) %	$ 114	(0.60) %	$ 199	(1.08) %	$ 226

The Company's pre-tax book loss for domestic and international operations was $(43,218) and $(4,823) for 2020, $(28,002) and $(6,993) for 2019 and $(13,443) and $(7,468) for 2018.

The Company had undistributed earnings of foreign subsidiaries of approximately $235 at December 31, 2020. The Company does not consider these earnings as permanently reinvested and has determined that no current and deferred taxes are required on such amounts.

Federal, state and local tax returns of the Company are routinely subject to examination by various taxing authorities. Federal income tax returns for periods beginning in 2017 are open for examination. Generally, state and foreign income tax returns for periods beginning in 2016 are open for examination. However, taxing authorities have the ability to adjust net operating loss and tax credit carryforwards from years prior to these periods. The Company has not recognized certain tax benefits because of the uncertainty of realizing the entire value of the tax position taken on income tax returns upon review by the taxing authorities.

A reconciliation of the change in federal and state unrecognized tax benefits for 2020, 2019 and 2018 is presented below:

	2020	2019	2018
Balance at the beginning of the year	$ 1,777	$ 1,157	$ 1,157
Increases (decreases) for prior year tax positions	21	620	—
Increases (decreases) for current year tax positions	—	—	—
Increases (decreases) related to settlements	—	—	—
Decreases related to statute lapse	—	—	—
Balance at the end of the year	$ 1,798	$ 1,777	$ 1,157

For 2019, the Company's increase for prior year tax positions relates to uncertain income tax benefits assumed pursuant to the SentreHEART acquisition. Historically, the Company did not have any interest and penalties accrued for unrecognized income tax benefits as a result of offsetting net operating losses. The Company has accrued interest and penalties associated with uncertain income tax benefits assumed pursuant to the SentreHEART acquisition as of December 31, 2019, and recognized interest and penalties within income tax expense. The amount is not significant.

There are no amounts included in the balance of unrecognized tax benefits at December 31, 2018 that, if recognized, would affect the effective tax rate. The balance of unrecognized tax benefits at December 31, 2020 and 2019 includes $1,798 and $1,777 of tax benefits that, if recognized, would result in adjustments to other tax accounts, primarily deferred taxes and valuation allowance. The Company does not expect that its unrecognized tax benefits for research credits will significantly change within twelve months of December 31, 2020.

15. CONCENTRATIONS

During 2020, 2019 and 2018, approximately 10.8%, 12.0% and 10.8% of the Company's total net revenue was derived from its top ten customers. During 2020, 2019 and 2018 no individual customer accounted for more than 10% of the Company's revenue.

As of December 31, 2020 and 2019, 13.0% and 16.5% of the Company's total accounts receivable balance was derived from its top ten customers. No individual customer accounted for more than 10% of the Company's accounts receivable as of December 31, 2020 and 2019.

The Company maintains cash and cash equivalents balances at financial institutions which at times exceed FDIC limits. As of December 31, 2020, $41,694 of the cash and cash equivalents balance was in excess of the FDIC limits.

16. EMPLOYEE BENEFIT PLANS

The Company sponsors the AtriCure, Inc. 401(k) Plan (401(k) Plan), a defined contribution plan covering substantially all U.S. employees of the Company. Eligible employees may contribute pre-tax annual compensation up to specified maximums under the Internal Revenue Code. During 2020, 2019 and 2018, the Company made matching contributions of 50% on the first 6% of employee contributions to the 401(k) Plan. The Company's matching contributions expensed during 2020, 2019 and 2018 were $2,237, $1,915 and $1,560. Additional amounts may be contributed to the 401(k) Plan at the discretion of the Company's Board of Directors, however, no such discretionary contributions were made during 2020, 2019 or 2018. The Company also provides retirement benefits for employees of AtriCure Europe B.V. and other foreign subsidiaries. Total contributions to retirement plans for these employees were $244, $248 and $243 in 2020, 2019 and 2018.

17. EQUITY COMPENSATION PLANS

The Company has two share-based incentive plans: the 2014 Stock Incentive Plan (2014 Plan) and the 2018 Employee Stock Purchase Plan (ESPP).

Stock Incentive Plan

Under the 2014 Plan, the Board of Directors may grant incentive stock options to Company employees and may grant restricted stock awards or restricted stock units (collectively RSAs), nonstatutory stock options, performance share awards (PSAs) or stock appreciation rights to Company employees, directors and consultants. The administrator (the Compensation Committee of the Board of Directors) has the authority to determine the terms of any awards, including the number of shares subject to each award, the exercisability of the awards and the form of consideration. As of December 31, 2020, 12,899 shares of common stock had been reserved for issuance under the 2014 Plan and 1,932 shares were available for future grants.

Stock options, restricted stock awards, and restricted stock units granted generally vest at a rate of 33.3% on the first, second and third anniversaries of the grant date. Stock options granted prior to 2018 under the 2014 Plan generally vest at a rate of 25% on the first anniversary date of the grant and ratably each month thereafter over the following three years. Restricted stock awards granted prior to 2018 generally vest between one year and four years from the date of grant. Stock options generally expire ten years from the date of grant.

In 2012 the Company granted 450 performance options to its President and Chief Executive Officer pursuant to his Employment Agreement. The options expire ten years from the date of grant and vest in increments of 25 shares when the volume adjusted weighted average closing price of the common stock of the Company as reported by NASDAQ (or any other exchange on which the common stock of the Company is listed) for 30 consecutive days equals or exceeds each of $10.00 per share, $12.50 per share, $15.00 per share, $17.50 per share, $20.00 per share, $25.00 per share, $30.00 per share, $35.00 per share and $40.00 per share. As of December 31, 2020, all of the performance options vested. A Monte Carlo simulation was performed to estimate the fair values, vesting terms and vesting probabilities for each tranche of options. Expense calculated using these estimates was recognized over the estimated vesting terms. As of December 31, 2017, compensation costs related to non-vested performance options were fully recognized.

The Compensation Committee approved the grant of performance share awards to the Company's Executive Leadership Team pursuant to the Company's 2014 Plan. The form of award agreement for the PSAs (PSA Grant Form) provides, among other things, that each PSA that vests represents the right to receive one share of the Company's common stock at the end of the performance period. With respect to the PSAs, the number of shares that vest and are issued to the recipient is based upon the Company's performance as measured against the specified performance target at the end of the three-year performance period as determined by the Compensation Committee. Established threshold, target and maximum payout opportunities, which may range from 0% to 200% of the target amount, are used to calculate the number of shares that will be issuable when the award vests. Additionally, all or a portion of the PSAs may vest following a change of control or a termination of service by reason of death or disability (each as described in greater detail in the PSA Grant Form). The Company estimated the fair value of the PSAs based on its closing stock price on the grant date and will adjust compensation expense over the performance period based on its estimate of performance target achievement.

In 2020, the Compensation Committee modified the methodology for measuring performance of the 2018, 2019, and 2020 performance awards. As a result of the modification which impacted the vesting conditions and performance measures related to the awards, the incremental compensation cost resulting from the modification is $4,162, of which $569 is reflected in the year ended December 31, 2020.

(In Thousands, Except Per Share Amounts)

Activity under the plans during 2020 was as follows:

Time-Based Stock Options	Number of Shares Outstanding	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding at January 1, 2020	1,507	$ 14.38		
Granted	52	39.02		
Exercised	(646)	13.08		
Cancelled	(9)	28.97		
Outstanding at December 31, 2020	904	$ 16.57	4.08	$ 35,345
Vested and expected to vest	900	$ 16.49	4.06	$ 35,271
Exercisable at December 31, 2020	807	$ 14.61	3.55	$ 33,143

Restricted Stock Awards and Performance Share Awards	RSA Shares Outstanding	Weighted Average Grant Date Fair Value	PSA Shares Outstanding	Weighted Average Grant Date Fair Value
Outstanding at January 1, 2020	1,402	$ 21.76	264	$ 26.34
Awarded	446	40.77	140	38.42
Released	(875)	20.89	(72)	57.08
Forfeited	(38)	33.34	(45)	34.16
Outstanding at December 31, 2020	935	$ 30.92	287	$ 39.70

Performance Stock Options	Number of Shares Outstanding	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding at January 1, 2020	450	$ 13.48		
Granted	—	—		
Exercised	(275)	8.66		
Cancelled	—	—		
Outstanding at December 31, 2020	175	$ 21.04	3.07	$ 6,085
Exercisable at December 31, 2020	175	$ 21.04	3.07	$ 6,085

Activity under the plans during 2019 was as follows:

Time-Based Stock Options	Number of Shares Outstanding	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding at January 1, 2019	1,582	$ 13.83		
Granted	42	28.77		
Exercised	(110)	10.91		
Cancelled	(7)	30.48		
Outstanding at December 31, 2019	1,507	$ 14.38	4.25	$ 27,340
Vested and expected to vest	1,503	$ 14.35	4.24	$ 27,319
Exercisable at December 31, 2019	1,392	$ 13.55	3.90	$ 26,398

(In Thousands, Except Per Share Amounts)

Restricted Stock Awards and Performance Share Awards	RSA Shares Outstanding	Weighted Average Grant Date Fair Value	PSA Shares Outstanding	Weighted Average Grant Date Fair Value
Outstanding at January 1, 2019	1,746	$ 18.19	90	$ 17.71
Awarded	435	30.12	174	30.77
Released	(776)	18.44	—	—
Forfeited	(3)	18.02	—	—
Outstanding at December 31, 2019	1,402	$ 21.76	264	$ 26.34

