

22,885,855 Shares of Common Stock

This prospectus supplement relates to the prospectus dated January 26, 2015, as supplemented by prospectus supplement no. 1 dated March 17, 2015, prospectus supplement no. 2 dated March 17, 2015, prospectus supplement no. 3 dated March 31, 2015, prospectus supplement no. 4 dated April 17, 2015, prospectus supplement no. 5 dated May 7, 2015 and prospectus supplement no. 6 dated May 8, 2015, which permits the resale of up to 15,556,398 outstanding shares of our common stock, and 7,329,457 shares of our common stock issuable upon the exercise of outstanding warrants, by the selling securityholders identified in the prospectus, as amended and supplemented from time to time. We will pay the expenses of registering the shares, but we are not selling any shares of common stock in this offering and therefore will not receive any proceeds from this offering. We will, however, receive the exercise price of the warrants if and when the warrants are exercised for cash by the securityholders.

This prospectus supplement is being filed to update, amend, and supplement the information previously included in the prospectus with the information contained in our Current Report on Form 8-K filed with the Securities and Exchange Commission on June 8, 2015 (the "8-K"). Accordingly, we have attached the 8-K to this prospectus supplement. You should read this prospectus supplement together with the prospectus, which is to be delivered with this prospectus supplement.

Our common stock is traded in the over-the-counter market and is quoted on the OTC Markets and the OTC Bulletin Board under the symbol MRIC. On June 4, 2015, the last reported sale price of our common stock was \$1.05 per share.

We are an "emerging growth company" under the federal securities laws and will be subject to reduced public company reporting requirements. Investing in our common stock involves risk. See "Risk Factors" beginning on page 6 of the prospectus, as amended and supplemented by the "Risk Factors" beginning on page 20 of our Quarterly Report on Form 10-Q for the quarter ended March 31, 2015, which is included in prospectus supplement no. 5, to read about factors you should consider before buying shares of our common stock.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus or this prospectus supplement. Any representation to the contrary is a criminal offense.

The date of this prospectus supplement is June 8, 2015.

UNITED STATES 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): June 8, 2015 (June 4, 2015)

MRI INTERVENTIONS, INC. (Exact name of registrant as specified in its charter)

Delaware (State or Other Jurisdiction of Incorporation) 000-54575 (Commission File Number) 58-2394628 (I.R.S. Employer Identification No.)

5 Musick Irvine, CA (Address of principal executive offices)

92618 (Zip Code)

(949) 900-6833

(Registrant's telephone number, including area code)

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

Check the appropriate box 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 5.02. Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers.

The annual meeting of the stockholders of MRI Interventions, Inc. (the "Company") was held on June 4, 2015 (the "Annual Meeting"). At the Annual Meeting, the Company's stockholders voted to approve the adoption of the MRI Interventions, Inc. Amended and Restated 2013 Incentive Compensation Plan (the "Plan"). The Company's Board of Directors had previously adopted and approved the Plan, subject to stockholder approval. A description of the terms and conditions of the Plan is set forth in the Company's 2015 Proxy Statement, filed with the Securities and Exchange Commission on April 17, 2015 (the "Proxy Statement") under "Proposal 4 — Approval of Amended and Restated 2013 Incentive Compensation Plan," and such description is incorporated herein by reference. The descriptions set forth herein and in the Proxy Statement are summaries and are qualified in their entirety by the full text of the Plan, a copy of which is incorporated by reference to Exhibit 10.1 to this Current Report on Form 8-K.

Item 5.03. Amendments to Articles of Incorporation or Bylaws; Change in Fiscal Year.

At the Annual Meeting, the Company's stockholders approved an amendment (the "Amendment") to the Company's Amended and Restated Certificate of Incorporation to increase the number of authorized shares of the Company's common stock to 200,000,000 shares. The change in the authorized number of shares of the Company's Common Stock was effected when the Amendment was filed with the Secretary of State of the State of Delaware on June 5, 2015 and the Amendment was effective as of such date. The description of the Amendment set forth herein and in the Proxy Statement are summaries and are qualified in their entirety by the full text of the Amendment, a copy of which is incorporated by reference to Exhibit 3.1 to this Current Report on Form 8-K.

Item 5.07. Submission of Matters to a Vote of Security Holders.

