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): September 9, 2005

AtriCure, Inc.

(Exact name of registrant as specified in charter)

Delaware (State or other jurisdiction of incorporation)

000-51470 (Commission File Number)

34-1940305 (IRS Employer Identification No.)

6033 Schumacher Park Drive West Chester, OH (Address of principal executive offices)

45069 (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 2.02. Results of Operations and Financial Condition.

On September 9, 2005, AtriCure, Inc. issued a press release and is holding a conference call regarding its financial results for the second quarter of fiscal year 2005 ended June 30, 2005. A copy of the press release is furnished as Exhibit 99.1 to this Form 8-K and is incorporated herein by reference.

The information in this Form 8-K is being furnished and shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that Section. The information in this Form 8-K shall not be incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Exchange Act, except as expressly set forth by specific reference in any such filing.

Item 9.01. Financial Statements and Exhibits.

(c) Exhibits. The following exhibit is filed pursuant to Item 601 of Regulation S-K:

No. Description	l
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99.1 Press Release of AtriCure, Inc. dated as of September 9, 2005.

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: September 9, 2005

EXHIBIT LIST

No. Description

99.1 Press Release of AtriCure, Inc. dated as of September 9, 2005.



Contacts:

AtriCure, Inc.

Thomas Etergino Chief Financial Officer 513-755-4561 tetergino@atricure.com The Ruth Group

Stephanie Carrington / Nick Laudico (investors) (646) 536-7017 / 7030 scarrington@theruthgroup.com nlaudico@theruthgroup.com

Jason Rando (media) (646) 536-7025 jrando@theruthgroup.com

Press Release

AtriCure Reports Second Quarter 2005 Financial Results

Business Highlights

- Generated quarterly revenue of \$7.7 million, up 50.9% year-over-year
- Gross margins increased 140 basis points to 74.4% from 73.0% in second quarter 2004
- Completed Enable Medical Corporation acquisition for \$7.0 million
- Raised gross proceeds of \$49.8 million in August initial public offering

WEST CHESTER, Ohio – September 9, 2005 – AtriCure, Inc. (Nasdaq:ATRC), a medical device company focused on developing, manufacturing and selling innovative surgical devices, announced today financial results for the second quarter ended June 30, 2005.

Second quarter 2005 total revenues were \$7.7 million, a 50.9% increase over total revenues of \$5.1 million for the second quarter of 2004 and up 3.1% from \$7.5 million reported in the first quarter of 2005. Second quarter revenues from domestic open-heart procedures represented 72% of total revenues, revenues from minimally invasive sole therapy products represented 21% and revenues from outside the United States represented 7%. Comparisons between the second quarter and first quarter 2005 were impacted by the unusually strong first quarter. A combination of new distributors outside the US and the release of new minimally invasive sole-therapy products resulted in a series of stocking orders which favorably impacted quarter one results.

Gross profit for the second quarter 2005 was \$5.8 million with a gross margin of 74.4%, compared with a gross profit of \$3.7 million with a gross margin of 73.0% for the second quarter 2004. Gross profit for the first quarter of 2005 was \$5.6 million with a gross margin of 74.4%.

Research and development expenses were \$2.0 million for the second quarter 2005, compared with \$768,000 for the second quarter 2004. The year-over-year increase is primarily attributable to recruitment of additional full-time engineers, the expansion of product development activities and the expansion of clinical trials.

Selling, general and administrative expenses were \$5.1 million for the second quarter 2005, compared with \$3.2 million for the second quarter 2004. The year-over-year increase is attributable primarily to increased headcount and higher facilities-related charges.

The Company reported net loss available to shareholders for the three months ended June 30, 2005 of \$2.3 million, or \$1.24 per share. On a pro forma basis assuming that the acquisition of Enable Medical Corporation had occurred on January 1, 2005 and conversion of all AtriCure's 6,012,020 shares of preferred stock into 6,012,020 shares of common stock occurred on January 1, 2005, second quarter 2005 net loss available to shareholders was \$1.1 million. On a basic and fully diluted basis, giving effect to the recently issued common shares from the initial public offering, pro forma net loss per share was \$0.09.

In August 2005, AtriCure completed an initial public offering of 4,150,000 common shares at \$12 per share, for gross proceeds of \$49.8 million.