Performance Stock Options	Number of Shares Outstanding	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding at January 1, 2019	450	$ 13.48		
Granted	—	—		
Exercised	—	—		
Cancelled	—	—		
Outstanding at December 31, 2019	450	$ 13.48	3.45	$ 8,566
Exercisable at December 31, 2019	350	$ 13.48	3.45	$ 6,662

The total intrinsic value of options exercised during the years ended December 31, 2020, 2019 and 2018 was $29,594, $1,985 and $5,343. As a result of the Company's full valuation allowance on its net deferred tax assets, no tax benefit was recognized related to the stock option exercises. The exercise price per share of each option is equal to the fair market value of the underlying share on the date of grant. For 2020, 2019 and 2018, $10,835, $1,202 and $6,012 in cash proceeds were included in the Consolidated Statements of Cash Flows as a result of the exercise of stock options. The total fair value of restricted stock vested during 2020, 2019 and 2018 was $34,200, $23,479 and $11,864. The Company issues registered shares of common stock to satisfy stock option exercises and restricted stock grants.

Employee Stock Purchase Plan

The ESPP is available to eligible employees as defined in the plan document. Under the ESPP, shares of the Company's common stock may be purchased at a discount (currently 15%) of the lesser of the closing price of the Company's common stock on the first trading day or the last trading day of the offering period. The offering period (currently six months) and the offering price are subject to change. Participants may not purchase more than $25 of the Company's common stock in a calendar year and may not purchase a value of more than 3 shares during an offering period. As of December 31, 2020, there were 387 shares available for future issuance under the ESPP.

Valuation and Expense Information Under FASB ASC 718

The following table summarizes share-based compensation expense related to employees, directors and consultants for 2020, 2019 and 2018. The expense was allocated as follows:

	2020	2019	2018
Cost of revenue	$ 1,425	$ 917	$ 1,545
Research and development expenses	3,530	2,374	1,987
Selling, general and administrative expenses	17,687	14,686	12,963
Total	$ 22,642	$ 17,977	$ 16,495

The expense by award type was allocated as follows:

	2020	2019	2018
Restricted Stock Awards & Time-Based Stock Options	$ 18,612	$ 13,922	$ 15,032
Performance Share Awards	2,921	3,254	766
ESPP	1,109	801	697
Total	$ 22,642	$ 17,977	$ 16,495

(In Thousands, Except Per Share Amounts)

As of December 31, 2020 there was $18,561 of unrecognized compensation costs related to non-vested stock options and restricted stock arrangements ($1,075 relating to stock options and $17,486 relating to restricted stock). This cost is expected to be recognized over a weighted-average period of 2.0 years for stock options and 1.7 years for restricted stock. As of December 31, 2020 there was $6,940 of unrecognized compensation costs related to non-vested performance share awards, and this cost is expected to be recognized over a weighted-average period of 1.6 years.

In calculating compensation expense, the fair value of restricted stock awards, restricted stock units and performance share awards is based on the market value of the Company's stock on the date of the awards or subsequent modification (as applicable). The fair value of the options is estimated on the grant date using the Black-Scholes model including the following assumptions:

	2020	2019	2018
Range of risk-free interest rate	0.30-1.73%	1.43-2.64%	2.31 - 3.01%
Range of expected life of stock options (years)	5.15 to 5.65	5.13 to 5.69	5.14 to 5.71
Range of expected volatility of stock	40.00 - 43.00%	40.00 - 42.00%	41.00 - 42.00%
Weighted-average volatility	41.54 %	40.87 %	41.51 %
Dividend yield	0.00 %	0.00 %	0.00 %

The Company's estimate of volatility is based solely on the Company's trading history over the expected option life. The risk-free interest rate assumption is based upon the U.S. treasury yield curve at the time of grant for the expected option life. The Company estimates the expected terms of options using historical employee exercise behavior.

Based on the assumptions noted above, the weighted average estimated grant date fair value per share of the stock options, restricted stock awards and performance share awards granted for 2020, 2019 and 2018 was as follows:

	2020	2019	2018
Stock options	$ 15.25	$ 11.56	$ 10.97
Restricted stock awards	40.77	30.12	18.71
Performance share awards	38.42	30.77	17.71

18. SEGMENT AND GEOGRAPHIC INFORMATION

The Company evaluates reporting segments in accordance with FASB ASC 280, "Segment Reporting". The Company develops, manufactures and sells devices designed primarily for the surgical ablation of cardiac tissue and systems designed for the exclusion of the left atrial appendage. These devices are developed and marketed to a broad base of medical centers globally. Management considers all such sales to be part of a single operating segment. Revenue attributed to geographic areas is based on the location of the customers to whom products are sold.

