Cardiovascular Systems Inc Form POS AM August 27, 2015

As filed with the Securities and Exchange Commission on August 27, 2015

Registration No. 333-177327 UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

POST-EFFECTIVE AMENDMENT NO. 1 TO

Form S-3

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

CARDIOVASCULAR SYSTEMS, INC.

(Exact name of registrant as specified in its charter)No. 41-1698056DelawareNo. 41-1698056(State or other jurisdiction(I.R.S. Employerof incorporation or organization)Identification Number)1225 Old Highway 8 NWSt. Paul, Minnesota 55112-6416(651) 259-1600(Address, including zip code, and telephone number, including area code, of principal executive offices)

Laurence L. Betterley Chief Financial Officer Cardiovascular Systems, Inc. 1225 Old Highway 8 NW St. Paul, Minnesota 55112-6416 (651) 259-1600 (Name, address, including zip code, and telephone number, including area code, of agent for service)

Please send copies of all communications to: Robert K. Ranum, Esq. Fredrikson & Byron, P.A. 200 South Sixth Street, Suite 4000 Minneapolis, MN 55402 Fax: (612) 492-7077

Approximate date of commencement of proposed sale to the public: Not applicable.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box: o

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box: o

Edgar Filing: Cardiovascular Systems Inc - Form POS AM

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box. o

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box. o

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check on

Large accelerated filer þ	Accelerated filer o	Non-accelerated filer o	Smaller reporting
			company o

(Do not check if a smaller reporting

company)

EXPLANATORY NOTE

On October 14, 2011, Cardiovascular Systems, Inc. (the "Company") filed with the Securities and Exchange Commission a registration statement on Form S-3, Registration No. 333-177327 (the "Registration Statement"), registering 328,988 shares of Company common stock, \$0.001 par value per share, consisting of:

161,747 shares of common stock that were issued to certain selling stockholders upon the prior exercise of warrants to purchase Company common stock, which warrants were originally issued in July 2006; and 167,241 shares of common stock that were to be issued to certain selling stockholders upon the future exercise of warrants to purchase our common stock, which warrants were originally issued in February 2009.

The Registration Statement was filed pursuant to the terms of a registration rights agreement between the Company and the selling stockholders, among others, and the Registration Statement was declared effective on October 27, 2011. Subsequent to the effective date, the registration rights agreement terminated as to the selling stockholders. Pursuant to the undertaking of the Company as required by Item 512(a)(3) of Regulation S-K, the Company is filing this Post-Effective Amendment No. 1 (the "Post-Effective Amendment") to the Registration Statement to deregister all common stock of the Company registered on the Registration Statement that remains unsold under such Registration Statement.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Post-Effective Amendment No.1 to the Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of St. Paul, State of Minnesota, on the 27th day of August, 2015.

CARDIOVASCULAR SYSTEMS, INC. Dated: August 27, 2015 /s/ David L. Martin By: David L. Martin President and Chief Executive Officer Pursuant to the requirements of the Securities Act of 1933, this Post-Effective Amendment No. 1 to the Registration Statement has been signed by the following persons in the capacities indicated on August 27, 2015: Signature Title President, Chief Executive Officer and Director (principal executive /s/ David L. Martin officer) David L. Martin /s/ Laurence L. Betterley Chief Financial Officer (principal financial and accounting officer) Laurence L. Betterley /s/ Scott Bartos Director Scott Bartos * Director Brent G. Blackey * Director Edward Brown /s/ William E. Cohn, M.D. Director William E. Cohn, M.D. * Director Augustine Lawlor * Director Leslie L. Trigg

Director

/s/ Scott Ward Scott Ward * /s/ Laurence L. Betterley Laurence L. Betterley, as attorney-in-fact

By: