

## CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Proposed Maximum Aggregate Offering Price(1)	Amount of Registration Fee(2)
Common Stock, par value \$0.001 per share	\$201,249,972	\$26,122.25

(1) Assumes exercise in full of the underwriters' option to purchase additional shares of common stock.

(2) Calculated in accordance with Rule 457(o) under the Securities Act of 1933, as amended (the "Securities Act"), and is being paid pursuant to Rule 457(r) under the Securities Act relating to the Registration Statement on Form S-3 (File No. 333-230001) filed by the registrant on March 1, 2019.

Prospectus Supplement  
(To Prospectus dated March 1, 2019)

# AtriCure

## 3,977,273 shares of common stock

We are offering 3,977,273 shares of our common stock.

Our common stock is listed on The Nasdaq Global Market under the symbol "ATRC." On May 11, 2020 the last reported sale price of our common stock on The Nasdaq Global Market was \$46.03 per share.

	Per Share	Total
Public offering price	\$44.00	\$175,000,012
Underwriting discounts and commissions(1)	\$ 2.64	\$ 10,500,001
Proceeds to AtriCure, Inc., before expenses	\$41.36	\$164,500,011

(1) See "Underwriting" for a description of compensation payable to the underwriters.

We have granted the underwriters an option for a period of 30 days following the date of this prospectus supplement to purchase 596,590 additional shares of our common stock at the public offering price, less the underwriting discounts and commissions.

Investing in our common stock involves a high degree of risk. See "[Risk factors](#)," beginning on page 11 of our Annual Report on Form 10-K for the year ended December 31, 2019 and on page S-7 of this prospectus supplement.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement or the accompanying prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The underwriters expect to deliver the shares on or about May 14, 2020.

*Joint Book-Running Managers*

**J.P. Morgan**

**Piper Sandler**

*Co-Managers*

**Canaccord Genuity**

**Needham & Company**

**Stifel**

**SVB Leerink BTIG**

May 11, 2020

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## About the prospectus supplement

We provide information to you about this offering of shares of our common stock in two separate documents that are bound together: (1) this prospectus supplement, which describes the specific details regarding this offering and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference into this prospectus supplement and the accompanying prospectus; and (2) the accompanying prospectus, which provides general information, some of which may not apply to this offering. Generally, when we refer to this “prospectus,” we are referring to both documents combined. If information in this prospectus supplement is inconsistent with the accompanying prospectus or in any document incorporated by reference that was filed with the Securities and Exchange Commission (“SEC”) before the date of this prospectus supplement, you should rely on this prospectus supplement.

In this prospectus supplement, as permitted by law, we “incorporate by reference” information from other documents that we file with the SEC. This means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be a part of this prospectus supplement and should be read with the same care. When we update the information contained in documents that have been incorporated by reference by making future filings with the SEC, the information incorporated by reference in this prospectus supplement is considered to be automatically updated and superseded. In other words, in case of a conflict or inconsistency between information contained in this prospectus supplement and information incorporated by reference into this prospectus supplement, you should rely on the information contained in the document that was filed with the SEC later.

We and the underwriters have not authorized anyone to provide any information or to make any representations other than those contained or incorporated by reference in this prospectus supplement and the accompanying prospectus, or in any free writing prospectuses prepared by us or on our behalf or to which we have referred you. We and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. You should not assume that the information contained in this prospectus supplement and the accompanying prospectus or the documents incorporated herein and therein by reference are accurate as of any date other than their respective dates. Our business, financial condition, and results of operations may have changed since those dates. It is important for you to read and consider all information contained in this prospectus supplement and the accompanying prospectus, including the documents incorporated by reference herein and therein, and any related free writing prospectus, in making your investment decision. You should also read and consider the information in the documents to which we have referred you in the sections entitled “Where you can find more information” and “Important information incorporated by reference” in this prospectus supplement and in the accompanying prospectus.

We are not, and the underwriters are not, making an offer to sell our common stock in any jurisdiction where the offer or sale is not permitted. Neither this prospectus supplement nor the accompanying prospectus constitute, and may not be used in connection with, an offer to sell, or a solicitation of an offer to buy, any securities offered by this prospectus supplement by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation. You must comply with all applicable laws and regulations in force in any applicable jurisdiction and you must obtain any consent, approval or permission required by you for the purchase, offer or sale of the common stock under the laws and regulations in force in the jurisdiction to which you are subject or in which you make your purchase, offer or sale, and neither we nor the underwriters will have any responsibility therefor.

References to “AtriCure,” the “Company,” “we,” “our” and “us” and similar terms mean AtriCure, Inc., a Delaware corporation, and its consolidated subsidiaries, unless the context otherwise requires.

## Prospectus supplement summary

*The items in the following summary are described in more detail later in this prospectus supplement, in the accompanying prospectus and in the documents incorporated by reference herein and therein. This summary provides an overview of selected information and does not contain all the information you should consider before investing in our common stock. Therefore, you should carefully read this prospectus supplement and the accompanying prospectus, including the documents incorporated by reference, which are described under “Where you can find more information” and “Important information incorporated by reference” in this prospectus supplement. You should also carefully consider the matters discussed in the sections in this prospectus supplement and in the accompanying prospectus entitled “Risk factors” and in other periodic reports incorporated herein by reference.*

### **Our business**

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 a high utilization of healthcare services by Afib patients. 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. 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. Patients often progress from being in Afib intermittently (paroxysmal) to being in Afib continuously (persistent and long standing persistent). Afib often occurs in conjunction with other cardiovascular diseases, including hypertension, congestive heart failure, left ventricular dysfunction, coronary artery disease and valvular disease.

Our products are used by physicians during both open-heart and minimally invasive procedures, either in conjunction with heart surgery for other conditions (“concomitant” to such a procedure), or on a standalone basis. We have several product lines for the ablation of cardiac tissue, including our Isolator® Synergy™ Ablation System, the first and only surgical device approved by the United States Food and Drug Administration (FDA) for the treatment of persistent and long-standing persistent forms of Afib in patients undergoing certain open heart concomitant procedures. We also offer a variety of minimally invasive ablation devices and access tools to facilitate less invasive cardiac and thoracic procedures. Our cryoICE® cryosurgery product line offers a variety of cryoablation devices for use in multiple types of cardiothoracic surgery. Our AtriClip® LAA Exclusion System is a device specifically designed to exclude the heart’s left atrial appendage. We believe that we are currently the market leader in the development of medical devices for 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 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. 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 and is currently being studied to support an indication of exclusion of the LAA in patients with persistent and long-standing persistent Afib also undergoing a pulmonary vein isolation. We also offer reusable surgical instruments typically used in cardiac valve replacement or repair. Our Isolator Synergy clamps, Isolator Synergy pens, Coolrail® linear pen, cryosurgery devices, certain products of the AtriClip LAA Exclusion System, COBRA Fusion® Ablation System, Numeris™ 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, cryosurgery 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.

## **Recent developments**

### ***Results from CONVERGE IDE clinical trial***

On May 8, 2020 we announced the results from our CONVERGE IDE clinical trial. This first-of-its-kind trial, which is designed to demonstrate superiority of the hybrid Convergent procedure over standalone endocardial catheter ablation achieved the primary efficacy endpoint with an approximately 18% difference in favor of the hybrid Convergent procedure as compared to standalone endocardial catheter ablation. Results of the trial were presented on May 8, 2020, as part of the late-breaking clinical trials at the Heart Rhythm Society's (HRS) Annual Scientific Session.

The CONVERGE IDE trial is a landmark prospective, superiority, randomized controlled pivotal trial to evaluate the overall success of the hybrid Convergent epicardial and endocardial ablation to standalone endocardial catheter ablation for patients with persistent or long-standing persistent Afib. The procedure combines a minimally invasive, closed chest epicardial ablation performed by a surgeon with endocardial catheter ablation performed by an electrophysiologist. The trial enrolled 153 patients at 27 locations. Patients were randomized at a rate of 2:1 and received either the hybrid Convergent procedure or a standalone endocardial catheter ablation.

The CONVERGE trial primary efficacy endpoint was 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) listed 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%.

Effectiveness endpoints				
Parameter	Convergent ablation arm	Standalone endocardial catheter ablation arm	Difference (Convergent – Control)	p-value
Freedom from AF/AFL/AT from 3-month blanking period through the 12-months* without imputation of missing data as failure <i>n</i> %, (95% confidence interval)	67.7% (67/99) (58.5% - 76.9%)	50.0% (25/50) (36.1% - 63.9%)	17.7% <i>in favor of Convergent</i>	<b>0.036</b>
Freedom from AF/AFL/AT from 3-month blanking period through the 12-months* with imputation of missing data as failure <i>n</i> %, (95% confidence interval)	65.7% (67/102) (56.5% - 74.9%)	49.0% (25/51) (35.3% - 62.7%)	16.7% <i>in favor of Convergent</i>	<b>0.047</b>
<sup>3</sup> 90% burden reduction at 12 months* <i>n</i> %, (95% confidence interval)	80.0% (60/75) (70.9% - 89.1%)	56.8% (25/44) (42.2% - 71.5%)	23.2% <i>in favor of Convergent</i>	<b>0.007</b>
Freedom from AF through 12 months* <i>n</i> %, (95% confidence interval)	70.6% (72/102) (61.7% - 79.4%)	51.0% (26/51) (37.3% - 64.7%)	19.6% <i>in favor of Convergent</i>	<b>0.017</b>

\* Without new/increased dosage of previously failed class I/III AADs  
AADs: anti-arrhythmic drugs; AF: atrial fibrillation; AFL: atrial flutter; AT: atrial tachycardia

**Fourth Amendment to Loan and Security Agreement**

On April 29, 2020, we entered into the Fourth Amendment to our Loan and Security Agreement with Silicon Valley Bank dated February 23, 2018 (as previously amended, the “Loan and Security Agreement”), which modified a covenant related to our liquidity ratio and increased the early termination fee in the Loan and Security Agreement. Specifically, the liquidity ratio of 1.35x was decreased to 1.10x through the September 30, 2020 testing date, after which it will revert back to the 1.35x ratio, and the early termination fees for both the term loan and revolving line of credit were increased by 2.0%.

**Corporate information**

We were incorporated in the State of Delaware as AtriCure, Inc. on October 31, 2000. Our principal executive offices are located at 7555 Innovation Way, Mason, Ohio 45040, and our main telephone number is (513) 755-4100. Our internet website address is <http://www.atricure.com>. We do not incorporate by reference into this prospectus supplement or the accompanying prospectus the information on, or accessible through, our website, and you should not consider it as part of this prospectus supplement or the accompanying prospectus.

## Summary consolidated financial data

The following tables summarize our consolidated financial data for the periods presented. The following summary consolidated financial data should be read in conjunction with the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and related notes thereto in our most recent Annual Report on Form 10-K and subsequent Quarterly Report on Form 10-Q, which are incorporated by reference into this prospectus supplement. The consolidated statements of operations data for the years ended December 31, 2019, 2018 and 2017 were derived from our audited consolidated financial statements incorporated by reference into this prospectus supplement. The condensed consolidated statements of operations data for the three month periods ended March 31, 2020 and 2019 and our condensed consolidated balance sheet data as of March 31, 2020 were derived from our unaudited interim condensed consolidated financial statements incorporated by reference into this prospectus supplement. The unaudited interim condensed consolidated financial statements have been prepared on the same basis as the audited financial statements and reflect, in the opinion of management, all adjustments, which include only normal, recurring adjustments that are necessary to present fairly the unaudited interim condensed consolidated financial statements. Our historical results are not necessarily indicative of the results to be expected in the future, and our results for the three months ended March 31, 2020 are not necessarily indicative of the results to be expected for the full year.

(in thousands, except per share amounts)	Three months ended		Year ended December 31,		
	March 31,		2019	2018	2017
	2020	2019			
	(unaudited)				
<b>Consolidated Statement of Operations Data:</b>					
Total revenue	\$ 53,225	\$53,966	\$230,807	\$201,630	\$174,716
Gross profit	38,884	39,871	170,335	147,120	126,163
Loss from operations	(15,454)	(5,320)	(33,122)	(17,127)	(24,979)
Net loss	(16,408)	(5,635)	(35,194)	(21,137)	(26,892)
Basic and diluted net loss per share	(0.42)	(0.15)	(0.94)	(0.62)	(0.83)
Shares used in computing net loss per share:					
Basic and diluted	38,671	36,976	37,589	34,087	32,387
				<b>As of March 31,</b>	
(in thousands)				<b>2020</b>	
				<b>(unaudited)</b>	
<b>Consolidated Balance Sheet Data:</b>					
Cash and cash equivalents					\$ 21,766
Total investments					46,771
Total assets					527,734
Total liabilities					300,368
Total stockholders' equity					227,366

## The offering

*The following is a brief summary of certain terms of this offering. For a more complete description of the terms of the common stock offered hereby, see the section titled "Description of Common Stock" in the accompanying prospectus.*

<b>Common stock offered by us</b>	3,977,273 shares.
<b>Option to purchase additional shares</b>	We have granted to the underwriters the option, exercisable for 30 days from the date of this prospectus supplement, to purchase 596,590 additional shares of our common stock.
<b>Common stock to be outstanding immediately after this offering</b>	44,054,294 shares (or 44,650,884 shares if the underwriters exercise their option to purchase additional shares in full),
<b>Use of proceeds</b>	<p>We estimate that the net proceeds to us from this offering will be approximately \$164.2 million, or approximately \$188.9 million if the underwriters exercise their option to purchase additional shares of common stock from us in full, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.</p> <p>We intend to use the net proceeds from this offering for working capital and other general corporate purposes, which may include repayment of debt or long-term liabilities, and other potential corporate or market development activities. See "Use of proceeds".</p>
<b>Risk factors</b>	Investing in our common stock involves a high degree of risk. You should read the "Risk Factors" beginning on page 11 of our Annual Report on Form 10-K for the year ended December 31, 2019, on page S-7 of this prospectus supplement, and in the other information included or incorporated by reference in this prospectus supplement and the accompanying prospectus for a discussion of factors to consider before deciding to purchase shares of our common stock.
<b>Nasdaq Global Market trading symbol</b>	"ATRC"

The number of shares of common stock to be outstanding after this offering as reflected in the table above is based on the actual number of shares outstanding as of March 31, 2020, which was 40,077,021, and does not include, as of that date:

- 1,307,873 shares of common stock issuable upon the exercise of outstanding options, with a weighted average exercise price of \$15.43 per share (including 50,146 shares of common stock that were issued upon the exercise of options from April 1, 2020 through May 8, 2020);
- 403,993 shares of common stock reserved for future issuance upon vesting of performance share awards (at target achievement), granted under our 2014 Stock Incentive Plan, as amended;

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- 1,139,580 additional shares of common stock reserved for future issuance under our 2014 Stock Incentive Plan, as amended; and
- 490,832 shares of common stock reserved for future issuance under our Employee Stock Purchase Plan.

Unless otherwise stated in this prospectus supplement, we have assumed throughout this prospectus supplement that the option granted to the underwriters to purchase additional shares from us will not be exercised.

## Risk factors

*Investing in our common stock involves a high degree of risk. Before you make a decision to invest in our common stock, you should consider carefully the risks described below, together with other information in this prospectus supplement, the accompanying prospectus and the information set forth under the caption "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2019. If any of the following events actually occur, our business, operating results, prospects or financial condition could be materially and adversely affected. This could cause the trading price of our common stock to decline and you may lose all or part of your investment. The risks described below are not the only ones that we face. Additional risks not presently known to us or that we currently deem immaterial may also significantly impair our business operations and could result in a complete loss of your investment.*

### **Additional risks related to our business**

***The results of clinical trials for our products may not be predictive of future results, and our current and planned clinical trials may not satisfy the requirements of the FDA or other non-U.S. regulatory authorities.***

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. Likewise, 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 in terms of safety and effectiveness to devices that are already marketed 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 non-U.S. regulatory authorities despite having progressed through initial clinical trials.

Further, our devices and other products may not be approved or cleared even if they achieve their primary endpoints in clinical trials. In addition, our devices and products may not be approved or cleared, as the case may be, even though clinical or other data are, in our view, adequate to support an approval or clearance. The FDA or other non-U.S. regulatory authorities may disagree with our trial design and our interpretation of data from pre-clinical studies and clinical trials. In addition, any of these regulatory authorities may 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 that has the potential to result in FDA and other non-U.S. regulatory authorities' approval. Any of these regulatory authorities may also approve or clear a product candidate for fewer or more limited indications or uses than we request or may grant approval or clearance contingent on the performance of costly post-marketing clinical trials. The FDA or other non-U.S. regulatory authorities may not approve the labeling claims necessary or desirable for the successful commercialization of our product candidates.

***Our success depends, in part, on our ability to achieve regulatory approval for the marketing of the CONVERGE IDE device and the commercial success of this product.***

On May 8, 2020, we announced the results from the CONVERGE IDE clinical trial. This trial achieves 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

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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 are 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 consider the analysis or consider the product for approval.

Although our CONVERGE IDE device is currently cleared under section 510(k), we are also pursuing a pre-marketing approval (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. In December 2019, we submitted the final module for our PMA. In April 2020, we received FDA comments and questions related to our PMA submission. We conducted an initial meeting with the FDA to discuss the FDA's comments and questions but we can provide no assurance that we will be able to respond to the FDA's comments and questions in a manner that is satisfactory to the FDA. There can be no assurance that we will obtain a marketing approval for the CONVERGE IDE device on a timely basis, or at all. Even if we obtain marketing approval, there can be no assurance that we will obtain FDA approval of both persistent and long-standing persistent indications for the CONVERGE IDE device. If we are unable to achieve marketing approval for the CONVERGE IDE device, our business will be significantly adversely impacted, which could have a materially adverse effect on our business, financial condition and results of operations.