Revenue by geographic area was as follows:

	2020	2019	2018
United States	$ 169,244	$ 185,829	$ 162,146
Europe	23,217	27,929	25,912
Asia	13,118	15,976	12,687
Other international	952	1,073	885
Total international	37,287	44,978	39,484
Total revenue	$ 206,531	$ 230,807	$ 201,630

United States revenue by product type was as follows:

	2020	2019	2018
Open ablation	$ 75,399	$ 80,205	$ 72,250
Minimally invasive ablation	25,647	34,842	35,053
Appendage management	66,981	68,166	52,891
Total ablation and appendage management	168,027	183,213	160,194
Valve tools	1,217	2,616	1,952
Total United States	$ 169,244	$ 185,829	$ 162,146

(In Thousands, Except Per Share Amounts)

International revenue by product type was as follows:

	2020	2019	2018
Open ablation	$ 18,655	$ 24,945	$ 21,118
Minimally invasive ablation	6,171	8,349	9,176
Appendage management	12,353	11,476	8,988
Total ablation and appendage management	37,179	44,770	39,282
Valve tools	108	208	202
Total international	$ 37,287	$ 44,978	$ 39,484

The Company's long-lived assets are principally located in the United States, except for $1,693 as of December 31, 2020 and $1,228 as of December 31, 2019, which are located primarily in Europe.

19. SELECTED QUARTERLY FINANCIAL DATA (UNAUDITED)

	For the Three Months Ended							
	March 31,		June 30,		September 30,		December 31,	
	2020	2019	2020	2019	2020	2019	2020	2019
Operating Results:								
Revenue	$ 53,225	$ 53,966	$ 40,824	$ 58,906	$ 54,757	$ 56,614	$ 57,725	$ 61,321
Gross profit	38,884	39,871	27,654	43,893	40,334	41,797	42,437	44,774
Loss from operations	(15,454)	(5,320)	(7,285)	(3,839)	(3,991)	(8,637)	(17,503)	(15,326)
Net loss	(16,408)	(5,635)	(8,236)	(4,101)	(4,949)	(9,362)	(18,562)	(16,096)
Net loss per share (basic and diluted)	$ (0.42)	$ (0.15)	$ (0.20)	$ (0.11)	$ (0.11)	$ (0.25)	$ (0.42)	$ (0.42)

Amounts may not sum to consolidated totals for the full year due to rounding. Basic and diluted net loss per share is computed independently for each of the quarters presented. Therefore, the sum of the quarterly per share amounts will not necessarily equal the total for the year.

SCHEDULE II

VALUATION AND QUALIFYING ACCOUNTS

	Beginning Balance	Additions		Deductions	Ending Balance
		Costs and Expenses	Other (1)		
Reserve for sales returns and allowances					
Year ended December 31, 2020	$ 3,979	$ 66	$ —	$ 2,156	$ 1,889
Year ended December 31, 2019	1,410	$ 369	$ 2,240	$ 40	$ 3,979
Year ended December 31, 2018	1,169	$ 312	$ —	$ 71	$ 1,410
Allowance for inventory valuation					
Year ended December 31, 2020	$ 1,517	$ 801	$ —	$ 539	$ 1,779
Year ended December 31, 2019	1,029	$ 848	$ —	$ 360	$ 1,517
Year ended December 31, 2018	889	$ 718	$ —	$ 578	$ 1,029
Valuation allowance for deferred tax assets					
Year ended December 31, 2020	$ 101,178	$ 15,847	$ —	$ —	$ 117,025
Year ended December 31, 2019	69,849	$ 10,739	$ 20,590	$ —	$ 101,178
Year ended December 31, 2018	66,973	$ 2,876	$ —	$ —	$ 69,849

(1) In connection with the acquisition of SentreHEART, the Company recognized an allowance for sales returns and refunds of for transition to ASC 606 to reflect SentreHEART's historical refund practices, and recorded a valuation allowance to offset the acquired net deferred tax assets.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

The Company's management, with the participation of the President and Chief Executive Officer (the Principal Executive Officer) and Chief Financial Officer (the Principal Accounting and Financial Officer), has evaluated the effectiveness of the Company's disclosure controls and procedures as defined in Rule 13(a) – 15(e) of the Securities Exchange Act of 1934 (Exchange Act), as of the end of the period covered by this report. Based on this evaluation, we concluded that, as of the end of the period covered by this report, our disclosure controls and procedures were effective in providing reasonable assurance that information required to be disclosed by us in the reports we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's forms and rules, and the material information relating to the Company is accumulated and communicated to management, including the President and Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosures.

Control systems, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that control objectives are met. Because of inherent limitations in all control systems, no evaluation of controls can provide assurance that all control issues and instances of fraud, if any, within a company will be detected. Additionally, controls can be circumvented by individuals, by collusion of two or more people or by management override. Over time, controls can become inadequate because of changes in conditions or the degree of compliance may deteriorate. Further, the design of any system of controls is based in part upon assumptions about the likelihood of future events. There can be no assurance that any design will succeed in achieving its stated goals under all future conditions. Because of the inherent limitations in any cost-effective control system, misstatements due to errors or fraud may occur and not be detected.

Changes in Internal Control over Financial Reporting

In the ordinary course of business, we routinely enhance our information systems by either upgrading current systems or implementing new ones. There were no changes in our internal control over financial reporting that occurred during the three months ended December 31, 2020 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Management's Annual Report on Internal Control Over Financial Reporting

The management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting. The 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 accounting principles generally accepted in the United States of America. Internal control over financial reporting includes policies and procedures that: (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. 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 (iii) 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. The Company's management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2020. No matter how well designed, because of inherent limitations in all control systems, internal control over financial reporting may not prevent or detect misstatements should they occur. 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 control procedures may deteriorate. In making this assessment, the Company's management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in *Internal Control-Integrated Framework (2013)*. Based on such assessment, management has concluded that the Company's internal control over financial reporting was effective as of December 31, 2020.

Deloitte & Touche LLP, the Company's independent registered public accounting firm, has audited the consolidated financial statements included in this Annual Report on Form 10-K and, as part of its audit, has issued an attestation report on the effectiveness of the Company's internal control over financial reporting. The attestation report can be found on the following page as part of this Item 9A.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the stockholders and the Board of Directors of
AtriCure, Inc.
Mason, Ohio

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of AtriCure, Inc. and subsidiaries (the "Company") as of December 31, 2020, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2020, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2020, of the Company and our report dated February 26, 2021, expressed an unqualified opinion on those 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 Annual Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Deloitte & Touche LLP

Cincinnati, Ohio
February 26, 2021

ITEM 9B. OTHER INFORMATION

Board Committees

Effective February 25, 2021, the Company's Board of Directors re-constituted its committees as follows:

Audit: Sven A. Wehrwein (Chair), Daniel P. Florin, Mark R. Lanning, Regina E. Groves
Compensation: B. Kristine Johnson (Chair), Mark A. Collar, Mark R. Lanning, Karen N. Prange
Compliance, Quality and Risk: Regina E. Groves (Chair), Sven A. Wehrwein, Robert S. White, Daniel P. Florin
Nominating and Corporate Governance: Mark A. Collar (Chair), Scott W. Drake, Robert S. White, Karen N. Prange
Strategy: Robert S. White (Chair), Regina E. Groves, B. Kristine Johnson

Amendments to Performance Share Awards

Effective as of February 25, 2021, pursuant to approval and direction from the Compensation Committee, the Company amended certain terms of performance share awards (PSAs) granted to active named executive officers and certain other executive employees (collectively, the "Executive Leadership Team") in 2018, 2019 and 2020 pursuant to the Company's 2014 Plan.

The award agreements for the PSAs provide, among other things, that each PSA that vests represents the right to receive one share of the Company's common stock at the end of the performance period. The number of shares that vest and are issued to the recipient is based upon the Company's performance as measured against the specified performance target (the Company's revenue compound annual growth rates (CAGR) at the end of the three-year performance period).

The amendments modify the methodology for calculating the Company's three year revenue growth as follows: (i) one-year revenue growth will be calculated for each year in the performance cycle; (ii) with respect to the calculation of revenue growth for each year in the performance cycle, if the Company achieves a growth rate less than the "Threshold" Performance Goal, then a 0% growth rate shall be substituted in place of such actual rate for the applicable year in the performance cycle; (iii) with respect to the calculation of revenue growth for each year in the performance cycle, if the Company achieves a growth rate greater than the "Maximum" Performance Goal, then the "Maximum" growth rate identified in the Performance Share Award Agreement shall be substituted in place of such actual rate for the applicable year in the performance cycle; (iv) all three years in the applicable performance cycle shall be averaged to provide revenue growth for purposes of determination vesting; and (v) in no event shall payouts under such PSA agreements exceed the "Target" amount originally identified in the applicable PSA agreements.

With respect to the PSAs granted in 2018 to current active members of the Executive Leadership Team, the Compensation Committee applied the calculation methodology described above to determine that the 2018 PSAs vest at the 93% payout level. With respect to the PSAs granted in 2019 and 2020, on February 25, 2021 the Company executed amendments to the PSA agreements for the 2019 and 2020 awards reflecting the modified calculation methodology described above. The form of amendment to the PSA agreements is filed herewith as Exhibit 10.19. The description of these amendments does not purport to be complete and is qualified in its entirety by reference to such exhibit.

The Compensation Committee took the actions described above due to developments related to the COVID-19 pandemic. The challenging environment resulting from the COVID-19 pandemic materially and adversely impacted the Company's addressable markets, as cardiac surgery and elective procedures were either significantly reduced or indeterminately deferred during the pandemic in order to preserve resources for COVID-19 patients and caregivers and to protect patients from potential exposure to COVID-19. Consequently, the achievement of any revenue growth was rendered extremely unlikely. Management expects that the contraction in addressable markets will continue to decrease demand for the Company's products and adversely impact the Company's revenue and financial condition while the pandemic persists.