In conjunction with the closing of the initial public offering, AtriCure completed the acquisition of Enable Medical Corporation for a total purchase price of \$7.0 million. Enable Medical was the sole supplier of all AtriCure's disposable products. AtriCure believes this acquisition will secure its product supply during an accelerated period of growth, increase its gross margins, shorten its product cycles and enhance its engineering capabilities.

David Drachman, President and Chief Executive Officer, said, "We are pleased with our second quarter results, which illustrate the increased surgeon adoption of our bipolar ablation system. AtriCure has established itself as the market leader in open-heart procedures to treat atrial fibrillation with a 50% U.S. market share. At the same time, we are cultivating additional investigational relationships with key opinion leaders and providing continued education to broaden awareness. Our RESTORE-SR clinical trial for use of our bipolar ablation system in elective, open-heart procedures to treat AF is continuing patient enrollment. We expect to begin enrolling patients in the feasibility phase of our clinical study for the use of our system as a sole-therapy, minimally invasive procedure to treat AF in the fourth quarter of 2005. With the recently completed Enable acquisition, we have integrated the manufacturing of our Isolator handpieces into our core business."

AtriCure will host a conference call today at 9:00 am EDT to discuss second quarter 2005 results. A live Web cast of the conference call will be available online from the investor relations page of AtriCure's corporate Web site at www.atricure.com. The dial-in numbers are (800) 561-2813 for domestic callers, and (617) 614-3529 for international callers. The passcode for both is 73067109. The recording of the conference call will remain available on AtriCure's Web site through October 7, 2005. A telephonic replay of the call will be available until September 23, 2005. The replay dial-in numbers are (888) 286-8010 for domestic callers and (617) 801-6888 for international callers. Please use reservation code 66068484.

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 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 manufactures 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.

AtriCure, Inc. Condensed Statement of Operations (unaudited)

	Three months	Three months ended June 30,	
	2005	2004	
Revenues	\$ 7,730,420	\$ 5,124,518	
Cost of revenues (a)	1,978,129	1,385,301	
Gross profit	5,752,291	3,739,217	
Expenses:			
Research and development expenses (a)	1,970,558	767,616	
Selling, general and administrative expenses	5,143,086	3,195,505	
Total expenses	7,113,644	3,963,121	
Loss from operations	(1,361,353)	(223,904)	
Preferred stock interest expense	976,293	976,292	
Other interest income (expense), net	(5,192)	26,515	
Net loss available to shareholders	\$(2,342,838)	\$(1,173,681)	
Basic and diluted loss per share	\$ (1.24)	\$ (0.65)	
Weighted average shares outstanding:			
Basic and diluted	1,888,079	1,805,842	
Pro forma basic and diluted loss per share	\$ (0.30)	\$ (0.15)	
Pro forma weighted average shares outstanding:			
Basic and diluted (b)	7,900,099	7,817,862	
(a) Includes the following expenses resulting from transactions with related parties:	# 4 co 4 to 5	# 4 222 622	
Cost of revenues	\$ 1,694,486	\$ 1,232,808	
Research and development expenses	\$ <i>679</i> ,583	\$ 215,819	

Pro forma weighted average shares has been adjusted to give effect to the conversion of all of our outstanding shares of redeemable preferred stock into

shares of common stock.

AtriCure, Inc. Condensed Statement of Operations (unaudited)

	Six months er	nded June 30,
	2005	2004
Revenues	\$15,228,179	\$ 8,926,876
Cost of revenues (a)	3,897,641	2,475,343
Gross profit	11,330,538	6,451,533
Expenses:		
Research and development expenses (a)	3,707,394	1,751,580
Selling, general and administrative expenses	10,395,184	6,107,014
Total expenses	14,102,578	7,858,594
Loss from operations	(2,772,040)	(1,407,061)
Preferred stock interest expense	1,952,585	1,952,584
Other interest income, net	15,609	55,583
Net loss available to shareholders	\$ (4,709,016)	\$(3,304,062)
Basic and diluted loss per share	\$ (2.50)	\$ (1.83)
Weighted average shares outstanding:		
Basic and diluted	1,884,837	1,805,842
Pro forma basic and diluted loss per share (b)	\$ (0.60)	\$ (0.42)
Pro forma weighted average shares outstanding:		
Basic and diluted (b)	7,896,857	7,817,862
(a) Includes the following expenses resulting from transactions with related parties:		
Cost of revenues	\$ 3,315,956	\$ 2,519,289
Research and development expenses	\$ 1,062,218	\$ 598,454

Pro forma weighted average shares has been adjusted to give effect to the conversion of all of our outstanding shares of redeemable preferred stock into

shares of common stock.