***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 impact our results of operations and financial condition.***

We are subject to risks related to the 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 which emanated from China 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 surgical procedures performed with our products. The number of procedures performed has significantly decreased as health care organizations globally have prioritized the treatment of patients with 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 capacity toward 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, thereby negatively impacting our operations. 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 continued 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 that may impact the integrity of subject data and clinical study endpoints. We may also encounter interruption or delays in the operations of FDA or other regulatory authorities, which may impact review and approval timelines. Delays or difficulties in nonclinical activities and clinical trials could severely impact our business.

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

The global COVID-19 pandemic continues to rapidly evolve. The extent to which the global COVID-19 pandemic impacts our business, including our nonclinical activities, clinical trials and financial condition, will depend on future developments, which are highly uncertain, such as the ultimate geographic spread of the disease, the duration of the pandemic, travel restrictions and social distancing, business closures or business disruptions and the effectiveness of actions taken worldwide to contain and treat the disease.

To the extent the global COVID-19 pandemic adversely affects our business and financial results, it may also have the effect of heightening many of the other risks described in this section and in the "Risk Factors" section of our Annual Report on Form 10-K for the year ended December 31, 2019.

## **Risks related to this offering**

***Our management will have broad discretion as to the use of the proceeds from this offering, and we may not use the proceeds effectively.***

We have not designated any portion of the net proceeds from this offering to be used for any particular purpose other than as we may describe in this prospectus supplement. Accordingly, our management will have broad discretion as to the application of the net proceeds from this offering, and could spend the proceeds in ways that do not necessarily improve our operating results or enhance the value of our common stock.

***You will experience immediate dilution in the book value per share of the common stock you purchase.***

Because the price per share of our common stock being offered is substantially higher than the book value per share of our common stock, you will suffer substantial dilution in the net tangible book value of the common stock you purchase in this offering. After giving effect to the sale by us of 3,977,273 shares of common stock in this offering, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us, and based on a net tangible book value of our common stock of \$(136.8) million, or \$(3.41) per share, as of March 31, 2020, if you purchase shares of common stock in this offering, you will suffer immediate and substantial dilution of \$43.38 per share in the net tangible book value of the common stock. If the underwriters exercise their option to purchase additional shares from us, you will experience additional dilution. See "Dilution" on page S-16 for a more detailed discussion of the dilution you will incur in connection with this offering.

***Future sales of a substantial number of shares of our common stock by our existing securityholders could cause our stock price to decline.***

If our existing stockholders sell, or indicate an intention to sell, substantial amounts of our common stock in the public market, the trading price of our common stock could decline. A number of shares of common stock are subject to outstanding options and are or will become eligible for sale in the public market to the extent permitted by the provisions of various vesting schedules. We also have issued shares of common stock to the former stockholders of companies we have acquired, namely SentreHEART and nContact, and we have

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registered all such shares for resale. In August 2019, we issued and delivered 698,792 shares of common stock to the former shareholders of SentreHEART as consideration for and in connection with the closing of the transactions described in our merger agreement with SentreHEART. We also have reserved 7,021,115 additional shares for issuance subject to achievement of certain clinical and reimbursement milestones, as set forth in the SentreHEART merger agreement. The nContact transaction also provides for contingent consideration to be paid upon attaining additional specified regulatory approvals and revenue milestones in addition to the 3,757,028 shares issued in October 2015 when we acquired nContact. In September 2018, we issued and delivered 231,963 shares of common stock to the former shareholders of nContact in connection with the achievement of the CONVERGE trial enrollment milestone. We also have reserved 1,670,993 additional shares for issuance subject to achievement of the regulatory milestone, as set forth in the nContact merger agreement. Subject to the terms and conditions of each of these merger agreements, such contingent consideration will be paid in shares of AtriCure common stock and cash, with certain requirements to make payments in shares of AtriCure common stock first, subject to specified limitations of each merger agreement. If these additional shares of common stock issued to the former stockholders of SentreHEART and nContact are sold, or if it is perceived that they will be sold, in the public market, the trading price of our common stock could decline.

Our executive officers and directors have agreed that, subject to limited exceptions, during the period ending 90 days after the date of this prospectus supplement, they may not, without the prior written consent of the representatives, (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any shares of our common stock or any securities convertible into or exercisable or exchangeable for our common stock (including, without limitation, common stock or such other securities which may be deemed to be beneficially owned by such directors or executive officers in accordance with the rules and regulations of the SEC and securities which may be issued upon exercise of a stock option or warrant) or (2) enter into any hedging, swap or other agreement or transaction that transfers, in whole or in part, any of the economic consequences of ownership of the common stock or such other securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of common stock or such other securities, in cash or otherwise, (3) make any demand for or exercise any right with respect to the registration of any shares of our common stock or any security convertible into or exercisable or exchangeable for our common stock, or (4) publicly disclose the intention to do any of the foregoing.

The lock-up agreements are subject to various exceptions, including sales or transfers of securities pursuant to existing trading plans established pursuant to Rule 10b5-1 of the Exchange Act. Our directors and executive officers may also be released from the lock-up agreements prior to the expiration of the lock-up period at the sole discretion of the representatives. For more information, see "Underwriting."

## Special note regarding forward-looking statements

This prospectus supplement and the accompanying prospectus, including the documents incorporated by reference herein and therein, and other information that we may furnish to the SEC contain forward-looking statements about us, our future performance and our industry that involve substantial risks and uncertainties. We intend such forward-looking statements to be covered by the safe harbor provisions for forward-looking statements contained in Section 21E of the Securities Exchange Act of 1934, as amended, and Section 27A of the Securities Act of 1933, as amended. All statements, other than statements of historical facts, included in this prospectus supplement and the accompanying prospectus and information that we furnish to or file with the SEC regarding our strategy, future operations, future financial position, future net sales, projected expenses, product placements, performance and acceptance, prospects and plans and management's objectives, as well as the growth of the overall market for our products in general and certain products in particular and the relative performance of other market participants are forward-looking statements. These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievement to be materially different from those expressed or implied by the forward-looking statements.

In some cases, you can identify forward-looking statements by terms such as "anticipate," "believe," "estimate," "hope," "expect," "seek," "intend," "may," "might," "plan," "project," "will," "would," "should," "could," "can," "predict," "potential," "continue," "objective," "target" or the negative of these terms, and similar expressions intended to identify forward-looking statements. However, not all forward-looking statements contain these identifying words. These forward-looking statements reflect our current views about activities, events or developments that we expect, believe or anticipate will or may occur in the future and are based on assumptions and subject to risks and uncertainties which may cause actual results, performance or achievements to differ materially from those expressed or implied. Forward-looking statements are based on our experience and perception of current conditions, trends, expected future developments and other factors we believe are appropriate under the circumstances and are subject to numerous risks and uncertainties, many of which are beyond our control. Given these uncertainties, you should not place undue reliance on these forward-looking statements. 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 but not limited to:

- our ability to obtain and maintain regulatory approval for our CONVERGE IDE device on expected timelines, or at all, including whether any additional clinical trials will be initiated or required for CONVERGE prior to FDA approval, and whether CONVERGE will be approved by FDA and any other required regulatory authorities;
- whether we will be able to successfully implement our commercialization plans for CONVERGE, if approved, and whether the market opportunity for CONVERGE is consistent with our expectations and market research;
- our ability to execute on the commercial launch of CONVERGE, if and when approved, on the timeline expected, or at all, and whether we will be able to generate projected net product revenue on the timeline we expect, or at all;
- our expectations regarding our financial performance and capital requirements;
- the effects of the COVID-19 outbreak on our business and results of operations, including the effects of suspension or halting of elective or specialty surgeries;
- the ability of our products to achieve widespread market acceptance within the medical community as a standard treatment alternative for the surgical treatment of Afib during open-heart surgical procedures and as a sole-therapy minimally invasive procedure;

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- our receipt of additional FDA approvals to promote our products for the treatment of Afib or reduction in stroke risk, which is conditioned on the safety and efficacy of our products as demonstrated in clinical trials;
- our reliance that our ablation, ablation-related, and LAA management products will continue to be the primary source of revenue and will not become obsolete;
- competition from new and existing products and procedures in the highly competitive medical device industry;
- failure of government or third-party payors to reimburse our customers for the use of our clinical diagnostic products or reduction of reimbursement levels, which could harm our ability to promote and sell our products;
- failure of our products to perform as expected or to obtain certain approvals or the questioning of the reliability of the technology on which our products are based or the questioning of the promotion by regulatory authorities of our products as “off-label”, which could cause lost revenue, delayed or reduced market acceptance of our products, increased costs and damage to our reputation;
- our ability to consummate acquisitions or, if consummated, to successfully integrate acquired businesses into our operations and to recognize the benefits of acquisitions, including potential synergies and cost savings;
- failure of an acquisition or acquired company to achieve its plans and objectives generally, and risk that proposed or consummated acquisitions may disrupt operations or pose difficulties in employee retention or otherwise affect financial or operating results;
- our ability to retain our current employees and/or require additional qualified personnel, upon whom the success of our business is highly dependent;
- domestic and foreign political developments, which may adversely affect our effective tax rate and global economic conditions, including trade wars and tariffs, which could interrupt or harm our operations and earnings;
- risks related to legal proceedings, including litigation, regulatory investigations, and other proceedings related to our compliance with applicable laws and regulations;
- our expectations regarding our ability to obtain and maintain intellectual property protection for our devices and products, as well as our ability to operate our business without infringing the intellectual property rights of others;
- our issuance of additional shares of common stock to former stockholders of SentreHEART and/or nContact as a result of the satisfaction of certain milestones, which could result in ownership dilution and depression of our stock price; and
- those set forth under “Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2019.

These forward-looking statements represent our estimates and assumptions only as of the date of this prospectus supplement. Unless required by U.S. federal securities laws, we do not intend to publicly update or revise any of these forward-looking statements to reflect new information or future events or otherwise. This prospectus supplement and the accompanying prospectus should be read in conjunction with our consolidated financial statements and notes thereto appearing in our Annual Report on Form 10-K. You should carefully consider all the information in or incorporated by reference in this prospectus supplement and the accompanying prospectus prior to investing in our securities.

## Use of proceeds

We estimate that the net proceeds to us from this offering will be approximately \$164.2 million, or approximately \$188.9 million if the underwriters exercise their option to purchase additional shares of common stock from us in full, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

We intend to use the net proceeds from this offering for working capital and other general corporate purposes, which may include repayment of debt or long-term liabilities, and other potential corporate or market development activities.

The amounts and timing of our use of proceeds will depend on a number of factors, such as the timing and availability of corporate and market development opportunities. As of the date of this prospectus supplement, we cannot specify with certainty the particular uses for the net proceeds to us from this offering. Accordingly, our management will have broad discretion in the application of these proceeds. Pending application of the net proceeds as described above, we intend to invest the proceeds in interest-bearing obligations, investment grade debt instruments, or direct or guaranteed obligations of the U.S. government.

## Dividend policy

We have never paid any cash dividends on our capital stock and do not anticipate paying any cash dividends on our common stock in the foreseeable future. In addition, unless waived, our Loan and Security Agreement with Silicon Valley Bank generally prevents us from declaring or paying any cash dividends. We intend to retain future earnings to fund ongoing operations and future capital requirements. Any future determination to pay cash dividends will be at the discretion of our board of directors and will be dependent upon financial condition, results of operations, capital requirements and such other factors as the board of directors deems relevant, including the extent to which any covenants in our agreements with our lenders may limit our ability to pay cash dividends.

## Capitalization

The following table sets forth our cash and cash equivalents and investments and capitalization as of March 31, 2020 on:

- an actual basis; and
- an as adjusted basis to give effect to the receipt of the estimated net proceeds of \$164.2 million from the sale of common stock in this offering (assuming no exercise of the underwriters' option to purchase additional shares) at the public offering price of \$44.00 per share, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

The table below should be read in conjunction with the sections titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our condensed consolidated financial statements and the accompanying notes included in our Quarterly Report on Form 10-Q for the quarter ended March 31, 2020 and in our Annual Report on Form 10-K for the year ended December 31, 2019, each of which is incorporated by reference herein.

(in thousands, except share and per share data)	March 31, 2020	
	Actual	As adjusted (unaudited)
Cash, cash equivalents and investments	\$ 68,537	\$ 232,737
Debt:		
Revolving line of credit(1)	\$ —	\$ —
Term loan debt, net of deferred financing costs(1)	59,752	59,752
Total debt	59,752	59,752
Stockholder's equity:		
Common stock, \$0.001 par value; 90,000,000 shares authorized; 40,077,021 shares issued and outstanding, actual; 44,054,294 shares issued and outstanding, as adjusted	40	44
Preferred stock, \$0.001 par value; 10,000,000 shares authorized; no shares issued or outstanding, actual and as adjusted	—	—
Additional paid-in capital	526,302	690,498
Accumulated other comprehensive loss	(371)	(371)
Accumulated deficit	(298,605)	(298,605)
Total stockholders' equity	227,366	391,566
Total capitalization	\$ 287,118	\$ 451,318

(1) Our loan and security agreement includes a \$60,000 term loan and a \$20,000 revolving line of credit. The term loan and revolving line of credit both mature or expire, as applicable on August 1, 2024. 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 of \$70,000. As of March 31, 2020, we had no borrowings under the revolving credit facility and had borrowing availability of \$8,750. Deferred financing costs related to the term loan total \$248 and are netted against the outstanding term loan balance. (Dollar amounts in this note (1) are in thousands.)

The information above is based on 40,077,021 shares of our common stock outstanding as of March 31, 2020 and does not include:

- 1,307,873 shares of common stock issuable upon the exercise of outstanding options, with a weighted average exercise price of \$15.43 per share (including 50,146 shares of common stock that were issued upon the exercise of options from April 1, 2020 through May 8, 2020);

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- 403,993 shares of common stock reserved for future issuance upon vesting of performance share awards (at target achievement), granted under our 2014 Stock Incentive Plan, as amended;
- 1,139,580 additional shares of common stock reserved for future issuance under our 2014 Stock Incentive Plan, as amended; and
- 490,832 shares of common stock reserved for future issuance under our Employee Stock Purchase Plan.

## Dilution

Our net tangible book value on March 31, 2020 was \$(136.8) million, or \$(3.41) per share of common stock. "Net tangible book value" is total assets minus the sum of liabilities and intangible assets including goodwill. "Net tangible book value per share" is net tangible book value divided by the total number of shares of common stock outstanding. After giving effect to the sale of 3,977,273 shares of common stock offered by us in this offering, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value on March 31, 2020 would have been approximately \$27.3 million, or \$0.62 per share of common stock. The following table illustrates this dilution on a per share basis:

Public offering price per share		\$44.00
Net tangible book value per share as of March 31, 2020	\$(3.41)	
Increase in net tangible book value per share attributable to offering	4.03	
As adjusted net tangible book value per share as of March 31, 2020 after giving effect to the offering		\$ 0.62
Dilution per share to investors in the offering		\$43.38

The information above assumes that the underwriters do not exercise their option to purchase additional shares. If the underwriters exercise their option to purchase 596,590 additional shares in full, the as adjusted net tangible book value after this offering would be approximately \$1.17 per share, representing an increase in net tangible book value of approximately \$0.55 per share to existing stockholders and immediate dilution in net tangible book value of approximately \$42.83 per share to new investors purchasing our common stock in this offering at the public offering price.

The information above is based on 40,077,021 shares of our common stock outstanding as of March 31, 2020 and does not include:

- 1,307,873 shares of common stock issuable upon the exercise of outstanding options, with a weighted average exercise price of \$15.43 per share (including 50,146 shares of common stock that were issued upon the exercise of options from April 1, 2020 through May 8, 2020);
- 403,993 shares of common stock reserved for future issuance upon vesting of performance share awards (at target achievement), granted under our 2014 Stock Incentive Plan, as amended;
- 1,139,580 additional shares of common stock reserved for future issuance under our 2014 Stock Incentive Plan, as amended; and
- 490,832 shares of common stock reserved for future issuance under our Employee Stock Purchase Plan.

## Material U.S. federal income and estate tax consequences for Non-U.S. Holders of common stock

The following are the material U.S. federal income and estate tax consequences of the ownership and disposition of our common stock acquired in this offering by a “Non-U.S. Holder” that holds our common stock as a “capital asset” within the meaning of Section 1221 of the Internal Revenue Code of 1986, as amended, or the Code, and does not own, and has not owned, actually or constructively, more than 5% of our common stock. You are a Non-U.S. Holder if for U.S. federal income tax purposes you are a beneficial owner of our common stock that is:

- a nonresident alien individual;
- a foreign corporation; or
- an estate the income of which is not subject to United States federal income taxation regardless of its source; or
- a trust that does not have in effect a valid election under the Treasury regulations to be treated as a United States person and either (1) no court within the United States is able to exercise primary supervision over the trust’s administration or (2) no United States person has the authority to control all substantial decisions of that trust.

You are not a Non-U.S. Holder if you are a nonresident alien individual present in the United States for 183 days or more in the taxable year of disposition, or if you are a former citizen or former resident of the United States for U.S. federal income tax purposes. If you are such a person, you should consult your tax advisor regarding the U.S. federal income tax consequences of the ownership and disposition of our common stock.

If you are a partnership for U.S. federal income tax purposes, the U.S. federal income tax treatment of a partner will generally depend on the status of the partner and your activities. Accordingly, partnerships holding our common stock and the partners in such partnerships should consult their tax advisors regarding the U.S. federal income tax consequences to them of the ownership and disposition of our common stock.

