## FORM 4

obligations may continue. See Instruction 1(b).

## UNITED STATES SECURITIES AND EXCHANGE COMMISSION

| Washington, D.C. 20049 |  |
|------------------------|--|
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|                        |  |
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| Check this box if no longer subject to<br>Section 16. Form 4 or Form 5 | STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP |
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Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

| 1. Name and Address of Reporting Person*  Kennedy Patricia J  (Last) (First) (Middle)  6217 CENTRE PARK DRIVE |  |      |               |  |                                   | Susuer Name and Ticker or Trading Symbol     AtriCure, Inc. [ ATRC ]      Date of Earliest Transaction (Month/Day/Year)     02/17/2012 |  |      |  |                                    |          |  |       |       |  | all application of the contraction of the contracti | icable)<br>or<br>r (give title<br>)                               |  | Owner<br>(specify   |
|---|--|------|---------------|--|-----------------------------------|--|--|------|--|------------------------------------|----------|--|-------|-------|--|--|---|--|---|
| (Street) WEST CHESTE  | R OF   | H 4  | 15069<br>Zip) |  | 4. If                             | 4. If Amendment, Date of Original Filed (Month/Day/Year)   |  |      |  |                                    |          |  |       |       | 6. Individual or Joint/Group Filing (Check Applicable Line)  X Form filed by One Reporting Person Form filed by More than One Reporting Person |  |   |  |   |
|   |  | Tabl | e I - Nor     | n-Deriv                                    | ative                             | Se   | curitie  | s Ac | quired,  | Dis                                | posed o  | f, or  | Ben   | efici | ally O   | wne  | d   |  |   |
|   |  |      |               | 2. Transaction<br>Date<br>(Month/Day/Year) |                                   | ar)  | 2A. Deemed<br>Execution Date,<br>if any<br>(Month/Day/Year)                  |      | Code   | Transaction Dis<br>Code (Instr. 5) |          | Securities Acquired (A<br>posed Of (D) (Instr. 3,  |       |       | nd S   | Securities<br>Beneficially   |   | 6. Ownership<br>Form: Direct<br>(D) or Indirect<br>(I) (Instr. 4)  | 7. Nature<br>of Indirect<br>Beneficial<br>Ownership<br>(Instr. 4) |
|   |  |      |               |  |                                   |  |  | Code | v  | Amount                             | (A<br>(I | A) or<br>D)  | Price | ,  т  | Transaction(s)<br>(Instr. 3 and 4)   |  |   | (111341.4)   |   |
| Common Stock  |  |      |               | 02/17/2012                                 |                                   |  |  |      | F  |                                    | 546(1    | )  | D \$9 |       | 95   | 16   | 5,725   | D  |   |
|   | Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities) |      |               |  |                                   |  |  |      |  |                                    |          |  |       |       |  |  |   |  |   |
| 1. Title of<br>Derivative<br>Security<br>(Instr. 3)   | rivative Conversion Date Execution Date, curity or Exercise (Month/Day/Year) if any  |      | Date,         |  | Transaction<br>Code (Instr.<br>8) |  | of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) |      | Date Exercisable and xpiration Date Month/Day/Year)  Tate Expiration Xercisable Date |                                    |          | 7. Title and Amount of Securities Underlying Derivative Security (Instr. and 4)  Amount of Numbe of Shares |       |       | itive<br>ity<br>5)   | 9. Number o<br>derivative<br>Securities<br>Beneficially<br>Owned<br>Following<br>Reported<br>Transaction<br>(Instr. 4)   | Ownership<br>Form:<br>Direct (D)<br>or Indirect<br>(I) (Instr. 4) | 11. Nature<br>of Indirect<br>Beneficial<br>Ownership<br>(Instr. 4) |   |

## **Explanation of Responses:**

1. The Reporting Person has elected to transfer these shares to the Company to satisfy the tax withholding obligation incurred upon the vesting and release of shares previously acquired pursuant to a Restricted Stock Award.

> /s/ Julie A Piton as Attorneyin-Fact for Patricia Kennedy

02/21/2012

\*\* Signature of Reporting Person

Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

- $^{\star}$  If the form is filed by more than one reporting person, see Instruction 4 (b)(v).
- \*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.