SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 8-K

CURRENT REPORT

PURSUANT TO SECTION 13 OR 15(d) of the SECURITIES EXCHANGE ACT OF 1934

Date of Report (Date of earliest event reported): July 20, 2006

AtriCure, Inc.

(Exact name of registrant as specified in charter)

Delaware	**000-51470**	**34-1940305**
(State or other jurisdiction of incorporation)	**(Commission File Number)**	**(IRS Employer Identification No.)**

6033 Schumacher Park Drive **West Chester, OH**	**45069**
(Address of principal executive offices)	**(Zip Code)**

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

Not Applicable

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 8.01. Other Events.

On July 20, 2006, we issued a press release announcing that we have received FDA 510(k) clearance for our Isolator Transpolar Pen System for pacing, sensing, stimulating, and recording during the evaluation of cardiac arrythmias in addition to its currently FDA-cleared use for the ablation of cardiac tissues. We also announced the release of our new Isolator Transpolar open clamp.

A copy of the press release is being filed as Exhibit 99.1 to this Form 8-K and is incorporated herein by reference in its entirety.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

No.	Description
99.1	Press Release of AtriCure, Inc. dated as of July 20, 2006.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

ATRICURE, INC.

By: /s/ Thomas J. Etergino
Thomas J. Etergino
Vice President and Chief Financial Officer

Dated: July 20, 2006

EXHIBIT LIST

No.	Description
99.1	Press Release of AtriCure, Inc. dated as of July 20, 2006.

Exhibit 99.1

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Press Release

AtriCure Receives FDA 510(k) Clearance for Multifunctional Isolator™ Transpolar ™ Pen System and Releases New Isolator Transpolar Open Clamp

WEST CHESTER, Ohio, July 20, 2006 — AtriCure, Inc. (Nasdaq: ATRC), a medical device company focused on developing, manufacturing and selling innovative surgical devices, announced today that it has received Food and Drug Administration (FDA) 510(k) clearance for its Isolator Transpolar Pen System (Pen) for pacing, sensing, stimulating, and recording during the evaluation of cardiac arrhythmias in addition to its currently FDA-cleared use for the ablation of cardiac tissues. The AtriCure Pen is the only bipolar radiofrequency (RF) device that is cleared for this broad range of indications.

The new capabilities of this multifunctional Pen allow physicians to identify potential trigger areas on the heart that could cause cardiac arrhythmias. Additionally, physicians may ablate these targeted cardiac triggers and directly evaluate the effectiveness of the ablation, all with the same device. The multifunctional system includes specialized electrophysiology accessories that enable physicians to toggle between each function.

Separately, the Company announced the release of its new Isolator Transpolar open clamp, which leverages the design enhancements of the Isolator minimally invasive system released during the first quarter of 2006. This new open clamp features a design that improves the surgeon’s access to key anatomical structures, simplifies the ablation procedure and provides superior tactile feedback to the user. The clamp currently has clearance from the FDA for the ablation of soft tissues in general, thoracic and other non-cardiac related surgical procedures.

Building on the foundation of success in more than 25,000 cases worldwide, the new open clamp utilizes AtriCure’s proprietary, automated ablation algorithm and further reinforces AtriCure’s market leadership position in surgical ablation devices. These devices deliver energy tailored to the biophysics of the tissue being ablated and are currently being evaluated in ongoing FDA clinical trials for the treatment of atrial fibrillation.

The first case with the new Isolator Transpolar System was conducted on June 28, 2006 by Patrick M. McCarthy, M.D., Chief, Division of Cardiothoracic Surgery at Northwestern Memorial Hospital in Chicago, IL. “My experiences with the new Isolator open clamp have been very encouraging. The new design makes the system easier to position around structures and the ablation lines are much more visible which assists in completing a successful ablation procedure,” said Dr. McCarthy.

Dave Drachman, President and CEO, said, “The clearance of our multifunctional Pen and the release of our new open clamp represents our commitment to superior clinical outcomes through innovation. We believe the expanded indications for the Pen will drive adoption in both the open and minimally invasive markets, while the benefits of the new open clamp will further strengthen our market position. These innovative products represent important steps in our mission to improve human life through the treatment of patients who suffer from AF.”

About AtriCure, Inc.

AtriCure, Inc. is a medical device company focused on developing, manufacturing and selling innovative surgical devices to create precise lesions, or scars, in soft and cardiac tissues. Medical journals have described the adoption by leading cardiothoracic surgeons of the AtriCure, Inc. bipolar ablation system as a standard treatment alternative during open-heart surgical procedures to safely, rapidly and reliably create lesions in cardiac, or heart, tissue to block the abnormal electrical impulses that cause atrial fibrillation, a rapid, irregular quivering of the upper chambers of the heart.

This press release contains “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements include statements that address activities, events or developments that AtriCure expects, believes or anticipates will or may occur in the future, such as earnings estimates, other predictions of financial performance, launches by AtriCure of new products and market acceptance of AtriCure’s products. Forward-looking statements are based on AtriCure’s experience and perception of current conditions, trends, expected future developments and other factors it believes are appropriate under the circumstances and are subject to numerous risks and uncertainties, many of which are beyond AtriCure’s control. 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, 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. AtriCure does not guarantee any forward-looking statement, and actual results may differ materially from those projected. AtriCure undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future events or otherwise.