This discussion is based on the Code, administrative pronouncements, judicial decisions and final, temporary and proposed Treasury regulations, changes to any of which subsequent to the date of this prospectus supplement may affect the tax consequences described herein, possibly with retroactive effect. There can be no assurance that the Internal Revenue Service (“IRS”), will not challenge one or more of the tax consequences described in this prospectus supplement. This discussion does not describe all of the tax consequences that may be relevant to you in light of your particular circumstances, including alternative minimum tax and Medicare contribution tax consequences and does not address any aspect of state, local or non-U.S. taxation, or any taxes other than income and estate taxes. You should consult your tax advisor with regard to the application of the U.S. federal tax laws to your particular situation, as well as any tax consequences arising under the laws of any state, local or non-U.S. taxing jurisdiction or the special tax rules applicable to particular Non-U.S. holders, such as:

- insurance companies;
- tax-exempt organizations;
- financial institutions;
- brokers or dealers in securities;
- pension plans;
- controlled foreign corporations;
- passive foreign investment companies;

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- persons deemed to sell our common stock under the constructive sale provisions of the Code;
- owners that hold our common stock as part of a straddle, hedge, conversion transaction, synthetic security or other integrated investment or who have elected to mark securities to market for U.S. federal income tax purposes; and
- certain former citizens or residents of the United States.

## **Dividends**

As discussed under “Dividend policy” above, we do not currently expect to make distributions on our common stock. In the event that we do make distributions of cash or other property, those distributions will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. To the extent those distributions exceed our current and accumulated earnings and profits, they will constitute a return of capital, which will first reduce your tax basis in our common stock, but not below zero, and then will be treated as gain from the sale of our common stock, as described below under “—Gain on disposition of our common stock.”

Dividends paid to you generally will be subject to withholding tax at a 30% rate or a reduced rate specified by an applicable income tax treaty between the United States and your country of residence. In order to obtain a reduced rate of withholding (subject to the discussion below under “—FATCA”), you will be required to provide a properly executed applicable IRS Form W-8 certifying your entitlement to benefits under a treaty. If you hold our common stock through a financial institution or other agent acting on your behalf, you will be required to provide appropriate documentation to the agent, which then will be required to provide certification to us or our withholding agent, either directly or through other intermediaries.

If dividends paid to you are effectively connected with your conduct of a trade or business in the United States (and, if required by an applicable income tax treaty, are attributable to a permanent establishment or fixed base maintained by you in the United States), you will generally be taxed on the dividends in the same manner as a U.S. person. In this case, you will be exempt from the withholding tax discussed in the preceding paragraph, although you will be required to satisfy applicable certification and disclosure requirements, including providing a properly executed IRS Form W-8ECI, in order to claim an exemption from withholding. You should consult your tax advisor with respect to other U.S. tax consequences of the ownership and disposition of our common stock, including the possible imposition of a branch profits tax at a rate of 30% (or a lower treaty rate) if you are a corporation.

If you claim the benefit of an applicable income tax treaty between the United States and your country of residence, you generally will be required to provide a properly executed IRS Form W-8BEN or W-8BEN-E (or successor form) and satisfy applicable certification and other requirements. You are urged to consult your own tax advisor regarding your entitlement to benefits under a relevant income tax treaty and the specific methods available to you to satisfy these requirements.

If you are eligible for a reduced rate of U.S. withholding tax under an income tax treaty, you may obtain a refund or credit of any excess amounts withheld by timely filing an appropriate claim with the IRS.

## Gain on disposition of our common stock

Subject to the discussions below under “—Information reporting and backup withholding” and “—FATCA,” you generally will not be subject to U.S. federal income or withholding tax on gain realized on a sale or other taxable disposition of our common stock unless:

- the gain is effectively connected with your conduct of a trade or business in the United States (and, if required by an applicable income tax treaty, is attributable to a permanent establishment or fixed base maintained by you in the United States), in which case you generally will be taxed on a net-income basis at the graduated U.S. federal income tax rates applicable to United States persons (as defined in the Code) with respect to the gain and, if you are a foreign corporation, the branch profits tax described above in “—Dividends” also may apply; or
- we are or have been a “United States real property holding corporation,” as defined in the Code, at any time within the five-year period preceding the disposition or your holding period, whichever period is shorter, and our common stock has ceased to be regularly traded on an established securities market prior to the beginning of the calendar year in which the sale or disposition occurs. If we are a U.S. real property holding corporation and the foregoing exception does not apply, then you generally will be taxed on your net gain derived from the disposition at the graduated U.S. federal income tax rates applicable to United States persons (as defined in the Code). Generally, a corporation is a U.S. real property holding corporation only if the fair market value of its U.S. real property interests equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests plus its other assets used or held for use in a trade or business.

Although there can be no assurance, we believe that we are not, and do not anticipate becoming, a United States real property holding corporation. Furthermore, no assurance can be provided that our common stock will continue to be regularly traded on an established securities market for purposes of the rules described above.

If you recognize gain on a sale or other disposition of our common stock that is effectively connected with your conduct of a trade or business in the United States (and if required by an applicable income tax treaty, is attributable to a permanent establishment or fixed base maintained by you in the United States), you will generally be taxed on such gain in the same manner as a U.S. person. You should consult your tax advisor with respect to other U.S. tax consequences of the ownership and disposition of our common stock, including the possible imposition of a branch profits tax at a rate of 30% (or a lower treaty rate) if you are a corporation.

## Information reporting and backup withholding

Information returns are required to be filed with the IRS in connection with payments of dividends on our common stock. Unless you comply with certification procedures to establish that you are not a U.S. person, information returns may also be filed with the IRS in connection with the proceeds from a sale or other disposition of our common stock. You may be subject to backup withholding on payments on our common stock or on the proceeds from a sale or other disposition of our common stock unless you comply with certification procedures to establish that you are not a U.S. person or otherwise establish an exemption. Your provision of a properly executed applicable IRS Form W-8 certifying your non-U.S. status or the meeting of other documentary evidence requirements for establishing that you are a non-U.S. holder will permit you to avoid backup withholding. Amounts withheld under the backup withholding rules are not additional taxes and may be refunded or credited against your U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

Information reporting and backup withholding generally will apply to the proceeds of a disposition of our common stock by you effected by or through the U.S. office of any broker, U.S. or foreign, unless you certify

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your status as a non-U.S. holder and satisfy certain other requirements, or otherwise establish an exemption. Generally, information reporting and backup withholding will not apply to a payment of disposition proceeds to you where the transaction is effected outside the United States through a non-U.S. office of a broker. However, for information reporting purposes, dispositions effected through a non-U.S. office of a broker with substantial U.S. ownership or operations generally will be treated in a manner similar to dispositions effected through a U.S. office of a broker. You should consult your own tax advisor regarding the application of the information reporting and backup withholding rules to you.

Copies of information returns may be made available to the tax authorities of the country in which you reside or are incorporated under the provisions of a specific treaty or agreement.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules from a payment to you can be refunded or credited against your U.S. federal income tax liability, if any, provided that an appropriate claim is timely filed with the IRS.

## **FATCA**

Provisions of the Code and related U.S. Treasury guidance commonly referred to as “FATCA” require withholding of 30% on payments of dividends on our common stock, and, subject to the discussion below regarding the proposed U.S. Treasury regulations, on gross proceeds of dispositions of our common stock occurring after December 31, 2018, to foreign entities, unless: (i) if the foreign entity is a “foreign financial institution”, the foreign entity undertakes certain due diligence, reporting, withholding and certification obligations; (ii) if the foreign entity is not a “foreign financial institution”, the foreign entity identifies certain of its U.S. investors, if any; or (iii) the foreign entity is otherwise exempt under FATCA.

Withholding under FATCA generally applies to payments of dividends on our common stock. While withholding under FATCA may apply to payments of gross proceeds from a sale or other disposition of our common stock, under proposed U.S. Treasury Regulations, withholding on payments of gross proceeds is not required. Although these regulations are not final, taxpayers may rely on the proposed regulations until final regulations are issued.

If withholding under FATCA is required on any payment related to our common stock, investors not otherwise subject to withholding (or that otherwise would be entitled to a reduced rate of withholding) on such payment may be required to seek a refund or credit from the IRS. An intergovernmental agreement between the United States and an applicable foreign country may modify the requirements described in this section. You should consult your own tax advisor regarding the possible implications of FATCA on your investment in our common stock and the entities through which you hold our common stock, including, without limitation, the process and deadlines for meeting the applicable requirements to prevent the imposition of the 30% withholding tax under FATCA.

## **Federal estate tax**

Individuals who are not citizens or residents of the United States (as defined for U.S. federal estate tax purposes) and entities the property of which is potentially includible in such an individual’s gross estate for U.S. federal estate tax purposes (for example, a trust funded by such an individual and with respect to which the individual has retained certain interests or powers), should note that, absent an applicable treaty exemption, our common stock will be treated as U.S.-situs property subject to U.S. federal estate tax.

**The preceding discussion of material U.S. federal tax considerations is for information only. It is not legal or tax advice. Prospective investors should consult their own tax advisors regarding the particular U.S. federal, state, local and non-U.S. tax consequences of purchasing, holding and disposing of our common stock, including the consequences of any proposed changes in applicable laws.**

## Underwriting

We are offering the shares of common stock described in this prospectus supplement through a number of underwriters. J.P. Morgan Securities LLC and Piper Sandler & Co. are acting as joint book running managers of the offering and as representatives of the underwriters. We have entered into an underwriting agreement with the underwriters. Subject to the terms and conditions of the underwriting agreement, we have agreed to sell to the underwriters, and each underwriter has severally agreed to purchase, at the public offering price less the underwriting discounts and commissions set forth on the cover page of this prospectus supplement, the number of shares of common stock listed next to its name in the following table:

<b>Name</b>	<b>Number of shares</b>
J.P. Morgan Securities LLC	1,571,023
Piper Sandler & Co.	1,173,296
Canaccord Genuity LLC	278,409
Needham & Company, LLC	278,409
Stifel, Nicolaus & Company, Incorporated	278,409
SVB Leerink LLC	278,409
BTIG, LLC	119,318
Total	<u>3,977,273</u>

The underwriters are committed to purchase all the shares of common stock offered by us if they purchase any shares. The underwriting agreement also provides that if an underwriter defaults, the purchase commitments of non-defaulting underwriters may also be increased or the offering may be terminated.

The underwriters propose to offer the shares of common stock directly to the public at the public offering price set forth on the cover page of this prospectus supplement and to certain dealers at that price less a concession not in excess of \$1.58 per share. After the initial offering of the shares to the public, if all of the shares are not sold at the public offering price, the underwriters may change the offering price and the other selling terms.

The underwriters have an option to buy up to 596,590 additional shares of common stock from us to cover sales of shares by the underwriters which exceed the number of shares specified in the table above. The underwriters have 30 days from the date of this prospectus supplement to exercise this option to purchase additional shares. If any shares are purchased with this option to purchase additional shares, the underwriters will purchase shares in approximately the same proportion as shown in the table above. If any additional shares of common stock are purchased, the underwriters will offer the additional shares on the same terms as those on which the shares are being offered.

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The underwriting fee is equal to the public offering price per share of common stock less the amount paid by the underwriters to us per share of common stock. The underwriting fee is \$2.64 per share. The following table shows the per share and total underwriting discounts and commissions to be paid to the underwriters assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

	<b>Without option to purchase additional shares exercise</b>	<b>With full option to purchase additional shares exercise</b>
Per Share	\$ 2.64	\$ 2.64
Total	\$ 10,500,001	\$ 12,074,999

We estimate that the total expenses of this offering, including registration, filing and listing fees, printing fees and legal and accounting expenses, but excluding the underwriting discounts and commissions, will be approximately \$300,000.

A prospectus in electronic format may be made available on the web sites maintained by one or more underwriters, or selling group members, if any, participating in the offering. The underwriters may agree to allocate a number of shares to underwriters and selling group members for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives to underwriters and selling group members that may make Internet distributions on the same basis as other allocations.

We have agreed with the underwriters that we will not (i) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, or submit to, or file with, the SEC a registration statement under the Securities Act of 1933 relating to, any shares of our common stock or any securities convertible into or exercisable or exchangeable for shares of our common stock, or publicly disclose the intention to undertake any of the foregoing, or (ii) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of our common stock or any such other securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of shares of our common stock or such other securities, in cash or otherwise, without the prior written consent of the representatives for a period of 90 days after the date of this prospectus supplement. The restrictions contained in the preceding sentence shall not apply to (A) the shares to be sold hereunder, (B) awards (or the filing of a registration statement on Form S-8 with the SEC in respect of such awards) pursuant to our existing equity incentive plans, (C) the sale of shares of our common stock to employees pursuant to our existing employee stock purchase plans, (D) the issuance of shares of our common stock upon the exercise of an option or warrant, and the vesting of equity awards outstanding under our existing equity incentive plans, or the conversion of a security outstanding on the date of the underwriting agreement, or (E) the issuance of shares of our common stock or any securities convertible into, or exercisable or exchangeable for, shares of our common stock in connection with any (1) mergers, (2) acquisition of assets, (3) joint ventures, (4) strategic alliances or licensing, collaboration or similar agreements, (5) partnerships with experts or other talent to develop or provide content or (6) equipment leasing arrangements; provided that (x) the aggregate number of shares of our common stock or securities convertible into, or exercisable or exchangeable for, shares of our common stock (on an as-converted or as-exercised basis, as the case may be) that we may issue pursuant to subclause (E) shall not exceed 10% of the number of shares of our common stock outstanding immediately after the issuance and sale of the shares, and (y) each recipient of any such shares or other securities executes a "lock-up" letter for the remainder of such 90-day restricted period. The foregoing agreement with the underwriters does not prohibit us from entering into one or more agreements to sell or issue shares of common

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stock or any securities convertible into, or exercisable or exchangeable for, shares of common stock in connection with transactions described in subclause (E)(1) through (6); provided that we do not issue shares in the aggregate in excess of the limit set forth in subclause (E) during a period of 90 days after the date of this prospectus supplement pursuant to such agreement or agreements.

Our directors and executive officers have entered into lock-up agreements with the underwriters prior to the commencement of this offering pursuant to which each of these persons, with limited exceptions, for a period of 90 days after the date of this prospectus supplement, may not (and may not cause any of their direct or indirect affiliates to), without the prior written consent of the representatives, (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any shares of our common stock or any securities convertible into or exercisable or exchangeable for our common stock (including, without limitation, common stock or such other securities which may be deemed to be beneficially owned by such directors or executive officers in accordance with the rules and regulations of the SEC and securities which may be issued upon exercise of a stock option or warrant (collectively with the common stock, the “lock-up securities”)) or (2) enter into any hedging, swap or other agreement or transaction that transfers, in whole or in part, any of the economic consequences of ownership of the lock-up securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of lock-up securities, in cash or otherwise, (3) make any demand for or exercise any right with respect to the registration of any lock-up securities, or (4) publicly disclose the intention to do any of the foregoing. Our directors and executive officers have further acknowledged that these undertakings preclude them from engaging in any hedging or other transactions or arrangements (including, without limitation, any short sale or the purchase or sale of, or entry into, any put or call option, or combination thereof, forward, swap or any other derivative transaction or instrument, however described or defined) designed or intended, or which could reasonably be expected to lead to or result in, a sale or disposition or transfer (by them or any other person) of any economic consequences of ownership, in whole or in part, directly or indirectly, of any lock-up securities, whether any such transaction or arrangement (or instrument provided for thereunder) would be settled by delivery of the lock-up securities, in cash or otherwise.

The restrictions described in the immediately preceding paragraph and contained in the lock-up agreements between the underwriters and our executive officers and directors do not apply, subject in certain cases to various conditions, to certain transactions, including (a) transfers of lock-up securities: (i) as bona fide gifts, or for bona fide estate planning purposes, (ii) by will or intestacy, (iii) to any trust for the direct or indirect benefit of the lock-up party or any immediate family member, (iv) to a partnership, limited liability company or other entity of which the lock-up party and its immediate family members are the legal and beneficial owner of all of the outstanding equity securities or similar interests, (v) to a nominee or custodian of a person or entity to whom a disposition or transfer would be permissible under clauses (i) through (iv), (vi) in the case of a corporation, partnership, limited liability company, trust or other business entity, (A) to another corporation, partnership, limited liability company, trust or other business entity that is an affiliate of the lock-up party, or to any investment fund or other entity controlling, controlled by, managing or managed by or under common control with the lock-up party or its affiliates or (B) as part of a distribution to members or stockholders of the lock-up party; (vii) by operation of law, (viii) to us from an employee upon death, disability or termination of employment of such employee, or (ix) pursuant to a bona fide third-party tender offer, merger, consolidation or other similar transaction approved by our board of directors and made to all shareholders involving a change in control, provided that if such transaction is not completed, all such lock-up securities would remain subject to the restrictions in the immediately preceding paragraph; (x) as part of a sale of the undersigned’s lock-up securities acquired in open market transactions after the closing date of the public offering; (xi) to the Company in connection with the vesting, settlement, or exercise of restricted stock units, options, warranties or other rights to purchase shares of common stock; and (b) exercise of the options, settlement of RSUs or other equity awards, or the exercise of warrants granted pursuant to plans in effect on the date of this prospectus

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supplement, provided that any lock-up securities received upon such exercise, vesting or settlement would be subject to restrictions similar to those in the immediately preceding paragraph. The restrictions described in the immediately preceding paragraph also do not apply to (a) sales or transfers of securities pursuant to an existing trading plan established pursuant to Rule 10b5-1 of the Exchange Act (a "10b5-1 Plan") and disclosed to the representatives, provided that any filing under Section 16 of the Exchange Act made in connection with such sales shall clearly indicate in the footnotes thereto that such disposition of securities was pursuant to a 10b5-1 Plan or (b) the establishment of a new 10b5-1 Plan, provided that no public announcement or filing under the Exchange Act regarding the establishment of such plan is required or voluntarily made during the restricted period and no sales are made during the restricted period.