Recognizing the significant adverse impact of COVID-19 on the Company's opportunity to grow revenue, which is the single metric used to measure performance under the outstanding awards, the Compensation Committee determined that the opportunities to achieve the performance thresholds for the PSA agreements entered into in 2018, 2019 and 2020 had all been directly and significantly impacted. The Compensation Committee also noted that while the pandemic had a direct and material impact on the Company's 2020 revenue, the Company's historical revenue growth outperformed the target revenue metrics. Further, despite the lack of opportunity to achieve revenue growth as a result of the pandemic, the Compensation Committee believes that the Executive Leadership team has been successful in executing strategic initiatives and has driven meaningful value for shareholders. The Compensation Committee views the efforts of the Executive Leadership Team throughout the performance periods as critical to the advancement of key Company initiatives, the prioritization of the safety and retention of Company employees and the Company's execution of shareholder value-driving activity.

2021 Performance Share Award Grants

Effective as of February 25, 2021, pursuant to approval and direction from the Compensation Committee, the Company granted PSAs granted to the Executive Leadership Team.

The award agreements for the PSAs provide, among other things, that each PSA that vests represents the right to receive one share of the Company's common stock at the end of the performance period. With respect to the PSAs, the number of shares that vest and are issued to the recipient is based upon the Company's performance with respect to two measurements, each of which is equally weighted at the end of the three-year performance period as determined by the Compensation Committee: (i) the Company's revenue compound annual growth rates (CAGR); and (ii) relative total shareholder return (TSR). TSR will be measured against the Nasdaq Health Care Index constituents and will be measured as the 20-trading-day average stock price prior to the end of the performance period over the 20-trading-day average stock price prior to the beginning of the performance period. Established threshold, target and maximum payout opportunities, which may range from 0% to 200% of the target amount, are used to calculate the number of shares that will be issuable when the award vests. The CAGR and TSR component payouts will be determined independently and added together for the total payout for the three-year performance period, subject to the maximum(s) defined in the PSA agreements. All or a portion of the 2021 PSAs may vest following a change of control or a termination of service by reason of death or disability.

The Compensation Committee granted target value of 2021 PSAs to the Company's named executive officers as follows:

Name and Title	Target Value of PSAs
Michael H. Carrel President and Chief Executive Officer	$ 3,150,000
Angela L. Wirick Chief Financial Officer	750,000
Douglas J. Seith Chief Operating Officer	875,000
Justin J. Noznesky Senior Vice President, Marketing and Business Development	425,000
Salvatore (Sam) Privitera Chief Technical Officer	325,000

The form of award agreement for the PSAs granted in 2021 is filed herewith as Exhibit 10.20. The description of this agreement does not purport to be complete and is qualified in its entirety by reference to such exhibit.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this item with respect to the Company's Directors is contained in our definitive proxy statement (the "Proxy Statement") for our 2021 Annual Meeting of Stockholders under the heading "Proposal One—Election of Directors" and is incorporated herein by reference.

The information required by this item with respect to the Company's Executive Officers is contained in the Proxy Statement under the heading "Management" and is incorporated herein by reference.

The information required by this item with respect to compliance with Section 16(a) of the Exchange Act is contained in the Proxy Statement under the heading "Delinquent Section 16(a) Reports" and is incorporated herein by reference.

The information required by this item with respect to the Company's code of ethics that applies to directors, officers, and employees, including the Company's principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions, is contained in the Proxy Statement under the heading "Corporate Governance Guidelines—Code of Conduct" and is incorporated herein by reference.

The information required by this item with respect to the procedures by which security holders may recommend nominees to the Board is contained in the Proxy Statement under the heading "Questions and Answers" and is incorporated herein by reference.

The information required by this item with respect to the Company's Audit Committee, including the Audit Committee's members and its financial experts, is contained in the Proxy Statement under the heading "Committees of the Board—Audit Committee" and is incorporated herein by reference.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this item with respect to executive compensation and director compensation is contained in the Proxy Statement under the headings “Executive Compensation” and “Director Compensation” and is incorporated herein by reference.

The information required by this item with respect to compensation committee interlocks and insider participation is contained in the Proxy Statement under the heading “Compensation Committee Interlocks and Insider Participation” and is incorporated herein by reference.

The compensation committee report required by this item is contained in the Proxy Statement under the heading “Executive Compensation—Report of the Compensation Committee of the Board of Directors” and is incorporated herein by reference.

The information required by this item with respect to compensation policies and practices as they relate to the Company’s risk management is contained in the Proxy Statement under the heading “Compensation Discussion and Analysis—Elements of Executive Compensation” and is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The following table summarizes information about our equity compensation plans as of December 31, 2020.