AtriCure, Inc. **Condensed Balance Sheets** (unaudited)

	June 30, 2005	December 31, 2004
Assets		
Current assets:		
Cash & cash equivalents	\$ 1,090,680	\$ 5,175,177
Accounts receivable, net	4,205,195	3,520,621
Inventory	1,552,774	1,087,408
Prepaid expenses	191,987	112,740
Advance payment for acquisition of company	500,000	0
Total current assets	7,540,636	9,895,946
Property and equipment-net	2,673,431	2,410,051
Deferred offering costs	2,083,934	412,005
Other assets	216,056	12,618
Total assets	\$ 12,514,057	\$ 12,730,620
Liabilities and shareholder's deficit		
Current liabilities		
Accounts payable (a)	\$ 1,203,950	\$ 733,444
Commissions payable	823,704	791,639
Accrued liabilities	3,238,589	1,780,690
Total current liabilities	5,266,243	3,305,773
Redeemable preferred stock:		
Preferred stock, \$0.001 par value; designated Series A, 2,182,521 shares authorized issued and outstanding as of June 30, 2005 and December 31, 2004 respectively	8,381,363	7,979,396
Preferred stock, \$0.001 par value; designated Series B, 4,059,720 shares authorized; 3,829,499 issued and outstanding as of June 30, 2005 and December 31, 2004 respectively	30,345,397	28,776,745
	20 726 760	26.756.1.41
Total redeemable preferred stock	38,726,760	36,756,141
Shareholders' deficit:		
Common stock, \$0.001 par value, 10,526,315 shares authorized, 1,896,784 and 1,880,169 shares issued and	1 007	1 000
outstanding as of June 30, 2005 and December 31, 2004, respectively	1,897	1,880
Additional paid-in capital	3,618,734	3,281,447
Unearned compensation Accumulated deficit	(739,515) (34,360,062)	(981,612)
Total shareholders' deficit	(31,478,946)	(27,331,294)
Total liabilities and shareholders' deficit	\$ 12,514,057	\$ 12,730,620
(a) Includes the following liabilities resulting from transactions with related parties:		
Accounts payable	\$ 1,088,458	\$ 434,869

AtriCure, Inc. Condensed Statement of Cash Flow

	Six months en	Six months ended June 30,	
	2005	2004	
Cash flows from operating activities:			
Net loss	\$(4,709,016)	\$ (3,304,062)	
Adjustments to reconcile net loss to net cash used in operating activities			
Depreciation	620,643	407,875	
Amortization of deferred financing costs	12,227	0	
Stock compensation	344,785	540,297	
Preferred stock interest	1,952,585	1,952,584	
Changes in assets & liabilities:			
Accounts receivable	(684,574)	(1,577,162)	
Inventory	(465,366)	(372,789)	
Prepaid expenses	(79,247)	96,487	
Other assets (a)	128,523	(7,132)	
Accounts payable	470,506	663,549	
Commissions payable	32,065	161,386	
Accrued liabilities (a)	(342,137)	182,542	
Net cash used in operating activities	(2,719,006)	(1,256,425)	
Cash flows from investing activities:			
Purchase of property & equipment	(884,023)	(837,272)	
Advance payments for acquisition of company	(500,000)	(037,272)	
Advance payments for acquisition of company	(300,000)		
Net cash used in investing activities	(1,384,023)	(837,272)	
Cash flow from financing activities:	40.500		
Proceeds from stock option exercise	18,532	0	
Net increase (decrease) in cash and cash equivalents	(4,084,497)	(2,093,697)	
Cash and cash equivalents - beginning of period	5,175,177	10,399,338	
Cash and cash equivalents - end of period	\$ 1,090,680	\$ 8,305,641	
Supplemental cash flow information:			
Warrants issued in connection with line of credit	216,083		

⁽a) Cash flows from operating activities excludes non-cash costs related to the initial public offering in other assets and accrued liabilities