J.P. Morgan Securities LLC and Piper Sandler & Co., in their sole discretion, may release the securities subject to the above referenced "market stand-off" agreement with us or any of the lock-up agreements described above, in whole or in part at any time.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act of 1933.

In connection with this offering, the underwriters may engage in stabilizing transactions, which involve making bids for, purchasing and selling shares of common stock in the open market for the purpose of preventing or retarding a decline in the market price of the common stock while this offering is in progress. These stabilizing transactions may include making short sales of the common stock, which involve the sale by the underwriters of a greater number of shares of common stock than they are required to purchase in this offering, and purchasing shares of common stock on the open market to cover positions created by short sales. Short sales may be "covered" shorts, which are short positions in an amount not greater than the underwriters' option to purchase additional shares referred to above, or may be "naked" shorts, which are short positions in excess of that amount. The underwriters may close out any covered short position either by exercising their option to purchase additional shares, in whole or in part, or by purchasing shares in the open market. In making this determination, the underwriters will consider, among other things, the price of shares available for purchase in the open market compared to the price at which the underwriters may purchase shares through the option to purchase additional shares. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market that could adversely affect investors who purchase in this offering. To the extent that the underwriters create a naked short position, they will purchase shares in the open market to cover the position.

The underwriters have advised us that, pursuant to Regulation M of the Securities Act of 1933, they may also engage in other activities that stabilize, maintain or otherwise affect the price of the common stock, including the imposition of penalty bids. This means that if the representatives of the underwriters purchase common stock in the open market in stabilizing transactions or to cover short sales, the representatives can require the underwriters that sold those shares as part of this offering to repay the underwriting discount received by them.

These activities may have the effect of raising or maintaining the market price of the common stock or preventing or retarding a decline in the market price of the common stock, and, as a result, the price of the common stock may be higher than the price that otherwise might exist in the open market. If the underwriters commence these activities, they may discontinue them at any time. The underwriters may carry out these transactions on The Nasdaq Global Market, in the over the counter market or otherwise.

In addition, in connection with this offering certain of the underwriters (and selling group members) may engage in passive market making transactions in our common stock on The Nasdaq Global Market prior to the pricing and completion of this offering. Passive market making consists of displaying bids on The Nasdaq Global Market no higher than the bid prices of independent market makers and making purchases at prices no higher

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than these independent bids and effected in response to order flow. Net purchases by a passive market maker on each day are generally limited to a specified percentage of the passive market maker's average daily trading volume in the common stock during a specified period and must be discontinued when such limit is reached. Passive market making may cause the price of our common stock to be higher than the price that otherwise would exist in the open market in the absence of these transactions. If passive market making is commenced, it may be discontinued at any time.

Other than in the United States, no action has been taken by us or the underwriters that would permit a public offering of the securities offered by this prospectus supplement in any jurisdiction where action for that purpose is required. The securities offered by this prospectus supplement may not be offered or sold, directly or indirectly, nor may this prospectus supplement or any other offering material or advertisements in connection with the offer and sale of any such securities be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons into whose possession this prospectus supplement comes are advised to inform themselves about and to observe any restrictions relating to the offering and the distribution of this prospectus supplement. This prospectus supplement does not constitute an offer to sell or a solicitation of an offer to buy any securities offered by this prospectus supplement in any jurisdiction in which such an offer or a solicitation is unlawful.

Our shares are quoted on The Nasdaq Global Market under the symbol "ATRC".

## **Other relationships**

The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. Certain of the underwriters and their affiliates have provided in the past to us and our affiliates and may provide from time to time in the future certain commercial banking, financial advisory, investment banking and other services for us and such affiliates in the ordinary course of their business, for which they have received and may continue to receive customary fees and commissions. In particular, in February 2018, we entered into a loan and security agreement, as subsequently amended, with Silicon Valley Bank, which is an affiliate of SVB Leerink LLC, one of the underwriters of this offering. In addition, in the ordinary course of their various business activities, the underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve our securities and instruments. The underwriters and their respective affiliates may also make investment recommendations or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long or short positions in such securities and instruments.

One of our directors, B. Kristine Johnson, formerly served on the board of directors of Piper Jaffray Companies (now Piper Sandler Companies), an affiliate of Piper Sandler & Co., one of the underwriters of this offering.

## **Selling restrictions**

### ***Notice to prospective investors in the European Economic Area and United Kingdom***

In relation to each Member State of the European Economic Area and the United Kingdom (each a "Relevant State"), no securities have been offered or will be offered pursuant to the offering to the public in that Relevant State prior to the publication of a prospectus in relation to the securities which has been approved by the competent authority in that Relevant State or, where appropriate, approved in another Relevant State and

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notified to the competent authority in that Relevant State, all in accordance with the Prospectus Regulation), except that offers of Shares may be made to the public in that Relevant State at any time under the following exemptions under the Prospectus Regulation:

- (a) to any legal entity which is a qualified investor as defined under the Prospectus Regulation;
- (b) to fewer than 150 natural or legal persons (other than qualified investors as defined under the Prospectus Regulation), subject to obtaining the prior consent of representatives for any such offer; or
- (c) in any other circumstances falling within Article 1(4) of the Prospectus Regulation,

provided that no such offer of Shares shall require the Issuer or any Manager to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation.

For the purposes of this provision, the expression an “offer to the public” in relation to any securities in any Relevant State means the communication in any form and by any means of sufficient information on the terms of the offer and any Shares to be offered so as to enable an investor to decide to purchase or subscribe for any Shares, and the expression “Prospectus Regulation” means Regulation (EU) 2017/1129.

### ***Notice to prospective investors in the United Kingdom***

In addition, in the United Kingdom, this document is being distributed only to, and is directed only at, and any offer subsequently made may only be directed at persons who are “qualified investors” (as defined in the Prospectus Regulation) (i) who have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the “Order”) and/or (ii) who are high net worth companies (or persons to whom it may otherwise be lawfully communicated) falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as “relevant persons”) or otherwise in circumstances which have not resulted and will not result in an offer to the public of the shares in the United Kingdom within the meaning of the Financial Services and Markets Act 2000. Any person who is not a relevant person should not act or rely on the information included in this document or use it as basis for taking any action. In the United Kingdom, any investment or investment activity that this document relates to may be made or taken exclusively by relevant persons.

### ***Notice to prospective investors in Hong Kong***

The shares have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document, other than (a) to “professional investors” as defined in the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong) (the “SFO”) of Hong Kong and any rules made thereunder; or (b) in other circumstances which do not result in the document being a “prospectus” as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32) of Hong Kong) (the “CO”) or which do not constitute an offer to the public within the meaning of the CO. No advertisement, invitation or document relating to the shares has been or may be issued or has been or may be in the possession of any person for the purposes of issue, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to shares which are or are intended to be disposed of only to persons outside Hong Kong or only to “professional investors” as defined in the SFO and any rules made thereunder.

### ***Notice to prospective investors in Japan***

The securities have not been and will not be registered pursuant to Article 4, Paragraph 1 of the Financial Instruments and Exchange Law Act. Accordingly, none of the shares nor any interest therein may be offered or

sold, directly or indirectly, in Japan or to, or for the benefit of, any “resident” of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan), or to others for re-offering or resale, directly or indirectly, in Japan or to or for the benefit of a resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the Financial Instruments and Exchange Act and any other applicable laws, regulations and ministerial guidelines of Japan in effect at the relevant time.

***Notice to prospective investors in Switzerland***

The shares may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange (the “SIX”) or on any other stock exchange or regulated trading facility in Switzerland. This document does not constitute a prospectus within the meaning of, and has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the shares or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to the offering, the Company, the shares have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of shares will not be supervised by, the Swiss Financial Market Supervisory Authority (“FINMA”), and the offer of shares has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes (“CISA”). The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of shares.

***Notice to prospective investors in Singapore***

Each underwriter has acknowledged that this prospectus supplement and the accompanying prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, each underwriter has represented and agreed that it has not offered or sold any shares or caused the shares to be made the subject of an invitation for subscription or purchase and will not offer or sell any shares or cause the shares to be made the subject of an invitation for subscription or purchase, and has not circulated or distributed, nor will it circulate or distribute, this prospectus supplement and the accompanying prospectus or any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the share, whether directly or indirectly, to any person in Singapore other than:

- (a) to an institutional investor (as defined in Section 4A of the Securities and Futures Act (Chapter 289) of Singapore, as modified or amended from time to time (the “SFA”)) pursuant to Section 274 of the SFA;
- (b) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA; or
- (c) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

- (a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

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(b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities or securities-based derivatives contracts (each term as defined in Section 2(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares pursuant to an offer made under Section 275 of the SFA except:

- (i) to an institutional investor or to a relevant person, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;
- (ii) where no consideration is or will be given for the transfer;
- (iii) where the transfer is by operation of law;
- (iv) as specified in Section 276(7) of the SFA; or
- (v) as specified in Regulation 37A of the Securities and Futures (Offers of Investments) (Securities and Securities-based Derivatives Contracts) Regulations 2018.

### ***Notice to prospective investors in Australia***

This prospectus supplement:

- does not constitute a disclosure document or a prospectus under Chapter 6D.2 of the Corporations Act 2001 (Cth) (the "Corporations Act");
- has not been, and will not be, lodged with the Australian Securities and Investments Commission ("ASIC"), as a disclosure document for the purposes of the Corporations Act and does not purport to include the information required of a disclosure document for the purposes of the Corporations Act; and
- may only be provided in Australia to select investors who are able to demonstrate that they fall within one or more of the categories of investors, available under section 708 of the Corporations Act ("Exempt Investors").

The shares may not be directly or indirectly offered for subscription or purchased or sold, and no invitations to subscribe for or buy the shares may be issued, and no draft or definitive offering memorandum, advertisement or other offering material relating to any shares may be distributed in Australia, except where disclosure to investors is not required under Chapter 6D of the Corporations Act or is otherwise in compliance with all applicable Australian laws and regulations. By submitting an application for the shares, you represent and warrant to us that you are an Exempt Investor.

As any offer in of shares under this prospectus supplement will be made without disclosure in Australia under Chapter 6D.2 of the Corporations Act, the offer of those securities for resale in Australia within 12 months may, under section 707 of the Corporations Act, require disclosure to investors under Chapter 6D.2 if none of the exemptions in section 708 applies to that resale. By applying for the shares you undertake to us that you will not, for a period of 12 months from the date of issue of the shares, offer, transfer, assign or otherwise alienate those shares to investors in Australia except in circumstances where disclosure to investors is not required under Chapter 6D.2 of the Corporations Act or where a compliant disclosure document is prepared and lodged with ASIC.

### ***Notice to prospective investors in the Dubai International Financial Centre ("DIFC")***

This prospectus supplement and the accompanying prospectus relate to an Exempt Offer in accordance with the Markets Rule 2012 of the Dubai Financial Services Authority (the "DFSA"). This prospectus supplement and the

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accompanying prospectus are intended for distribution only to persons of a type specified in the Markets Rules 2012 of the DFSA. It must not be delivered to, or relied on by, any other person. The DFSA has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved this prospectus supplement or the accompanying prospectus nor taken steps to verify the information set forth herein and has no responsibility for this prospectus supplement or the accompanying prospectus. The shares to which this prospectus supplement and the accompanying prospectus relate may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the shares offered should conduct their own due diligence on the shares. If you do not understand the contents of this prospectus supplement and the accompanying prospectus you should consult an authorized financial advisor.

In relation to its use in the DIFC, this document is strictly private and confidential and is being distributed to a limited number of investors and must not be provided to any person other than the original recipient, and may not be reproduced or used for any other purpose. The interests in the securities may not be offered or sold directly or indirectly to the public in the DIFC.

### ***Notice to prospective investors in Canada***

The shares of our common stock may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the shares of our common stock must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus supplement (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

## Legal matters

Certain legal matters with respect to the validity of common stock offered by this prospectus supplement will be passed upon for us by Keating Muething & Klekamp PLL, Cincinnati, Ohio. Davis Polk & Wardwell LLP, Menlo Park, California, is representing the underwriters in this offering.

## Experts

The consolidated financial statements and financial statement schedule incorporated in this prospectus supplement and the accompanying prospectus by reference from AtriCure, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2019 and the effectiveness of AtriCure, Inc.'s internal control over financial reporting as of December 31, 2019 have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their reports, which are incorporated herein by reference. Such consolidated financial statements and financial statement schedule have been so incorporated in reliance upon the reports of such firm given upon their authority as experts in accounting and auditing.

## Where you can find more information

We have filed with the SEC a registration statement on Form S-3 under the Securities Act of 1933 with respect to the shares of common stock we are offering under this prospectus supplement. This prospectus supplement and the accompanying prospectus do not contain all of the information set forth in the registration statement and the exhibits to the registration statement. For further information with respect to us and the securities we are offering under this prospectus supplement, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement. Statements contained in this prospectus supplement as to the contents of any contract or any other document referred to are not necessarily complete, and in each instance, we refer you to the copy of the contract or other document filed as an exhibit to the registration statement. Each of these statements is qualified in all respects by this reference.

We also file annual reports, quarterly reports, proxy statements, and other documents with the SEC under the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Our SEC filings are available to the public over the Internet at the SEC's website at [www.sec.gov](http://www.sec.gov). General information about AtriCure, including our annual report on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K, as well as any amendments and exhibits to those reports, are available free of charge through our website at [www.atricure.com](http://www.atricure.com) as soon as reasonably practicable after we file them with, or furnish them to, the SEC. Information on or available through our website is not incorporated into this prospectus supplement and the accompanying prospectus.

## Important information incorporated by reference

The SEC allows "incorporation by reference" into this prospectus supplement and the accompanying prospectus of information that we file with the SEC. This permits us to disclose important information to you by referencing these filed documents. Any information referenced this way is considered part of this prospectus supplement and the accompanying prospectus, and any information filed by us with the SEC and incorporated herein by reference subsequent to the date of this prospectus supplement and the accompanying prospectus will automatically be deemed to update and supersede this information. We incorporate by reference the following

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documents which have been filed with the SEC (except the information contained in such documents to the extent “furnished” and not “filed”):

- Our Annual Report on [Form 10-K](#) for our fiscal year ended December 31, 2019 as filed with the SEC on February 24, 2020 (including the portions of our Definitive Proxy Statement on [Schedule 14A](#), filed with the SEC on April 8, 2020, incorporated by reference therein);
- Our Quarterly Report on [Form 10-Q](#) for our fiscal quarter ended March 31, 2020 as filed with the SEC on April 30, 2020;
- Our Current Reports on Form 8-K filed on [April 9, 2020](#) and [April 29, 2020](#); and
- the description of our Common Stock contained in our Registration Statement File No. 000-51470 on [Form 8-A](#) as a filed with the SEC on August 1, 2005, including any amendment or report filed for the purpose of updating such description.

All documents filed by us under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act from the date of this prospectus supplement and the accompanying prospectus until the sale of all securities registered hereunder or the termination of the registration statement shall be deemed to be incorporated in this prospectus supplement and the accompanying prospectus by reference (except the information contained in such documents to the extent “furnished” and not “filed”). Any statement contained in this prospectus supplement and the accompanying prospectus or in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this prospectus supplement and the accompanying prospectus to the extent that a statement contained in any subsequently filed document which is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus supplement and the accompanying prospectus.

You may request a copy of these filings, at no cost, by writing or telephoning us at the following address or telephone number:

AtriCure, Inc.  
7555 Innovation Way  
Mason, Ohio 45040  
Attention: Chief Financial Officer  
Phone: (513) 755-4100

Exhibits to the filings will not be sent, unless those exhibits have been specifically incorporated by reference in this prospectus supplement and the accompanying prospectus.

Prospectus

# AtriCure®

## Common Stock, Preferred Stock, Debt Securities, Warrants, Depositary Shares and Units and 5,659,984 Shares of Common Stock

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By this prospectus and an accompanying prospectus supplement, we may from time to time offer and sell, in one or more offerings, in any combination of common stock, preferred stock, debt securities, warrants, depositary shares and units. Also, selling securityholders identified in this prospectus may, from time to time, offer and sell up to an additional 5,659,984 shares of common stock. See “Selling Securityholders.”

We will provide you with more specific terms of these securities in one or more supplements to this prospectus. You should read this prospectus and the applicable prospectus supplement carefully before you invest.

We or any selling securityholders may offer these securities from time to time in amounts, at prices and on other terms to be determined at the time of offering. We or any selling securityholders may offer and sell these securities to or through underwriters, dealers or agents, or directly to investors, on a continuous or delayed basis. The supplements to this prospectus will provide the specific terms of the plan of distribution. The price to the public of such securities and the net proceeds we expect to receive from such sale will also be set forth in a prospectus supplement.

Our common stock is listed on the NASDAQ Global Market under the symbol “ATRC.”

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**Investing in our securities involves risks. See “[Risk Factors](#)” beginning on page 5 of this prospectus and the information included and incorporated by reference in this prospectus.**

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.**

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**The date of this prospectus is March 1, 2019**

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No dealer, salesperson or other person is authorized to give any information or to represent anything not contained in this prospectus. You must not rely on any unauthorized information or representations. If you are in a jurisdiction where offers to sell, or solicitations of offers to purchase, the securities offered by this document are unlawful, or if you are a person to whom it is unlawful to direct these types of activities, then the offer presented in this document does not extend to you. The information contained in this document speaks only as of the date of this document, unless the information specifically indicates that another date applies.