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (1) (a)	Weighted-average exercise price of outstanding options, warrants and rights (2) (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders (3)	2,301,073	$ 17	1,932,220
Equity compensation plans not approved by security holders	—	—	—
Total	2,301,073	$ 17	1,932,220

(1) Represents outstanding stock options, restricted stock awards, performance stock options and performance shares as of December 31, 2020.

(2) The weighted average exercise price is calculated without taking into account restricted stock that will become issuable, without any cash consideration or other payment, as vesting requirements are achieved.

(3) Amounts include awards under our 2005 Equity Incentive Plan and 2014 Stock Incentive Plan but exclude shares purchased under our 2018 Employee Stock Purchase Plan.

The information required by this item with respect to security ownership of certain beneficial owners and management is contained in the Proxy Statement under the heading “Security Ownership of Certain Beneficial Owners and Management” and is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this item with respect to director independence is contained in the Proxy Statement under the heading “Corporate Governance and Board Matters – Independence of the Board” and is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this item with respect to audit fees, tax fees and the audit committee’s pre-approval policies and procedures are contained in the Proxy Statement under the heading “Proposal Two-Ratification of Appointment of Independent Registered Public Accounting Firm” and is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(1) The financial statements required by Item 15(a) are filed in Item 8 of this Form 10-K.

(2) The financial statement schedules required by Item 15(a) are filed in Item 8 of this Form 10-K.

(3) The following exhibits are included in this Form 10-K or incorporated by reference in this Form 10-K:

Exhibit No.	Description
3.1	Second Amended and Restated Certificate of Incorporation (incorporated by reference to our Current Report on Form 8-K, filed on May 27, 2016).
3.2	Fourth Amended and Restated Bylaws (incorporated by reference to our Current Report on Form 8-K filed on February 16, 2018).
4.1	Description of the Registrant's Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934 (incorporated by reference to our Annual Report on Form 10-K filed on February 24, 2020).
10.1#	Employment Agreement, dated as of November 1, 2012, between AtriCure, Inc. and Michael H. Carrel (incorporated by reference to our Current Report on Form 8-K, filed on November 1, 2012).
10.2#	2005 Equity Incentive Plan, as amended on September 19, 2007 and on March 6, 2013 (incorporated by reference to our Annual Report on Form 10-K filed on March 8, 2013).
10.3#	AtriCure, Inc. 2018 Employee Stock Purchase Plan (Amended and Restated effective July 1, 2019 (incorporated by reference to our Quarterly Report on Form 10-Q, filed on July 31, 2019).
10.4#	Form of Change in Control Agreement between AtriCure and AtriCure Executive Officers (incorporated by reference to our Annual Report on Form 10-K filed on March 8, 2013).
10.5	Loan and Security Agreement dated as of February 23, 2018 by and among Silicon Valley Bank, AtriCure, Inc., AtriCure, LLC, Endoscopic Technologies, LLC and nContact Surgical, LLC (incorporated by reference to our Current Report on Form 8-K, filed on February 26, 2018).
10.6	Lease Agreement Dated August 20, 2014 between LM-VP AtriCure, LLC, as Landlord, and AtriCure, Inc., as Tenant (incorporated by reference to our Current Report on Form 8-K, filed on August 25, 2014).
10.7#	AtriCure, Inc. 2014 Stock Incentive Plan (Amended and Restated as of May 20, 2020) (incorporated by reference to our Current Report on Form 8-K, filed on May 22, 2020).
10.8#	Form of Restricted Stock Award Agreement under the Amended and Restated AtriCure, Inc. 2014 Stock Incentive Plan (incorporated by reference to our Quarterly Report on Form 10-Q, filed on July 31, 2019).
10.9#	Form of Stock Option Award Agreement under the Amended and Restated AtriCure, Inc. 2014 Stock Incentive Plan (incorporated by reference to our Quarterly Report on Form 10-Q, filed on July 31, 2019).
10.10#	Form of Restricted Share Unit Award Agreement under the Amended and Restated AtriCure, Inc. 2014 Stock Incentive Plan (incorporated by reference to our Quarterly Report on Form 10-Q, filed on July 31, 2019).
10.11	Merger Agreement dated as of October 4, 2015 among nContact Surgical, Inc., AtriCure, Inc., Portal Merger Sub, Inc., Second Portal Merger Sub, LLC and WRYP Stockholder Services, LLC, as Representative of nContact stockholders (incorporated by reference to our Current Report on Form 8-K, filed on October 5, 2015).
10.12	Merger Agreement dated as of August 11, 2019 among SentreHEART, Inc., AtriCure, Inc., Stetson Merger Sub, Inc., Second Stetson Merger Sub, LLC and Shareholder Representative Services LLC, as Representative of SentreHEART stockholders (incorporated by reference to our Current Report on Form 8-K filed August 12, 2019).
10.13	First Loan Modification Agreement dated December 28, 2018 among AtriCure, Inc., Silicon Valley Bank, the lenders named therein, AtriCure, LLC, Endoscopic Technologies, LLC and nContact Surgical, LLC (incorporated by reference to our Current Report on Form 8-K filed on January 3, 2019).
10.14	Second Amendment to Loan and Security Agreement dated August 12, 2019 among AtriCure, Inc., Silicon Valley Bank, and the other parties named therein (incorporated by reference to our Current Report on Form 8-K, filed on August 11, 2019).
10.15	Joinder and Third Amendment to Loan and Security Agreement dated September 27, 2019 (incorporated by reference to our Quarterly Report on Form 10-Q, filed on October 31, 2019).
10.16	Fourth Amendment to Loan and Security Agreement dated April 29, 2020 among AtriCure, Inc., Silicon Valley Bank and the other parties named therein (incorporated by reference to our Current Report on Form 8-K filed with the Commission on April 29, 2020).
10.17§	Fifth Amendment to Loan and Security Agreement dated February 8, 2021 among AtriCure, Inc., Silicon Valley Bank and the other parties named therein.
10.18#	Form of Performance Share Award Grant Agreement for Awards Granted in 2018, 2019, 2020 (incorporated by reference to our Annual Report on Form 10-K filed on February 24, 2020).
10.19#	Form of First Amendment to Performance Share Award Agreement for Awards Granted in 2019 and 2020.
10.20#	Form of Performance Share Award Agreement for Awards Granted in 2021.
14	Code of Conduct (incorporated by reference to our Annual Report on Form 10-K filed on March 1, 2019).
21	Subsidiaries of the Registrant.
23.1	Consent of Deloitte & Touche LLP.
31.1	Rule 13a-14(a) Certification of Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Rule 13a-14(a) Certification of Chief Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification pursuant to 18 U.S.C. Section 1350 by the Chief Executive Officer, as adopted, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification pursuant to 18 U.S.C. Section 1350 by the Chief Financial Officer, as adopted, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