At the Annual Meeting, the Company's stockholders considered and voted on the following proposals:

- (1) The election of nine directors to serve until the 2016 annual meeting of stockholders;
- (2) The ratification of the appointment of Cherry Bekaert LLP as the Company's independent registered public accounting firm for the year ending December 31, 2015;
- (3) The approval of an amendment to the Company's Amended and Restated Certificate of Incorporation; and
- (4) The approval of the Company's Amended and Restated 2013 Incentive Compensation Plan.

The final voting results for each proposal are described below. For beneficial owners holding the Company's common stock at a bank or broker institution, a "broker non-vote" occurred if the owner failed to give voting instructions, and the bank or broker was otherwise restricted from voting on the owner's behalf.

1. <u>Election of Directors</u>. The following named persons were elected as directors of the Company to serve until the 2016 annual meeting of stockholders or until their successors have been duly elected and qualified or until their earlier death, resignation, disqualification or removal. The votes were cast as follows:

Nominee	For	Withheld	Broker Non-Votes
Pascal E.R. Girin	35,366,886	91,936	20,243,499
Francis P. Grillo	35,366,886	91,936	20,243,499
Kimble L. Jenkins	35,342,537	116,285	20,243,499
Charles E. Koob	35,354,139	104,683	20,243,499
Philip A. Pizzo	35,353,994	104,828	20,243,499
Timothy T. Richards	35,367,031	91,791	20,243,499
Andrew K. Rooke	33,683,680	1,775,142	20,243,499
Maria Sainz	35,366,886	91,936	20,243,499
John N. Spencer, Jr.	35,364,139	94,683	20,243,499

2. <u>Ratification of Independent Registered Public Accounting Firm</u>. The stockholders ratified the appointment of Cherry Bekaert LLP as the Company's independent registered public accounting firm for the year ending December 31, 2015. The votes were cast as follows:

For	Against	Abstain	
55,493,845	195,697	12,779	

3. <u>Approval of an amendment to the Company's Amended and Restated Certificate of Incorporation</u>. The stockholders approved the amendment to the Company's Amended and Restated Certificate of Incorporation. The votes were cast as follows:

For	Against	Abstain	
53,252,346	1,684,935	765,040	

4. <u>Approval of the Company's Amended and Restated 2013 Incentive Compensation Plan</u>. The stockholders approved the Company's Amended and Restated 2013 Incentive Compensation Plan as follows:

For	Against	Abstain	Broker Non-Vote
32,940,976	1,712,748	805,098	20,243,499

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

See Exhibit Index immediately following signature page.

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.

MRI INTERVENTIONS, INC.

By: /s/ Harold A. Hurwitz

Harold A. Hurwitz Chief Financial Officer

Date: June 8, 2015

EXHIBIT INDEX

Exhibit No.	Description
3.1	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of MRI Interventions, Inc.
10.1	MRI Interventions, Inc. 2013 Amended and Restated Incentive Compensation Plan (incorporated by reference to Appendix A to MRI Interventions, Inc. definitive proxy statement on Schedule 14A filed with the Securities and Exchange Commission on April 17, 2015)

CERTIFICATE OF AMENDMENT TO AMENDED AND RESTATED CERTIFICATE OF INCORPORATION OF MRI INTERVENTIONS, INC.

(Pursuant to Section 242 of the General Corporation Law of the State of Delaware)

MRI INTERVENTIONS, INC., a corporation duly organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the "<u>DGCL</u>"), DOES HEREBY CERTIFY:

FIRST: That the name of the corporation is MRI Interventions, Inc.

SECOND: That the Amended and Restated Certificate of Incorporation of MRI Interventions, Inc. is amended by deleting Section A of Article IV thereof and substituting the following in its place:

A. <u>Authorized Stock</u>. The total number of shares which the Corporation shall have authority to issue is Two Hundred Twenty Five Million (225,000,000), consisting of Two Hundred Million (200,000,000) shares of Common Stock, par value \$0.01 per share (the "<u>Common Stock</u>"), and Twenty Five Million (25,000,000) shares of Preferred Stock, par value \$0.01 per share (the "<u>Preferred Stock</u>").

THIRD: That this amendment to the Amended and Restated Certificate of Incorporation of MRI Interventions, Inc. has been duly adopted in accordance with Section 242 of the DGCL.

IN WITNESS WHEREOF, MRI Interventions, Inc. has caused this Certificate of Amendment to be signed by its duly authorized officer on this 4th day of June, 2015.

MRI INTERVENTIONS, INC.

By: /s/ Francis P. Grillo Francis P. Grillo

Chief Executive Officer