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**ABOUT THIS PROSPECTUS**

This prospectus is part of an automatically effective registration statement filed with the Securities and Exchange Commission (the “SEC”) by AtriCure, Inc. as a “well-known seasoned issuer” as defined in Rule 405 of the Securities Act of 1933, as amended (the “Securities Act”) using a “shelf” registration process. Under this shelf process, we or any selling securityholders may sell any combination of the securities described in this prospectus in one or more offerings. This prospectus provides you with a general description of the securities which may be offered. Each time securities are offered for sale, we will provide a free writing prospectus or a prospectus supplement that contains specific information about the terms of that offering. The prospectus supplement may also add, change or update information contained in this prospectus. You should read both this prospectus and any prospectus supplement together with additional information described below under “Where You Can Find More Information” and “Information Incorporated by Reference.” The registration statement that contains this prospectus (including the exhibits thereto) contains additional important information about us and the selling securityholders and the securities we or any selling securityholders may offer under this prospectus. Specifically, we have filed certain legal documents that establish the terms of the securities offered by this prospectus as exhibits to the Registration Statement. We will file certain other legal documents that establish the terms of the securities offered by this prospectus as exhibits to reports we file with the SEC. You may obtain copies of that registration statement and the other reports and documents referenced herein as described below under the heading “Where You Can Find More Information.”

You should rely only on the information contained or incorporated by reference in this prospectus and in any prospectus supplement. We have not authorized any other person to provide you with different information.

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If anyone provides you with different or inconsistent information, you should not rely on it. We are not making offers to sell or solicitations to buy the securities in any jurisdiction in which an offer or solicitation is not authorized or in which the person making that offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make an offer or solicitation. You should not assume that the information in this prospectus, any prospectus supplement or free writing prospectus, as well as the information we file or previously filed with the SEC that we incorporate by reference in this prospectus or any prospectus supplement, is accurate as of any date other than its respective date. Our business, financial condition, results of operations and prospects may have changed since those dates.

In this prospectus, unless the context otherwise requires, references to “we,” “us,” “our” or “AtriCure” refer to AtriCure, Inc. and its subsidiaries. We urge you to read carefully this prospectus (as supplemented and amended) before deciding whether to purchase any of the shares of our common stock, preferred stock, debt securities, warrants, depository shares or units being offered.

## WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at <http://www.sec.gov> or our website at [www.atricure.com](http://www.atricure.com). The information contained on our website is not incorporated by reference in, and should not be considered a part of, this prospectus or any accompanying prospectus supplement. Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K, including any amendments to those reports, and other information that we file with or furnish to the SEC pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") can also be accessed free of charge through the Internet.

We have filed with the SEC a registration statement under the Securities Act relating to the offering of these securities. The Registration Statement, including the attached exhibits, contains additional relevant information about us, and the selling securityholders and the securities. This prospectus does not contain all of the information set forth in the Registration Statement. You can obtain a copy of the Registration Statement from the SEC as described above. The Registration Statement and the documents referred to below under "Information Incorporated by Reference" and our other SEC filings are also available free of charge by accessing the "Investors" section of our website at <http://www.atricure.com>. We have not incorporated by reference into this prospectus the information on our website, and you should not consider it to be a part of this prospectus.

## INFORMATION INCORPORATED BY REFERENCE

The SEC allows us to incorporate by reference into this prospectus certain information we file with it, which means that we can disclose important information by referring you to those documents. The information incorporated by reference is considered to be a part of this prospectus, and information that we file later with the SEC will automatically update and supersede information contained in this prospectus and any accompanying prospectus supplement. We incorporate by reference the documents listed below that we have previously filed with the SEC:

- our [Annual Report on Form 10-K](#) for the year ended December 31, 2018;
- our Current Report on Form 8-K filed on [January 3, 2019](#) (excluding any information furnished in such reports under Item 2.02, Item 7.01 or Item 9.01); and
- the description of our common stock contained in our Registration Statement on [Form 8-A](#) as filed with the SEC on or about August 1, 2005.

We also incorporate by reference into this prospectus additional documents that we may file with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act prior to the completion or termination of the offering, including all such documents we may file with the SEC after the date of the initial registration statement and prior to the effectiveness of the registration statement. We do not and will not, however, incorporate by reference in this prospectus any documents or portions thereof that are not deemed "filed" with the SEC, including any information furnished pursuant to Item 2.02 or Item 7.01 of our Current Reports on Form 8-K, unless, and except to the extent, specified in such Current Reports. Any statements contained in a previously filed document incorporated by reference into this prospectus is deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus, or in a subsequently filed document also incorporated by reference herein, modifies or supersedes that statement.

This prospectus may contain information that updates, modifies or is contrary to information in one or more of the documents incorporated by reference in this prospectus. You should rely only on the information incorporated by reference or provided in this prospectus. We have not authorized anyone else to provide you with different information. You should not assume that the information in this prospectus is accurate as of any date other than the date of this prospectus or the date of the documents incorporated by reference in this prospectus.

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We will provide to each person, including any beneficial owner, to whom this prospectus is delivered, upon written or oral request, at no cost to the requester, a copy of any and all of the information that is incorporated by reference in this prospectus.

Requests for such documents should be directed to:

**Investor Relations**  
**AtriCure, Inc.**  
**7555 Innovation Way**  
**Mason, Ohio 45040**  
**Telephone: (513) 755-4100**

You may also access the documents incorporated by reference in this prospectus free of charge through the “Investors” section of our website at <http://www.atricure.com>. Except for the specific incorporated documents listed above, no information available on or through our website shall be deemed to be incorporated in this prospectus or the registration statement of which it forms a part.

## RISK FACTORS

Investing in our securities involves risk. Please see the risk factors set forth in Part I, Item 1A in our Annual Report on Form 10-K for our most recent fiscal year, as updated by our quarterly reports on Form 10-Q and other filings we make with the SEC, as incorporated by reference in this prospectus and which may be updated, supplemented or superseded by the risks and uncertainties described in the reports we subsequently filed with the SEC. Additional risk factors may be included in a prospectus supplement relating to a particular series or offering of securities. Before making an investment decision, you should carefully consider these risks as well as other information we include or incorporate by reference in this prospectus. The risks and uncertainties we have described are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our business operations. These risks could materially affect our business, results of operations or financial condition and cause the value of our securities to decline.

### SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, any prospectus supplement or free writing prospectus (including the information incorporated by reference therein) contains certain statements that may be deemed to be “forward-looking statements” within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. Forward-looking statements anticipate results based on our estimates, assumptions and plans that are subject to uncertainty. The Private Securities Litigation Reform Act of 1995 provides a safe harbor for forward-looking statements. All statements in this prospectus and any accompanying prospectus supplement not dealing with historical results or current facts are forward-looking and are based on estimates, assumptions and projections. Statements which include the words “believes”, “seeks”, “expects”, “may”, “should”, “intends”, “likely”, “targets”, “plans”, “anticipates”, “estimates” or the negative version of those words and similar statements of a future or forward-looking nature identify forward-looking statements. The forward-looking statements reflect the views of our management regarding expectations and projections current as of the date they are made about future events and are based on information available as of the date they are made.

Factors that could cause actual results to differ from those in the forward-looking statements may accompany the statements themselves. In addition, generally applicable factors that could cause actual results or outcomes to differ from those expressed in the forward-looking statements are and will be discussed in our reports on Forms 10-K, 10-Q and 8-K, incorporated by reference in this prospectus.

All forward-looking statements address matters that involve risks and uncertainties. Accordingly, there are or will be important factors that could cause actual results to differ materially from those indicated in these statements. These risks and uncertainties include the rate and degree of market acceptance of AtriCure’s products, AtriCure’s ability to develop and market new and enhanced products, the timing of and ability to obtain and maintain regulatory clearances and approvals for its products, the timing of and ability to obtain reimbursement of procedures utilizing AtriCure’s products, AtriCure’s ability to consummate acquisitions or, if consummated, to successfully integrate acquired businesses into AtriCure’s operations, AtriCure’s ability to recognize the benefits of acquisitions, including potential synergies and cost savings, failure of an acquisition or acquired company to achieve its plans and objectives generally, risk that proposed or consummated acquisitions may disrupt operations or pose difficulties in employee retention or otherwise affect financial or operating results, AtriCure’s ability to raise the capital that may be required to accomplish the foregoing, competition from existing and new products and procedures or AtriCure’s ability to effectively react to other risks and uncertainties described from time to time in AtriCure’s SEC filings, such as fluctuation of quarterly financial results, reliance on third party manufacturers and suppliers, litigation or other proceedings, government regulation and stock price volatility. We do not undertake any obligation to publicly update or review any forward-looking statement.

**ATRICURE, INC.**

AtriCure, Inc. is a medical device company providing innovative treatments for atrial fibrillation (Afib) and left atrial appendage (LAA) management. Afib affects more than 33 million people worldwide. Electrophysiologists and cardiothoracic surgeons around the globe use AtriCure technologies for the treatment of Afib and reduction of Afib related complications. AtriCure's Synergy™ Ablation System is the first and only medical device to receive FDA approval for the treatment of persistent and longstanding persistent forms of Afib in patients undergoing certain open heart procedures. We believe our AtriClip® Left Atrial Appendage Exclusion System products are the most widely sold LAA management devices worldwide.

We were incorporated in the State of Delaware as AtriCure, Inc. on October 31, 2000. Our principal executive offices are located at 7555 Innovation Way, Mason, Ohio 45040. Our telephone number is (513) 755-4100. SEC filings, news releases, our Code of Conduct applicable to directors, officers and employees and other information may be accessed free of charge through the "Investors" section of our website at <http://www.atricure.com>. Other than the information specifically incorporated by reference in this prospectus, information on our website is not part of this prospectus.

## USE OF PROCEEDS

Unless otherwise indicated in an accompanying prospectus supplement, we expect to use the net proceeds from the sale of any securities offered by us for general corporate purposes, which may include the repayment of outstanding debt. Until the net proceeds are used for these purposes, we may deposit them in interest-bearing accounts or invest them in marketable securities. The specific allocations, if any, of the proceeds from the sale of any of the securities will be described in the prospectus supplement relating to the offering of the securities.

Unless otherwise indicated in a prospectus supplement, we will not receive any proceeds from the sale of securities by any selling securityholder.

## DESCRIPTION OF THE SECURITIES WE MAY OFFER

We may issue, from time to time, in one or more offerings, the following securities:

- shares of common stock of the Company;
- shares of preferred stock of the Company;
- debt securities, which may be senior or subordinated, and which may be convertible into our common stock or be non-convertible;
- warrants to purchase from us shares of our common stock or preferred stock or other securities; and
- units representing two or more of the foregoing securities.

This prospectus contains a summary of the general terms of the various securities that we may offer. The prospectus supplement and/or free writing prospectus relating to any particular securities offered will describe the specific terms of the securities. The summary in this prospectus and in any prospectus supplement does not describe every aspect of the securities and is subject to and qualified in its entirety by reference to all applicable provisions of the documents relating to the securities offered. These documents are or will be filed as exhibits to or incorporated by reference in the registration statement.

In addition, the prospectus supplement will set forth the terms of the offering, the initial public offering price and net proceeds to us. Where applicable, the prospectus supplement will also describe any material U.S. federal income tax considerations relating to the securities offered and indicate whether the securities offered are or will be listed on any securities exchange.

## DESCRIPTION OF COMMON STOCK

This section summarizes the general terms of our common stock that we may offer. The prospectus supplement and/or free writing prospectus relating to the common stock offered will set forth the number of shares offered, the initial offering price and recent market prices, dividend information and any other relevant information. The summary in this section and in the prospectus supplement does not describe every aspect of the common stock and is subject to and qualified in its entirety by reference to all the provisions of our Second Amended and Restated Certificate of Incorporation and Fourth Amended and Restated Bylaws and to the provisions of the Delaware General Corporation Law.

The following briefly summarizes the material terms of the common stock that we may offer, other than pricing and related terms which will be disclosed in a prospectus supplement. The total number of authorized shares of common stock is 90,000,000, par value \$0.001 per share. Holders of common stock are entitled to one vote for each share held of record on all matters submitted to a vote of shareholders. Shareholders do not have the right to cumulate their votes in the election of directors. Our board of directors is authorized to issue the shares of common stock that are authorized but not yet issued without further shareholder approval.

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Holders of our common stock are entitled to receive dividends when and if declared by our board of directors out of funds legally available therefor, subject to any contractual restrictions on the payment of dividends and to any restrictions on the payment of dividends imposed by the terms of any outstanding preferred shares or debt securities.

Upon our dissolution or liquidation or the sale of all or substantially all of our assets, after payment in full of all amounts required to be paid to creditors and to the holders of preferred shares having liquidation preferences, if any, the holders of our common stock will be entitled to receive pro rata our remaining assets available for distribution.

As of February 22, 2019, we had 38,605,737 shares of common stock outstanding. Shares of common stock carry no preemptive or conversion or subscription rights and are not subject to redemption or sinking fund provisions. All outstanding shares of common stock are, and any shares of common stock issued upon conversion of any convertible securities or exercise of employee stock options will be, fully paid and non-assessable.

Our common stock is listed on the NASDAQ Global Market and trades under the symbol "ATRC." Our registrar and transfer agent is American Stock Transfer & Trust Company.

### **Anti-Takeover Effects of Provisions of Our Certificate of Incorporation and Bylaws**

Provisions of our Second Amended and Restated Certificate of Incorporation and Fourth Amended and Restated Bylaws may have the effect of making it more difficult for a third party to acquire, or of discouraging a third party from attempting to acquire, control of us. Because our shareholders do not have cumulative voting rights, our shareholders representing a majority of the shares of common stock outstanding will be able to elect all of our directors. Our Second Amended and Restated Certificate of Incorporation and Fourth Amended and Restated Bylaws provide that all shareholder action must be effected at a duly called meeting of shareholders and not by a consent in writing, and that only our board of directors, chairman of the board, chief executive officer or president (in the absence of a chief executive officer) may call a special meeting of shareholders. Our Second Amended and Restated Certificate of Incorporation requires a 66 2/3% shareholder vote for the amendment, repeal or modification of certain provisions of our Second Amended and Restated Certificate of Incorporation and Fourth Amended and Restated Bylaws relating to the absence of cumulative voting, limitations of liability of our directors, the requirement that shareholder actions be effected at a duly-called meeting and the designated parties entitled to call a special meeting of the shareholders.

The combination of the lack of cumulative voting and the 66 2/3% shareholder voting requirement will make it more difficult for our existing shareholders to replace our board of directors as well as for another party to obtain control of us by replacing our board of directors. Since our board of directors has the power to retain and discharge our officers, these provisions could also make it more difficult for existing shareholders or another party to effect a change in management. In addition, the authorization of undesignated preferred stock makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to change our control.

These provisions may have the effect of deterring hostile takeovers or delaying changes in our control or management. These provisions are intended to enhance the likelihood of continued stability in the composition of our board of directors and in the policies they implement, and to discourage certain types of transactions that may involve an actual or threatened change of our control. These provisions are designed to reduce our vulnerability to an unsolicited acquisition proposal. The provisions also are intended to discourage certain tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and, as a consequence, they also may inhibit fluctuations in the market price of our shares that could result from actual or rumored takeover attempts. Such provisions may also have the effect of preventing changes in our management.

## **Delaware Anti-Takeover Statute**

We are subject to Section 203 of the Delaware General Corporation Law. This law prohibits a publicly held Delaware corporation from engaging in any “business combination” with any “interested shareholder” for a period of three years following the date that the shareholder became an interested shareholder unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction that resulted in the shareholder becoming an interested shareholder;
- upon consummation of the transaction which resulted in the shareholder becoming an interested shareholder, the interested shareholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares outstanding those shares owned by persons who are directors or officers or by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or subsequent to the date of the transaction, the business combination is approved by the board of directors and authorized at an annual or special meeting of shareholders, and not by written consent, by the affirmative vote of at least two-thirds of the outstanding voting stock which is not owned by the interested shareholder.

Section 203 defines “business combination” to include:

- any merger or consolidation involving the corporation and the interested shareholder;
- any sale, transfer, pledge or other disposition of 10% or more of our assets involving the interested shareholder;
- in general, any transaction that results in the issuance or transfer by us of any of our stock to the interested shareholder;
- any transaction involving the corporation that has the effect of increasing the proportionate share of the stock or any class or series of the corporation beneficially owned by the interested shareholder; or
- the receipt by the interested shareholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an “interested shareholder” as an entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by the entity or person.

Under specific circumstances, Section 203 makes it more difficult for an “interested stockholder” to effect various business combinations with a corporation for a three-year period, although the stockholders may, by adopting an amendment to the corporation’s certificate of incorporation or bylaws, elect not to be governed by this section, effective 12 months after adoption.

Our Second Amended and Restated Certificate of Incorporation and Fourth Amended and Restated Bylaws do not exclude us from the restrictions of Section 203. We anticipate that the provisions of Section 203 might encourage companies interested in acquiring us to negotiate in advance with our board of directors since the shareholder approval requirement would be avoided if a majority of the directors then in office approve either the business combination or the transaction that resulted in the shareholder becoming an interested shareholder.