Exhibit No.	Description
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File

Compensatory plan or arrangement.

§ Certain portions of this exhibit have been omitted pursuant to Item 601(b)(2) of Regulation S-K. The omitted information is not material and would likely cause competitive harm to the Registrant if publicly disclosed. The Registrant hereby agrees to furnish a copy of any omitted portion to the SEC upon request.

ITEM 16. FORM 10-K SUMMARY

Not provided.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this Form 10-K to be signed on our behalf by the undersigned, thereunto duly authorized.

AtriCure, Inc.
(REGISTRANT)

Date: February 26, 2021

/s/ Michael H. Carrel

Michael H. Carrel
President and Chief Executive Officer
(Principal Executive Officer)

Date: February 26, 2021

/s/ Angela L. Wirick

Angela L. Wirick
Chief Financial Officer
(Principal Accounting and Financial Officer)

KNOW ALL MEN AND WOMEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Michael H. Carrel and Angela L. Wirick, her or his attorney-in-fact, with the power of substitution, for her or him in any and all capacities, to sign any and all amendments to this Form 10-K, and to file the same, with exhibits thereto and other documents in connection therewith, with the U.S. Securities and Exchange Commission, granting unto said attorneys-in-fact, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done therewith, as fully to all intents and purposes as she or he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact, and any of them or her or his substitute or substitutes, may do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this Form 10-K has been signed by the following persons on behalf of the registrant and in the capacities indicated on February 26, 2021.

Signature	Title(s)
/s/ Scott W. Drake **Scott W. Drake**	**Scott W. Drake** *Chairman of the Board*
/s/ Michael H. Carrel **Michael H. Carrel**	**Michael H. Carrel** *Director, President and Chief Executive Officer (Principal Executive Officer)*
/s/ Angela L. Wirick **Angela L. Wirick**	**Angela L. Wirick** *Chief Financial Officer (Principal Accounting and Financial Officer)*
/s/ Mark A. Collar **Mark A. Collar**	**Mark A. Collar** *Director*
/s/ Daniel P. Florin **Daniel P. Florin**	**Daniel P. Florin** *Director*
/s/ Regina E. Groves **Regina E. Groves**	**Regina E. Groves** *Director*
/s/ B. Kristine Johnson **B. Kristine Johnson**	**B. Kristine Johnson** *Director*
/s/ Mark R. Lanning **Mark R. Lanning**	**Mark R. Lanning** *Director*
/s/ Karen N. Prange **Karen N. Prange**	**Karen N. Prange** *Director*
/s/ Sven A. Wehrwein **Sven A. Wehrwein**	**Sven A. Wehrwein** *Director*
/s/ Robert S. White **Robert S. White**	**Robert S. White** *Director*