

ARRHYTHMIA RESEARCH TECHNOLOGY INC /DE/  
Form 424B3  
May 29, 2014

Filed Pursuant to Rule 424(b)(3)  
Registration No. 333-150044

Prospectus Supplement No. 1 to Reoffer Prospectus  
of  
ARRHYTHMIA RESEARCH TECHNOLOGY, INC.  
397,000 Shares of Common Stock, par value \$0.01 per share  
Issuable Pursuant to the 2001 Stock Option Plan

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This Prospectus Supplement dated May 29, 2014 (this “Supplement”), supplements the reoffer prospectus filed as part of the Registration Statement on Form S-8 filed by Arrhythmia Research Technology, Inc. (the “Company”) with the Securities and Exchange Commission (the “SEC”) on April 2, 2008 (the “Prospectus”), relating to the resale by certain of our stockholders of shares of our common stock, \$0.01 par value (the “Shares”) they received from us pursuant to the Company’s 2001 Stock Option Plan (the “2001 Plan”). Some of these stockholders may be considered our “affiliates” as defined in Rule 405 under the Securities Act of 1933, as amended (the “Securities Act”).

You should read this Supplement in conjunction with the Prospectus. This Supplement is qualified by reference to the Prospectus, except to the extent the information in this Supplement supersedes the information contained in the Prospectus.

Our common stock is listed on the NYSE MKT under the symbol “HRT.” The closing price of the Company’s common stock as reported on the NYSE MKT on May 28, 2014 was \$6.30 per share.

You should carefully read and consider the risk factors under Item 1A beginning on page 5 of our Annual Report on Form 10-K for the year ended December 31, 2013 for risks relating to investment in the Company’s securities. Neither the SEC nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of the Prospectus or this Supplement. Any representation to the contrary is a criminal offense.

The information set forth under the caption “Selling Stockholders” in the Prospectus is amended and restated in its entirety as set forth below and is provided for the primary purpose of updating the table of selling stockholders contained in the Prospectus.

#### SELLING STOCKHOLDERS

Shares may be acquired by certain employees, officers, directors and consultants to the Company who may be deemed affiliates of the Company or who hold “control stock” issued to such persons pursuant to the terms of the 2001 Plan. Executive officers, directors or others who are considered to be affiliates of the Company who acquire common stock under the 2001 Plan may be added to the list of selling securityholders and their number of shares to

be sold may be increased or decreased by the use of future prospectus supplements filed with the SEC. Each selling securityholder will receive all of the net proceeds from any sale from time to time of his Shares subject of this Supplement in conjunction with the Prospectus. The inclusion of the Shares in the table below does not constitute a commitment to sell any such Shares.

The information in the following table is as of the date of this Supplement.

| Name and Position with the Company (1)                                 | Number of Shares Owned (2) | Number of Shares Eligible to be Offered by the Stockholder (3) | Number of Shares Owned After the Offering (4) |
|--|----------------------------|--|---|
| Jason R. Chambers<br>Director  | 132,543 <sup>(5)</sup>     | 7,500  | 125,043                                       |
| Paul F. Walter, M.D.<br>Director                                       | 95,555 <sup>(5)</sup>      | 7,500  | 88,055  |
| E. P. Marinos<br>Director  | 85,448 <sup>(5)</sup>      | 7,500  | 77,948  |
| Salvatore Emma, Jr.<br>President, Chief Executive Officer and Director | 60,010 <sup>(6)</sup>      | 5,000  | 55,010  |

(1)The address of all persons listed above is c/o Arrhythmia Research Technology, Inc., 25 Sawyer Passway, Fitchburg, MA 01420.

(2)For each securityholder, includes (i) Shares owned as of the date of this Supplement; (ii) Shares underlying options granted under the 2001 Plan or the 2010 Equity Incentive Plan (the “2010 Plan”) whether or not exercisable within sixty (60) days of the date hereof; and (iii) Shares awarded under the 2010 Plan.

(3) Represents the number of Shares underlying options granted to such person and outstanding under the 2001 Plan (both vested and unvested) as of the date of this Supplement.

(4) Assumes the sale of all Shares eligible to be sold under the 2001 Plan but does not give effect to the sale of shares of common stock eligible to be sold under the 2010 Plan.

(5) Includes 18,000 shares of common stock issuable upon exercise of vested options issued pursuant to the 2001 Plan (6,000 shares) and the 2010 Plan (12,000 shares); 9,500 shares of common stock issuable upon exercise of unvested options issued pursuant to the 2001 Plan (1,500 shares) and the 2010 Plan (8,000 shares); and 6,000 shares of common stock awarded under the 2010 Plan. The unvested options vest 1,500 shares on January 4, 2015; 2,000 shares on May 19, 2015 and each year thereafter until fully vested; and 2,000 shares on June 3, 2015 and each year thereafter until fully vested.

(6) Includes 19,000 shares of common stock issuable upon exercise of vested options issued pursuant to the 2001 Plan (4,000 shares) and 2010 Plan (15,000 shares); and 21,000 shares of common stock issuable upon exercise of unvested options issued pursuant to the 2001 Plan (1,000 shares) and the 2010 Plan (20,000 shares). The unvested options vest 1,000 shares each on January 4, 2015 and January 4, 2016; 2,000 shares on May 19, 2015 and each year thereafter until fully vested; 2,000 shares on June 3, 2015 and each year thereafter until fully vested; and 3,000 shares on April 1, 2015 and each year thereafter until fully vested.

This Supplement is dated May 29, 2014