## **DESCRIPTION OF PREFERRED STOCK**

The following briefly summarizes the material terms of the preferred stock that we may offer, other than pricing and related terms which will be disclosed in a prospectus supplement and/or free writing prospectus. You

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should read the particular terms of any series of preferred stock that we offer, which we will describe in more detail in any prospectus supplement relating to such series. You should also read the more detailed provisions of our Second Amended and Restated Certificate of Incorporation and the statement with respect to shares relating to each particular series of preferred stock for provisions that may be important to you. The statement with respect to shares relating to each particular series of preferred stock offered by the accompanying prospectus supplement and this prospectus will be filed as an exhibit to a document incorporated by reference in the registration statement. The prospectus supplement will also state whether any of the terms summarized below do not apply to the series of preferred stock being offered.

### **General**

Our board of directors is authorized to issue up to 10,000,000 shares of preferred stock, par value \$0.001 per share. As of the date of this prospectus, we have not issued any shares of preferred stock. Our board of directors can issue shares of preferred stock in one or more series and can specify the following terms for each series:

- the number of shares;
- the designation, powers, preferences and rights of the shares; and
- the qualifications, limitations or restrictions, except as otherwise stated in our Second Amended and Restated Certificate of Incorporation.

Before issuing any series of preferred stock, our board of directors will adopt resolutions creating and designating the series as a series of preferred stock, and the resolutions will be filed in a statement with respect to shares as an amendment to our Second Amended and Restated Certificate of Incorporation.

The rights of holders of the preferred stock offered may be adversely affected by the rights of holders of any shares of preferred stock that may be issued in the future. Our board of directors may cause shares of preferred stock to be issued in public or private transactions for any proper corporate purpose. Examples include issuances to obtain additional financing in connection with acquisitions or otherwise, and issuances to our officers, directors and employees and its subsidiaries pursuant to benefit plans or otherwise. The preferred stock could have the effect of acting as an anti-takeover device to prevent a change in control of us.

Unless the particular prospectus supplement states otherwise, holders of each series of preferred stock will not have any preemptive or subscription rights to acquire more of our stock.

The transfer agent, registrar, dividend disbursing agent and redemption agent for shares of each series of preferred stock will be named in the prospectus supplement relating to such series.

### **Rank**

Unless otherwise specified in the prospectus supplement relating to the shares of any series of preferred stock, the shares will rank on an equal basis with each other series of preferred stock and prior to the common stock as to dividends and distributions of assets.

### **Dividends**

Unless the particular prospectus supplement states otherwise, holders of each series of preferred stock will be entitled to receive cash dividends, when, as and if declared by our board of directors out of funds legally available for dividends. The rates and dates of payment of dividends will be set forth in the prospectus supplement relating to each series of preferred stock. Dividends will be payable to holders of record of preferred stock as they appear on our books. Dividends on any series of preferred stock may be cumulative or noncumulative.

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We may not declare, pay or set apart for payment dividends on the preferred stock unless full dividends on any other series of preferred stock that ranks on an equal or senior basis have been paid or sufficient funds have been set apart for payment for:

- all prior dividend periods of the other series of preferred stock that pay dividends on a cumulative basis; or
- the immediately preceding dividend period of the other series of preferred stock that pay dividends on a noncumulative basis.

Partial dividends declared on shares of preferred stock and any other series of preferred stock ranking on an equal basis as to dividends will be declared pro rata. A pro rata declaration means that the ratio of dividends declared per share to accrued dividends per share will be the same for all such series of preferred stock.

Similarly, we may not declare, pay or set apart for payment non-stock dividends or make other payments on our common stock or any other stock ranking junior to the preferred stock unless full dividends on all series of preferred stock have been paid or set apart for payment for:

- all prior dividend periods if the preferred stock pays dividends on a cumulative basis; or
- the immediately preceding dividend period if the preferred stock pays dividends on a noncumulative basis.

### **Conversion and Exchange**

The prospectus supplement for any series of preferred stock will state the terms, if any, on which shares of that series are convertible into or exchangeable for shares of our common stock.

### **Redemption**

If so specified in the applicable prospectus supplement, a series of preferred stock may be redeemable at any time, in whole or in part, at our option or at the option of the holders, or may be mandatorily redeemed.

Any partial redemptions of preferred stock will be made in a way that our board of directors decides is equitable.

Unless we default in the payment of the redemption price, dividends will cease to accrue after the redemption date on shares of preferred stock called for redemption and all rights of holders of such shares will terminate except for the right to receive the redemption price.

### **Liquidation Preference**

Upon our voluntary or involuntary liquidation, dissolution or winding up, holders of each series of preferred stock will be entitled to receive distributions upon liquidation in the amount set forth in the prospectus supplement relating to such series of preferred stock, plus an amount equal to any accrued and unpaid dividends. Such distributions will be made before any distribution is made on any securities ranking junior to the preferred stock with respect to liquidation, including common stock.

If the liquidation amounts payable relating to the preferred stock of any series and any other securities ranking on a parity regarding liquidation rights are not paid in full, the holders of the preferred stock of such series and such other securities will share in any such distribution of our available assets on a ratable basis in proportion to the full liquidation preferences. Holders of such series of preferred stock will not be entitled to any other amounts from us after they have received their full liquidation preference.

## Voting Rights

If we issue voting preferred stock, holders of preferred stock will be entitled to one vote per share on each matter submitted to our shareholders. If we issue non-voting preferred stock, holders of preferred stock will have no voting rights, except as required by applicable law. The prospectus supplement will state the voting rights, if any, applicable to any particular series of preferred stock.

## DESCRIPTION OF DEBT SECURITIES

### General

The debt securities will be governed by documents called “indentures”. An indenture is a contract between AtriCure and the trustee named in the applicable prospectus supplement, which acts as trustee for the debt securities. There may be more than one trustee under each indenture for different series of debt securities. The trustee has two main roles. First, the trustee can enforce your rights against AtriCure if AtriCure defaults. There are some limitations on the extent to which the trustee acts on your behalf, described under “—Remedies If An Event of Default Occurs”. Second, the trustee may perform administrative duties for AtriCure, such as sending you interest payments, transferring your debt securities to a new buyer if you sell, and sending you notices.

The debt securities will be unsecured general obligations of AtriCure and may include:

- senior debt securities, to be issued under the senior indenture; and
- subordinated debt securities, to be issued under the subordinated indenture.

The prospectus supplement relating to any particular debt securities offered will indicate whether the debt securities are senior debt securities or subordinated debt securities and will describe the specific terms of the debt securities. The summary in this section and in any prospectus supplement does not describe every aspect of the senior or subordinated indenture or the debt securities, and is subject to and qualified in its entirety by reference to all the provisions of the applicable indenture and the debt securities. The forms of the senior indenture and subordinated indenture and the forms of the debt securities are or will be filed as exhibits to or incorporated by reference in the registration statement. See “Where You Can Find More Information” for information on how to obtain a copy.

This section summarizes the general terms of the senior and subordinated debt securities that we may offer. When we refer to the indenture, we mean the senior indenture and the subordinated indenture collectively, unless we indicate otherwise. When we refer to the trustee, we mean the senior trustee and the subordinated trustee collectively, unless we indicate otherwise. When we refer to the debt securities, we mean the senior and subordinated debt securities, unless we indicate otherwise.

The prospectus supplement relating to any series of debt securities will describe the following specific financial, legal and other terms particular to such series of debt securities:

- the title of the debt securities;
- any limit on the aggregate principal amount of the debt securities;
- the date or dates on which the debt securities will mature;
- the rate or rates (which may be fixed or variable) at which the debt securities will bear interest, if any, and the date or dates from which the interest will accrue;
- the dates on which interest on the debt securities will be payable and the regular record dates for those interest payment dates;

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- the place or places where the principal and premium, if any, and interest, if any, shall be payable, where the debt securities may be surrendered for transfer or exchange, and where notices and demands may be served;
- the date, if any, after which and the price or prices at which the debt securities may, in accordance with any option or mandatory redemption provisions, be redeemed and the other detailed terms and provisions of any such optional or mandatory redemption provision;
- any mandatory or optional sinking funds or analogous provisions or provisions for redemption at the holder's option;
- the denomination in which the debt securities will be issuable, if other than denominations of \$1,000 and any integral multiple thereof;
- if other than the principal amount thereof, the portion of the principal amount of the debt securities which will be payable upon the declaration of acceleration of the maturity of those debt securities;
- any addition to, or modification or deletion of, any events of default or covenants with respect to the securities;
- any provision relating to the defeasance of our obligations in connection with the debt securities;
- any provision regarding exchangeability or conversion of the debt securities into our common stock or other securities;
- whether any debt securities will be issued in the form of a global security, and, if different than described below under "Book-Entry Securities," any circumstances under which a global security may be exchanged for debt securities registered in the names of persons other than the depository for the global security or its nominee;
- the subordination provisions applicable to the subordinated debt securities; and
- any other material terms of the debt securities.

The terms of any series of debt securities may vary from the terms described here. Thus, this summary also is subject to and qualified by reference to the description of the particular terms of your debt securities to be described in the prospectus supplement. The prospectus supplement relating to the debt securities will be attached to the front of this prospectus.

The indenture and its associated documents will contain the full legal text of the matters described in this section. The indenture and the debt securities will be governed by New York law.

### **Events of Default**

You will have special rights if an "event of default" occurs, with respect to any series of debt securities, and is not cured, as described later in this subsection. Under the indenture, the term "event of default" will mean any of the following:

- AtriCure does not pay interest on a debt security within 30 days of its due date;
- AtriCure does not pay the principal or any premium on a debt security on its due date;
- AtriCure remains in breach of any covenant or warranty described in the indenture for 90 days after AtriCure receives a notice stating it is in breach, which notice must be sent by either the trustee or direct holders of at least 25% of the principal amount of outstanding debt securities;
- AtriCure fails to pay an amount of debt as defined in any mortgage, indenture, security agreement or other instrument totaling more than \$25,000,000 in principal amount, AtriCure's obligation to repay is accelerated by its lenders, and this payment obligation remains accelerated for 30 days after AtriCure receives notice of default as described in the previous paragraph;

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- AtriCure becomes subject to one or more final, non-appealable judgments, orders or decrees requiring payments of more than \$25,000,000 and such judgments, orders or decrees remain unsatisfied for 60 days during which a stay of enforcement has not been in effect after AtriCure receives notice as described two paragraphs above; or
- certain events of bankruptcy, insolvency or reorganization of AtriCure.

### **Remedies if an Event of Default Occurs**

If an event of default has occurred and has not been cured (if a cure period is provided for), the trustee or the direct holders of 25% in principal amount of the outstanding debt securities may declare the entire principal amount of all the debt securities of that series to be due and immediately payable. This is called a “declaration of acceleration of maturity”.

Except in cases of default, whereby a trustee has some special duties, a trustee will not be required to take any action under the indenture at the request of any direct holders unless the direct holders offer the trustee reasonable protection from costs, expenses and liability (called an “indemnity”). If reasonable indemnity is provided, the direct holders of a majority in principal amount of the outstanding debt securities of the relevant series may direct the time, method and place of conducting any lawsuit or other formal legal action seeking any remedy available to the trustee. These majority direct holders may also direct the trustee in performing any other action under the indenture.

In general, before you bypass the trustee and bring your own lawsuit or other formal legal action or take other steps to enforce your rights or protect your interests relating to the debt securities, the following must occur:

- you must give the trustee written notice that an event of default has occurred and remains uncured;
- the direct holders of at least 25% in principal amount of all outstanding debt securities of the relevant series must make a written request that the trustee take action in its own name as trustee because of the default, and must offer reasonable indemnity to the trustee against the costs, expenses and other liabilities of taking that action;
- the trustee must have not taken action for 60 days after receipt of the above notice and offer of indemnity; and
- the trustee must not have received from direct holders of a majority in principal amount of the outstanding debt securities of that series a direction inconsistent with the written notice during the 60 day period after receipt of the above notice.

However, you are entitled at any time to bring a lawsuit for the payment of money due on your debt security on or after its due date.

### **Modification**

There are three types of changes we can make to the indentures and the debt securities.

#### *Changes Requiring Your Approval*

First, there are changes that cannot be made to the indentures or your debt securities without your specific approval. The following is a list of those types of changes:

- change the payment due date;
- reduce any amounts due on a debt security;

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- reduce the amount of principal payable upon acceleration of the maturity of a debt security following a default;
- impair your right to sue for payment;
- reduce the percentage in principal amount of debt securities, the consent of whose holders is required to modify or amend the indenture;
- reduce the percentage in principal amount of debt securities, the consent of whose holders is required to waive compliance with certain provisions of the indenture or to waive certain defaults; and
- modify any other aspect of the provisions dealing with modification and waiver of the indenture.

### *Changes Requiring a Majority Vote*

The second type of change to the indentures and the debt securities is the kind that requires consent of the holders of a majority in principal amount of the outstanding debt securities of the particular series affected. With a majority vote, the holders may waive past defaults, provided that such defaults are not of the type described previously under “Changes Requiring Your Approval”.

### *Changes Not Requiring Approval*

The third type of change does not require any vote by direct holders of debt securities. This type is limited to clarifications and certain other changes that would not adversely affect holders of the debt securities.

### **Consolidation, Merger and Sale of Assets**

AtriCure may consolidate or merge with or into another entity, and AtriCure may sell or lease substantially all of AtriCure’s assets to another corporation if the following conditions, among others, are met:

- where AtriCure merges out of existence or sells or leases substantially all its assets, the other entity must be a corporation, partnership or trust organized under the laws of a state or the District of Columbia or under federal law, and it must agree to be legally responsible for the debt securities; and
- the merger, sale of assets or other transaction must not cause a default or an event of default on the debt securities.

### **Form, Exchange, Registration and Transfer**

Generally, we will issue debt securities only in registered global form. See “Book-Entry Securities” below. However, if specified in the prospectus supplement, we may issue certificated securities in definitive form.

You may have your debt securities broken into more debt securities of smaller denominations or combined into fewer debt securities of larger denominations, as long as the total principal amount is not changed. This is called an “exchange”.

You may exchange or transfer debt securities at the office of the trustee. The trustee acts as our agent for registering debt securities in the names of holders and transferring debt securities. We may appoint another entity or perform this role itself. The entity performing the role of maintaining the list of registered direct holders is called the “security registrar”. It will also perform transfers. You will not be required to pay a service charge to transfer or exchange debt securities, but you may be required to pay for any tax or other governmental charge associated with the exchange or transfer. The transfer or exchange will only be made if the security registrar is satisfied with your proof of ownership.

If the debt securities are redeemable and AtriCure redeems less than all of the debt securities of a particular series, AtriCure may block the transfer or exchange of those debt securities during the period beginning 15 days

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before the day AtriCure mails the notice of redemption and ending on the day of that mailing, in order to freeze the list of holders to prepare the mailing. We may also refuse to register transfers or exchanges of debt securities selected for redemption, except that we will continue to permit transfers and exchanges of the unredeemed portion of any debt security being partially redeemed.

### **Book-Entry Securities**

The debt securities will be represented by one or more global securities. Unless otherwise indicated in the prospectus supplement, the global security representing the debt securities will be deposited with, or on behalf of, The Depository Trust Company (“DTC”), New York, New York, or other successor depository we appoint, and registered in the name of the depository or its nominee. The debt securities will not be issued in definitive form unless otherwise provided in the prospectus supplement.

DTC will act as securities depository for the securities. The debt securities will be issued as fully registered securities registered in the name of Cede & Co. (DTC’s nominee).

DTC has informed us as follows:

- DTC is a limited-purpose trust company organized under the New York Banking Law, a “banking organization” within the meaning of the New York Banking Law, a member of the Federal Reserve System, a “clearing corporation” within the meaning of the New York Uniform Commercial Code, and a “clearing agency” registered pursuant to the provisions of Section 17A of the Exchange Act.
- DTC holds securities that its participants deposit with DTC and facilitates the settlement among participants of securities transactions, such as transfers and pledges, in deposited securities through electronic computerized book-entry changes in participants’ accounts, thereby eliminating the need for physical movement of securities certificates.
- Direct participants include securities brokers and dealers, trust companies, clearing corporations, and certain other organizations.
- DTC is owned by a number of its direct participants and by the New York Stock Exchange, Inc., the American Stock Exchange, Inc. and the Financial Industry Regulatory Authority.
- Access to the DTC system is also available to indirect participants such as securities brokers and dealers, banks and trust companies that clear through or maintain a custodial relationship with a direct participant, either directly or indirectly.
- The rules applicable to DTC and its direct and indirect participants are on file with the SEC.

We have provided the following descriptions of the operations and procedures of DTC solely as a matter of convenience. These operations and procedures are solely within the control of DTC and are subject to change by them from time to time. Neither we, any underwriter nor the trustee take any responsibility for these operations or procedures, and you are urged to contact DTC or its participants directly to discuss these matters.

We expect that under procedures established by DTC:

- Upon deposit of the global securities with DTC or its custodian, DTC will credit on its internal system the accounts of direct participants designated by the underwriters with portions of the principal amounts of the global securities; and
- Ownership of the debt securities will be shown on, and the transfer of ownership of the debt securities will be effected only through, records maintained by DTC or its nominee, with respect to interests of direct participants, and the records of direct and indirect participants, with respect to interests of persons other than participants.

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The laws of some jurisdictions require that purchasers of securities take physical delivery of those securities in the form of a certificate. For that reason, it may not be possible to transfer interests in a global security to those persons. In addition, because DTC can act only on behalf of its participants, who in turn act on behalf of persons who hold interests through participants, the ability of a person having an interest in a global security to pledge or transfer that interest to persons or entities that do not participate in DTC's system, or otherwise to take actions in respect of that interest, may be affected by the lack of a physical definitive security in respect of that interest.

So long as DTC or its nominee is the registered owner of a global security, DTC or that nominee will be considered the sole owner or holder of the debt securities represented by that global security for all purposes under the mortgage indenture and under the debt securities. Except as described below, owners of beneficial interests in a global security will not be entitled to have debt securities represented by that global security registered in their names, will not receive or be entitled to receive the debt securities in the form of a physical certificate and will not be considered the owners or holders of the debt securities under the mortgage indenture or under the debt securities, and may not be entitled to give the trustee directions, instructions or approvals. For that reason, each holder owning a beneficial interest in a global security must rely on DTC's procedures and, if that holder is not a direct or indirect participant in DTC, on the procedures of the DTC participant through which that holder owns its interest, to exercise any rights of a holder of debt securities under the mortgage indenture or the global security.

We will not have any responsibility or liability for any aspect of DTC's records relating to the debt securities or relating to payments made by DTC on account of the debt securities, or any responsibility to maintain, supervise or review any of DTC's records relating to the debt securities.

We will make payments on the debt securities represented by the global securities to DTC or its nominee, as the registered owner of the debt securities. We expect that when DTC or its nominee receives any payment on the debt securities represented by a global security, DTC will credit participants' accounts with payments in amounts proportionate to their beneficial interests in the global security as shown in DTC's records. We also expect that payments by DTC's participants to owners of beneficial interests in the global security held through those participants will be governed by standing instructions and customary practice as is now the case with securities held for the accounts of customers registered in the names of nominees for such customers. DTC's participants will be responsible for those payments.

Payments on the debt securities represented by the global securities will be made in immediately available funds. Transfers between participants in DTC will be made in accordance with DTC's rules and will be settled in immediately available funds.

### **Notices**

Notices to holders of debt securities will be given by mail to the addresses of such holders as they appear in the security register.

### **The Trustee**

U.S. Bank National Association will act as trustee under each of the senior debt indenture and the subordinated debt indenture.

## **DESCRIPTION OF WARRANTS**

We may issue warrants for the purchase of common stock, debt securities or other securities registered pursuant to this registration statement and described in this prospectus. We may issue warrants independently or together with other securities that may be attached to or separate from the warrants. We will issue each series of

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warrants under a separate warrant agreement that will be entered into between us and a bank or trust company, as warrant agent, and will be described in the prospectus supplement relating to the particular issue of warrants. The warrant agent will act solely as our agent in connection with the warrant of such series and will not assume any obligation or relationship of agency for or with holders or beneficial owners of warrants. The following describes certain general terms and provisions of debt warrants or common stock warrants we may offer. We will set forth further terms of the debt warrants, common stock warrants or warrants to purchase other securities and the applicable warrant agreement in the applicable prospectus supplement.

### **Common Stock and Preferred Stock Warrants**

The applicable prospectus supplement will describe the terms of any common stock or preferred stock warrants, including the following:

- the title of such warrants;
- the offering price of such warrants, which we may distribute proportionately free of charge to our shareholders (in the applicable prospectus supplement, we may refer to warrants distributed proportionately free of charge to our shareholders as rights to purchase our common stock and any securities not taken by our shareholders may be reoffered to the public);
- the aggregate number of such warrants;
- the designation and terms of the securities purchasable upon exercise of such warrants;
- if applicable, the designation and terms of the securities with which such warrants are issued and the number of such warrants issued with each such security;
- if applicable, the date from and after which such warrants and any securities issued therewith will be separately transferable;
- the number of shares of securities purchasable upon exercise of the warrants and the price at which such shares may be purchased upon exercise;
- the date on which the right to exercise such warrants shall commence and the date on which such right shall expire;
- if applicable, the minimum or maximum amount of such warrants which may be exercised at any one time;
- the currency, currencies or currency units in which the offering price, if any, and the exercise price are payable;
- if applicable, a discussion of certain U.S. federal income tax considerations;
- the identity of the warrant agent for the warrants; and
- the antidilution provisions of the warrants, if any.

### **Debt Warrants**

The applicable prospectus supplement will describe the terms of any debt warrants, including the following:

- the title of the debt warrants;
- the offering price for the debt warrants;
- the aggregate number of the debt warrants;
- the designation and terms of the debt securities purchasable upon exercise of such debt warrants;
- if applicable, the designation and terms of the securities with which such debt warrants are issued and the number of such debt warrants issued with each security;

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- if applicable, the date from and after which such debt warrants and any securities issued therewith will be separately transferable;
- the principal amount of debt securities purchasable upon exercise of a debt warrant and the price at which such principal amount of debt securities may be purchased upon exercise;
- the date on which the right to exercise such debt warrants shall commence and the date on which such right shall expire;
- if applicable, the minimum or maximum amount of such debt warrants which may be exercised at any one time;
- whether the debt warrants represented by the debt warrant certificates or debt securities that may be issued upon exercise of the debt warrants will be issued in registered form;
- information with respect to book-entry procedures, if any;
- the currency, currencies or currency units in which the offering price, if any, and the exercise price are payable;
- if applicable, a discussion of certain U.S. federal income tax considerations;
- the identity of the warrant agent for the warrants;
- the antidilution provisions of such debt warrants, if any;
- the redemption or call provisions, if any, applicable to such debt warrants; and
- any additional terms of the debt warrants, including terms, procedures and limitations relating to the exchange and exercise of such debt warrants.

### **DESCRIPTION OF DEPOSITARY SHARES**

The following briefly summarizes the provisions of the depositary shares and depositary receipts that we may issue from time to time and which would be important to holders of depositary shares and depositary receipts, other than pricing and related terms, which will be disclosed in the applicable prospectus supplement. The prospectus supplement will also state whether any of the general provisions summarized below do not apply to the depositary shares or depositary receipts being offered and provide any additional provisions applicable to the depositary shares or depositary receipts being offered. The following description and any description in a prospectus supplement may not be complete and are subject to, and qualified in their entirety by reference to the terms and provisions of the form of deposit agreement filed as an exhibit to the registration statement which contains this prospectus.

#### **Depositary Shares**

We may offer depositary shares evidenced by depositary receipts. Each depositary share represents a fraction or a multiple of a share of a particular series of preferred stock that we issue and deposit with a depositary. The fraction or the multiple of a share of preferred stock, which each depositary share represents, will be set forth in the applicable prospectus supplement.

We will deposit the shares of any series of preferred stock represented by depositary shares according to the provisions of a deposit agreement to be entered into between us and a bank or trust company, which we will select as its preferred stock depositary. We will name the depositary in the applicable prospectus supplement. Each holder of a depositary share will be entitled to all the rights and preferences of the underlying preferred stock in proportion to the applicable fraction or multiple of a share of preferred stock represented by the depositary share. These rights include any applicable dividend, voting, redemption, conversion and liquidation rights. The depositary will send the holders of depositary shares all reports and communications that we deliver to the depositary and which we are required to furnish to the holders of depositary shares.

### **Depository Receipts**

The depository shares will be evidenced by depository receipts issued pursuant to the deposit agreement. Depository receipts will be distributed to anyone who is buying the fractional shares of preferred stock in accordance with the terms of the applicable prospectus supplement.

### **Withdrawal of Preferred Stock**

Unless the related depository shares have previously been called for redemption, a holder of depository shares may receive the number of whole shares of the related series of preferred stock and any money or other property represented by the holder's depository receipts after surrendering the depository receipts at the corporate trust office of the depository, paying any taxes, charges and fees provided for in the deposit agreement and complying with any other requirement of the deposit agreement. Partial shares of preferred stock will not be issued. If the surrendered depository shares exceed the number of depository shares that represent the number of whole shares of preferred stock the holder wishes to withdraw, then the depository will deliver to the holder at the same time a new depository receipt evidencing the excess number of depository shares. Once the holder has withdrawn the preferred stock, the holder will not be entitled to re-deposit that preferred stock under the deposit agreement or to receive depository shares in exchange for such preferred stock.

### **Dividends and Other Distributions**

The depository will distribute to record holders of depository shares any cash dividends or other cash distributions it receives on preferred stock. Each holder will receive these distributions in proportion to the number of depository shares owned by the holder. The depository will distribute only whole U.S. dollars and cents. The depository will add any fractional cents not distributed to the next sum received for distribution to record holders of depository shares.

In the event of a non-cash distribution, the depository will distribute property to the record holders of depository shares, unless the depository determines that it is not feasible to make such a distribution. If this occurs, the depository may, with our approval, sell the property and distribute the net proceeds from the sale to the holders.

The amounts distributed to holders of depository shares will be reduced by any amounts required to be withheld by the preferred stock depository or by us on account of taxes or other governmental charges.

### **Redemption of Depository Shares**

If the series of preferred stock represented by depository shares is subject to redemption, then we will give the necessary proceeds to the depository. The depository will then redeem the depository shares using the funds it received from us for the preferred stock. The redemption price per depository share will be equal to the redemption price payable per share for the applicable series of the preferred stock and any other amounts per share payable with respect to the preferred stock multiplied by the fraction of a share of preferred stock represented by one depository share. Whenever we redeem shares of preferred stock held by the depository, the depository will redeem the depository shares representing the shares of preferred stock on the same day, provided we have paid in full to the depository the redemption price of the preferred stock to be redeemed and any accrued and unpaid dividends. If fewer than all the depository shares of a series are to be redeemed, the depository shares will be selected by lot or ratably or by any other equitable method as the depository will decide.

After the date fixed for redemption, the depository shares called for redemption will no longer be considered outstanding. Therefore, all rights of holders of the depository shares will cease, except that the holders will still be entitled to receive any cash payable upon the redemption and any money or other property to which the holder was entitled at the time of redemption. To receive this amount or other property, the holders must surrender the

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depository receipts evidencing their depository shares to the preferred stock depository. Any funds that we deposit with the preferred stock depository for any depository shares that the holders fail to redeem will be returned to us after a period of two years from the date we deposit the funds.

### **Voting the Preferred Stock**

Upon receipt of notice of any meeting at which the holders of preferred stock are entitled to vote, the depository will notify holders of depository shares of the upcoming vote and arrange to deliver our voting materials to the holders. The record date for determining holders of depository shares that are entitled to vote will be the same as the record date for the preferred stock. The materials the holders will receive will describe the matters to be voted on and explain how the holders, on a certain date, may instruct the depository to vote the shares of preferred stock underlying the depository shares. For instructions to be valid, the depository must receive them on or before the date specified. To the extent possible, the depository will vote the shares as instructed by the holder. We agree to take all reasonable actions that the depository determines are necessary to enable it to vote as a holder has instructed. The depository will abstain from voting shares of preferred stock deposited under a deposit agreement if it has not received specific instructions from the holder of the depository shares representing those shares.

### **Amendment and Termination of the Deposit Agreement**

We may agree with the depository to amend the deposit agreement and the form of depository receipt at any time. However, any amendment that materially and adversely alters the rights of the holders of depository receipts will not be effective unless it has been approved by the holders of at least a majority of the affected depository shares then outstanding. We will make no amendment that impairs the right of any holder of depository shares, as described above under “– Withdrawal of Preferred Stock,” to receive shares of preferred stock and any money or other property represented by those depository shares, except in order to comply with mandatory provisions of applicable law. If an amendment becomes effective, holders are deemed to agree to the amendment and to be bound by the amended deposit agreement if they continue to hold their depository receipts.

The deposit agreement automatically terminates if a final distribution in respect of the preferred stock has been made to the holders of depository receipts in connection with our liquidation, dissolution or winding-up. We may also terminate the deposit agreement at any time we wish with at least 60 days prior written notice to the depository. If we do so, the depository will give notice of termination to the record holders not less than 30 days before the termination date. Once depository receipts are surrendered to the depository, it will send to each holder the number of whole or fractional shares of the series of preferred stock underlying that holder’s depository receipts.

### **Charges of Depository and Expenses**

We will pay all transfer and other taxes and governmental charges arising solely from the existence of the depository arrangements. We will pay all charges of the depository in connection with the initial deposit of the related series of offered preferred stock, the initial issuance of the depository shares, all withdrawals of shares of the related series of offered preferred stock by holders of the depository shares and the registration of transfers of title to any depository shares. However, holders of depository receipts will pay other taxes and governmental charges and any other charges provided in the deposit agreement to be payable by them.

### **Limitations on Our Obligations and Liability to Holders of Depository Receipts**

The deposit agreement will expressly limit our obligations and the obligations of the depository. It will also limit our liability and the liability of the depository as follows:

- we and the depository are only liable to the holders of depository receipts for negligence or willful misconduct; and

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- we and the depository have no obligation to become involved in any legal or other proceeding related to the depository receipts or the deposit agreement on your behalf or on behalf of any other party, unless you provide us with satisfactory indemnity.

### **Resignation and Removal of Depository**

The depository may resign at any time by notifying us of its election to do so. In addition, we may remove the depository at any time. Within 60 days after the delivery of the notice of resignation or removal of the depository, we will appoint a successor depository.

### **Reports to Holders**

We will deliver all required reports and communications to holders of the offered preferred stock to the depository, and it will forward those reports and communications to the holders of depository shares.

## **DESCRIPTION OF UNITS**

We may issue units consisting of any combination of the other types of securities offered under this prospectus in one or more series. We may evidence each series of units by unit certificates that we will issue under a separate agreement. We may enter into unit agreements with a unit agent. Each unit agent will be a bank or trust company that we select. We will indicate the name and address of the unit agent in the applicable prospectus supplement relating to a particular series of units.

The following description, together with the additional information included in any applicable prospectus supplement, summarizes the general features of the units that we may offer under this prospectus. You should read any prospectus supplement and any free writing prospectus that we may authorize to be provided to you related to the series of units being offered, as well as the complete unit agreements that contain the terms of the units. Specific unit agreements will contain additional important terms and provisions and we will file with the SEC the form of each unit agreement relating to units offered under this prospectus.

If we offer any units, certain terms of that series of units will be described in the applicable prospectus supplement, including, without limitation, the following, as applicable:

- the title of the series of units;
- identification and description of the separate constituent securities comprising the units;
- the price or prices at which the units will be issued; the date, if any, on and after which the constituent securities comprising the units will be separately transferable;
- a discussion of certain U.S. federal income tax considerations applicable to the units; and
- any other terms of the units and their constituent securities.

## **ISSUANCE OF COMMON STOCK PURSUANT TO OUR ACQUISITION OF NCONTACT**

Effective October 13, 2015, we acquired nContact pursuant to the terms of the Merger Agreement (the “Merger Agreement”), by and among AtriCure, two wholly-owned subsidiaries of AtriCure, and WRYP Stockholders Services, LLC, solely in its capacity as representative of the stockholders (“Representative”). As consideration for the merger, we paid upfront consideration of 3,452,152 shares of our common stock and approximately \$7.6 million in cash and deposited an additional 304,876 shares of our common stock into an escrow established pursuant to the Merger Agreement for post-closing claims.

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Subject to meeting certain additional performance milestones throughout the five-year period beginning January 1, 2016, as more particularly described in the Merger Agreement, the nContact stockholders will be eligible to receive additional consideration in the form of earn out payments (the “Earn-Out”). The Earn-Out may be paid in a combination of cash and our common stock. The Merger Agreement provides that the maximum number of shares that may be issued by AtriCure in connection with all of the transactions contemplated by the Merger Agreement, including the Earn-Out, shall not exceed 19.9% of AtriCure’s outstanding shares of common stock prior to the acquisition of nContact. This prospectus relates to the resale of the 3,757,028 shares of our common stock previously issued at the closing of the merger, 231,963 shares issued to the former stockholders of nContact (the “selling securityholders”) on September 20, 2018 pursuant to the Merger Agreement as contingent consideration, and up to 1,670,993 additional shares that may be issued pursuant to the Earn-Out by us to the selling securityholders in connection with the Merger Agreement.

## SELLING SECURITYHOLDERS

The shares of common stock to be sold pursuant to this prospectus identified in the table below were issued in a private placement to the selling securityholders in connection with the consummation of transactions contemplated by the Merger Agreement described above in “Issuance of Common Stock Pursuant to our Acquisition of nContact.” When we refer to the selling securityholders in this prospectus, we mean the holders listed in the table below, as well as their permitted transferees, assignees, donees, pledgees and successors in interest.

The Registration Statement of which this prospectus forms a part has been filed pursuant to registration rights granted to the selling securityholders in the Merger Agreement in order to permit the selling securityholders to resell to the public shares of our common stock, as well as any shares of common stock that we may issue or may be issuable by reason of the Earn-Out. We will pay certain expenses of the registration of the selling securityholders’ shares of our common stock, including SEC filing fees, but the selling securityholders will pay all underwriting discounts and commissions, if any.

Securityholders that received shares pursuant to the Merger Agreement entered into a Lock-Up and Liquidity Agreement. Pursuant to the Lock-Up and Liquidity Agreement and subject to certain exceptions, for a period that ended the 180<sup>th</sup> day following the closing of the Merger (the “Lock-Up Period”), the selling securityholders agreed that they would not offer, sell, contract to sell, pledge, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, make any short sale or otherwise transfer, hedge or dispose of any of our shares, enter into any swap or other arrangement that transfers our shares, make any demand for or exercise any right with respect to registration of any of our shares, or publicly announce the intention to do any of the foregoing, without our prior written consent. Notwithstanding the foregoing, AtriCure agreed to use commercially reasonable efforts after the closing to undertake an organized liquidity event that gives selling securityholders the right, during the Lock-Up Period, to sell up to 50% of such selling securityholder’s shares received pursuant to the Merger Agreement. The Lock-Up Period does not apply to any of our shares issued as part of any Earn-Outs.

Pursuant to registration rights granted in the Merger Agreement, each selling securityholder must promptly notify us in writing of any changes in the information set forth in the Registration Statement regarding the selling securityholder. We may, by giving two (2) days prior written notice to each selling securityholder, delay or suspend the Registration Statement and require that all selling securityholders immediately cease sales of shares of our common stock pursuant to the Registration Statement, for a period no longer than fourteen (14) calendar days, in the event that: (i) we are involved in any activity, transaction, preparations or negotiations that we desire to keep confidential for business reasons and we in good faith determine that the public disclosure requirements imposed on us pursuant to the Registration Statement would require a disclosure that could cause us imminent and material harm; or (ii) any other event occurs that makes any statement of a material fact in the Registration Statement untrue or requires additions or changes to the Registration Statement; provided, however, that we may only use this right twice in any twelve-month period.

The table below sets forth certain information known to us with respect to the beneficial ownership of the shares of our common stock held by the selling securityholders as of October 13, 2015. Given that the selling securityholders may sell, transfer or otherwise dispose of all, some or none of the shares of our common stock covered by this prospectus, we cannot determine the number of such shares that will be sold, transferred or otherwise disposed of by the selling securityholders, or the amount or percentage of shares of our common stock that will be held by the selling securityholders upon termination of this offering. See “Plan of Distribution”. For the purposes of the table below, we assume that the selling securityholders will sell all of their shares of our common stock covered by this prospectus.

In the table below, the percentage of shares beneficially owned is based on 38,605,737 shares of our common stock outstanding as of February 22, 2019. Beneficial ownership is determined under the rules of the

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SEC and generally includes voting or investment power with respect to securities. The entities named in the table below have sole voting and sole investment power with respect to all shares beneficially owned.

Except as described herein, none of the selling securityholders has had any material relationship with us except with respect to ownership of the shares of common stock.

Name and address of beneficial owner	Shares beneficially owned prior to this offering		Shares beneficially owned after offering		
	Common stock (1)	Percentage of shares	Shares to be sold in offering	Common stock	Percentage of shares
Intersouth Partners VI, L.P. (2) 102 City Mall Plaza, Suite 200 Durham, NC 27701	1,998,465	5.18%	1,998,465	—	—
Massey Burch Venture Fund II, L.P. (3) 4007 Hillsboro Rd. Suite A Nashville, TN 37215	657,225	1.70%	657,225	—	—
Village Ventures Partners Fund, L.P. (4) 1 Bank Street, 2nd Floor Williamstown, MA 01267	25,969	*	25,969	—	—
Village Ventures Partners Fund A, L.P. (4) 1 Bank Street, 2nd Floor Williamstown, MA 01267	1,874	*	1,874	—	—
Tall Oaks Capital Investments, LLC (5) 315 Old Ivy Way, Suite 301 Charlottesville, VA 22903	79,406	*	79,406	—	—
Finistere-Chicago Partners Fund I L.P. (6) 4365 Executive Drive, Suite 1500 San Diego, CA 92121	393,425	1.02%	393,425	—	—
Finistere-Oceania Partners Fund I L.P. (6) 4365 Executive Drive, Suite 1500 San Diego, CA 92121	108,247	*	108,247	—	—
Hippo Ventures, L.L.C. (7) 3101 Hillsborough St. Raleigh, NC 27607	336,190	*	336,190	—	—
Hippo Ventures II, L.L.C. (7) 3101 Hillsborough St. Raleigh, NC 27607	264,812	*	264,812	—	—
Harbert Venture Partners, LLC (8) 2100 Third Avenue North, Suite 600 Birmingham, AL 35203	309,678	*	309,678	—	—
Harbert Venture Partners II, L.P. (9) 2100 Third Avenue North, Suite 600 Birmingham, AL 35203	436,463	1.14%	436,463	—	—
SVB Financial Group 3005 Tasman Dr. Santa Clara, CA 95054	151	*	151	—	—
ZMV Associates, LLC (10) 114 River Road Scarborough, NY 10510	215,528	*	215,528	—	—
NCON Co-Investor, LLC (9) 2100 Third Avenue North, Suite 600 Birmingham, AL 35203	308,875	*	308,875	—	—

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Name and address of beneficial owner	Shares beneficially owned prior to this offering		Shares beneficially owned after offering		
	Common stock (1)	Percentage of shares	Shares to be sold in offering	Common stock	Percentage of shares
Harbert Venture Partners (Annex Fund), LLC (8) 2100 Third Avenue North, Suite 600 Birmingham, AL 35203	38,902	*	38,902	—	—
Excelleration MedTech, LLC (11) 3550 Lakeline Blvd., Suite 170-1520 Leander, TX 78641	367,920	*	367,920	—	—
Lakestone Capital, LLC (12) 2626 Glenwood Avenue, Suite 483 Raleigh, NC 27608	17,487	*	17,487	—	—
Hercules Technology III, L.P. (13) 400 Hamilton Ave., Suite 310 Palo Alto, CA 94301	11,341	*	11,341	—	—
Michael S. Estes PhD 1173 Brown Ave. Lafayette, CA 94549	5,078	*	5,078	—	—
John P. Funkhouser 3340 Alleghany Drive Raleigh, NC 27609	50,819	*	50,819	—	—
James G. Whyne 3922 Overcup Oak Lane Cary, NC 27519	11,306	*	11,306	—	—
Sidney D. Fleischman 1147 Scholastic Circle Durham, NC 27713	20,823	*	20,823	—	—

\* denotes less than one percent

- Includes shares of our common stock over which the selling securityholder has sole voting and dispositive power as well as shares of our common stock held in escrow over which WRYP Stockholders Services, LLC in its capacity as representative of the selling securityholder has sole voting power as follows: Intersouth Partners VI, L.P. – 109,157 shares; Massey Burch Venture Fund II, L.P. – 35,901 shares; Village Ventures Partners Fund, L.P. – 1,417 shares; Village Ventures Partners Fund A, L.P. – 107 shares; Tall Oaks Capital Investments, LLC – 4,342 shares; Finistere-Chicago Partners Fund I L.P. – 21,491 shares; Finistere-Oceania Partners Fund I L.P. – 5,917 shares; Hippo Ventures, L.L.C. – 18,363 shares; Hippo Ventures II, L.L.C. – 14,462; Harbert Venture Partners, LLC – 16,917 shares; Harbert Venture Partners II, L.P. – 23,842 shares; SVB Financial Group - 12 shares; ZMV Associates, LLC – 11,769 shares; NCON Co-Investor, LLC – 16,867 shares; Harbert Venture Partners (Annex Fund), LLC – 2,121 shares; Excelleration MedTech, LLC – 20,097 shares; Lakestone Capital, LLC – 953 shares; Hercules Technology III, L.P. - 620 shares; John P. Funkhouser - 279 shares; James G. Whyne - 114 shares; Sidney D. Fleischman - 128 shares. Also includes up to an aggregate of 1,902,956 shares of our common stock that may be issued as Earn-Out as follows: Intersouth Partners VI, L.P. – 671,939 shares; Massey Burch Venture Fund II, L.P. – 220,935 shares; Village Ventures Partners Fund, L.P. – 8,753 shares; Village Ventures Partners Fund A, L.P. – 570 shares; Tall Oaks Capital Investments, LLC – 26,641 shares; Finistere-Chicago Partners Fund I L.P. – 132,256 shares; Finistere-Oceania Partners Fund I L.P. – 36,346 shares; Hippo Ventures, L.L.C. – 113,036 shares; Hippo Ventures II, L.L.C. – 89,059 shares; Harbert Venture Partners, LLC – 104,092 shares; Harbert Venture Partners II, L.P. – 146,719 shares; ZMV Associates, LLC – 72,503 shares; NCON Co-Investor, LLC – 103,902 shares; John P. Funkhouser – 17,126 shares; James G. Whyne – 3,805 shares; Sidney D. Fleischman – 7,040 shares; Harbert Venture Partners (Annex Fund), LLC – 13,130 shares; Excelleration MedTech, LLC – 123,693 shares; Lakestone Capital, LLC – 5,899 shares; Hercules Technology III, L.P. – 3,805 shares; Michael S. Estes PhD – 1,707 shares.

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2. The general partner of Intersouth Partners VI, L.P. is Intersouth Associates VI, LLC, the managers of which are Intersouth Advisors, Inc., Dennis Dougherty and Mitch Mumma, each of whom may be deemed to share voting and investment power with respect to the securities and disclaims beneficial ownership of the securities, except to the extent of his/her/its pecuniary interest therein.
3. The general partner of Massey Burch Venture Fund II, L.P. is MB Partners II, L.P., the managers of which are William F. Earthman III and Donald M. Johnston, each of whom may be deemed to share voting and investment power with respect to the securities and disclaims beneficial ownership of the securities, except to the extent of his/her pecuniary interest therein.
4. The general partner of Village Ventures Partners Fund, L.P. and Village Ventures Partners Fund A, L.P. is Village Ventures Capital Partners I, LLC, the managers of which are Village Ventures, Inc., Matthew C. Harris and William Bo S. Peabody, each of whom may be deemed to share voting and investment power with respect to the securities and disclaims beneficial ownership of the securities, except to the extent of his/her/its pecuniary interest therein.
5. The manager of Tall Oaks Capital Investments, LLC is Colin M. Rolph, who may be deemed to share voting and investment power with respect to the securities and disclaims beneficial ownership of the securities, except to the extent of his pecuniary interest therein.
6. The general partner of Finistere-Chicago Partners Fund I L.P. and Finistere-Oceania Partners Fund I L.P. is Finistere Ventures, LLC, the managers of which are Bruce J. Brumfield, Jr., Jerry Caulder and Aramia Kukutai, each of whom may be deemed to share voting and investment power with respect to the securities and disclaims beneficial ownership of the securities, except to the extent of his/her/its pecuniary interest therein.
7. The manager of Hippo Ventures, L.L.C. and Hippo Ventures II, L.L.C. is Robert Young, who may be deemed to share voting and investment power with respect to the securities and disclaims beneficial ownership of the securities, except to the extent of his pecuniary interest therein.
8. The manager of Harbert Venture Partners, LLC and Harbert Venture Partners (Annex Fund), LLC is Harbert Venture Partners MM, LLC, the managers of which is HMC-Virginia, Inc. and William W. Brooke, each of whom may be deemed to share voting and investment power with respect to the securities and disclaims beneficial ownership of the securities, except to the extent of his/her/its pecuniary interest therein.
9. The general partner of Harbert Venture Partners II, L.P., and the manager of NCON Co-Investor, LLC, is Harbert Venture Partners II GP, LLC, the managers of which are HMC-Virginia, Inc. and William W. Brooke, each of whom may be deemed to share voting and investment power with respect to the securities and disclaims beneficial ownership of the securities, except to the extent of his/her/its pecuniary interest therein.
10. The manager of ZMV Associates, LLC is Robert C. Mayer, Jr., who may be deemed to share voting and investment power with respect to the securities and disclaims beneficial ownership of the securities, except to the extent of his pecuniary interest therein.
11. The manager of Excelleration MedTech, LLC is Robert L. Kay, who may be deemed to share voting and investment power with respect to the securities and disclaims beneficial ownership of the securities, except to the extent of his pecuniary interest therein.
12. The manager of Lakestone Capital, LLC is Todd A. Robinson, who may be deemed to share voting and investment power with respect to the securities and disclaims beneficial ownership of the securities, except to the extent of his pecuniary interest therein.
13. The general partner of Hercules Technology III, L.P. is Hercules Technology SBIC Management, LLC, the managers of which are Hercules Technology Growth Capital, Inc., Manuel Henriquez, Mark Harris, Scott Bluestein and Walter Lee, each of whom may be deemed to share voting and investment power with respect to the securities and disclaims beneficial ownership of the securities, except to the extent of his/her/its pecuniary interest therein.

## PLAN OF DISTRIBUTION

We and the selling securityholders may offer and sell the securities covered by this prospectus in any of the following ways (or in any combination) from time to time:

- to or through underwriters, brokers or dealers;
- directly to purchasers or to a single purchaser, including through privately negotiated transactions;
- through agents;
- in “at the market offerings,” within the meaning of Rule 415(a)(4) of the Securities Act, to or through a market maker or into an existing trading market, on an exchange or otherwise; or
- sales on any national securities exchange or quotation service on which our common stock may be listed or quoted at the time of sale.

In addition, we and any selling securityholder may enter into derivative or other hedging transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. If any applicable prospectus supplement indicates, in connection with such a transaction, such third parties may, pursuant to this prospectus and any applicable prospectus supplement, sell securities covered by this prospectus and any applicable prospectus supplement. If so, the third party may use securities borrowed from others to settle such sales and may use securities received from us to close out any related short positions. We and the selling securityholders may also loan or pledge securities covered by this prospectus and any applicable prospectus supplement to third parties, who may sell the loaned securities or, in an event of default in the case of a pledge, sell the pledged securities pursuant to this prospectus and any applicable prospectus supplement. We may also offer and sell, or agree to deliver, our securities pursuant to, or in connection with, any option agreement or other contractual arrangement.

Any applicable prospectus supplement will set forth the terms of the offering of the securities covered by this prospectus, including:

- the name or names of any underwriters, dealers or agents and the amounts of securities underwritten or purchased by each of them, if any;
- any material relationship with the underwriter and the nature of such relationship, if any;
- the over-allotment options under which underwriters may purchase additional securities, if any;
- the public offering price or purchase price of the securities and the proceeds to us and any discounts, commissions, or concessions or other items constituting compensation allowed, re-allowed or paid to underwriters, dealers or agents, if any;
- any securities exchanges on which the securities may be listed, if any; and
- the manner for refunding any excess amount paid (including whether interest will be paid).

Any public offering price or purchase price and any discounts, commissions, concessions or other items constituting compensation allowed or re-allowed or paid to underwriters, dealers or agents may be changed from time to time.

The securities may be offered and sold from time to time in one or more transactions, including negotiated transactions, at a fixed price or prices or at varying prices determined at the time of sale. If underwriters are used in the sale of any securities, the securities will be acquired by the underwriters for their own account and may be resold from time to time in one or more transactions described above. The securities may be either offered to the public through underwriting syndicates represented by managing underwriters, or directly by underwriters. Generally, the underwriters' obligations to purchase the securities will be subject to certain conditions precedent. The underwriters will be obligated to purchase all of the securities if they purchase any of the securities.

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We and the selling securityholders may sell the securities through agents from time to time. If required by applicable law, any applicable prospectus supplement will name any agent involved in the offer or sale of the securities and any commissions we pay to them. Generally, unless otherwise indicated in any applicable prospectus supplement, any agent will be acting on a best efforts basis for the period of its appointment. If a dealer is used in the sale of the securities in respect of which the prospectus is delivered, we or the selling stockholders will sell such securities to the dealer, as principal. The dealer may then resell such securities to the public at varying prices to be determined by such dealer at the time of resale.

In order to comply with the securities laws of some states, if applicable, the securities may be sold in these jurisdictions only through registered or licensed brokers or dealers. Broker-dealers and agents, and their respective affiliates, may be engaged in transactions with, or perform commercial or investment banking or other services for, us or our subsidiaries or affiliates, in the ordinary course of business.

We and the selling securityholders may authorize underwriters, dealers or agents to solicit offers by certain purchasers to purchase the securities from us at the public offering price set forth in any applicable prospectus supplement or other prices pursuant to delayed delivery or other contracts providing for payment and delivery on a specified date in the future. Any delayed delivery contracts will be subject only to those conditions set forth in any applicable prospectus supplement, and any applicable prospectus supplement will set forth any commissions we pay for solicitation of these delayed delivery contracts.

Each underwriter, dealer and agent participating in the distribution of any offered securities that are issuable in bearer form will agree that it will not offer, sell, resell or deliver, directly or indirectly, offered securities in bearer form in the United States or to U.S. persons except as otherwise permitted by Treasury Regulations Section 1.163-5(c)(2)(i)(D).

Offered securities may also be offered and sold, if so indicated in any applicable prospectus supplement, in connection with a remarketing upon their purchase, in accordance with a redemption or repayment pursuant to their terms, or otherwise, by one or more remarketing firms, acting as principals for their own accounts or as agents for us or the selling securityholders. Any remarketing firm will be identified and the terms of its agreements, if any, with us, and its compensation will be described in any applicable prospectus supplement.

We and the selling securityholders may sell equity securities in an offering “at the market,” as defined in Rule 415 under the Securities Act. A post-effective amendment to this Registration Statement will be filed to identify the underwriter(s) at the time of the take-down for “at the market” offerings.

Agents, underwriters and other third parties described above may be entitled under relevant underwriting or other agreements to indemnification by us or the selling securityholders against certain civil liabilities under the Securities Act, or to contribution with respect to payments which the agents, underwriters or other third parties may be required to make in respect thereof. Agents, underwriters and such other third parties may be customers of, engage in transactions with, or perform services for us or the selling securityholders in the ordinary course of business.

### **LEGAL MATTERS**

The validity of the securities offered by this prospectus will be passed upon for us by Keating Muething & Klekamp PLL, Cincinnati, Ohio.

### **EXPERTS**

The consolidated financial statements and the related financial statement schedule, incorporated in this prospectus by reference from the Company’s Annual Report on Form 10-K for the year ended December 31,

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2018 and the effectiveness of AtriCure's internal control over financial reporting have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in its reports, which are incorporated by reference herein. Such financial statements and financial statement schedule have been so incorporated in reliance upon the reports of such firm given upon its authority as experts in accounting and auditing.

# AtriCure

**3,977,273 shares of common stock**

*Joint Book-Running Managers*

**J.P. Morgan**

**Piper Sandler**

*Co-Managers*

**Canaccord Genuity**

**Needham & Company**

**Stifel**

**SVB Leerink BTIG**

May 11, 2020