



MRI Interventions, Inc.

29,356,679 Shares of Common Stock

This prospectus supplement relates to the prospectus dated January 29, 2016, as supplemented by prospectus supplement no. 1 dated March 22, 2016, prospectus supplement no. 2 dated March 25, 2016, prospectus supplement no. 3 dated April 4, 2016, prospectus supplement no. 4 dated April 25, 2016, prospectus supplement no. 5 dated May 6, 2016 and prospectus supplement no. 6 dated June 6, 2016, which permits the resale of up to 16,309,270 outstanding shares of our common stock, and 13,047,409 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 9, 2016 (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 OTCQB Marketplace and the OTC Bulletin Board under the symbol MRIC. On June 7, 2016, the last reported sale price of our common stock was \$0.25 per share.

We are an "emerging growth company" under the federal securities laws and are 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 21 of our Annual Report on Form 10-K for the year ended December 31, 2015, which is included in prospectus supplement no. 2, 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 9, 2016.

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 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 9, 2016 (June 7, 2016)**

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
*(IRS Employer
Identification No.)*

**5 Musick
Irvine, CA**
(Address of principal 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 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))
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Item 5.07. Submission of Matters to a Vote of Security Holders.

The annual meeting of the stockholders of MRI Interventions, Inc. (the “Company”) was held on June 7, 2016 (the “Annual Meeting”). 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 2017 annual meeting of stockholders; and
- (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, 2016.

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. **Election of Directors.** The following named persons were elected as directors of the Company to serve until the 2017 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:

	<u>For</u>	<u>Withheld</u>	<u>Broker Non-Votes</u>
Pascal E.R. Girin	35,989,230	4,074,084	25,308,421
Francis P. Grillo	39,999,640	63,674	25,308,421
Kimble L. Jenkins	36,027,569	4,035,745	25,308,421
Charles K. Koob	35,988,230	4,075,084	25,308,421
Philip A. Pizzo	35,993,230	4,070,084	25,308,421
Timothy T. Richards	35,992,230	4,071,084	25,308,421
Andrew K. Rooke	35,989,230	4,074,084	25,308,421
Maria Sainz	36,026,230	4,037,084	25,308,421
John N. Spencer, Jr.	35,953,230	4,110,084	25,308,421

2. **Ratification of Independent Registered Public Accounting Firm.** The stockholders ratified the appointment of Cherry Bekaert LLP as the Company’s independent registered public accounting firm for the year ending December 31, 2016. The votes were cast as follows:

<u>For</u>	<u>Against</u>	<u>Abstain</u>
65,204,380	68,469	98,886

Item 7.01 Regulation FD Disclosure

On June 9, 2016, the Company posted two investor presentations to its website at <http://ir.stockpr.com/mriinterventions/investor-presentation>. Copies of the investor presentations are being furnished herewith as Exhibits 99.1 and 99.2. The Company may use the investor presentations from time-to-time in conversations with analysts, investors and others.

The information in Item 7.01 of this Form 8-K, as well as Exhibits 99.1 and 99.2 attached hereto, shall not be deemed “filed” for the purposes of Section 18 of the Exchange Act, nor shall it be deemed incorporated by reference in any filing under the Securities Act, or the Exchange Act, except as shall be expressly set forth by specific reference in such a filing.

The information contained in Exhibits 99.1 and 99.2 is summary information that is intended to be considered in the context of the Company’s filings with the Securities and Exchange Commission (“SEC”) and other public announcements that the Company may make from time-to-time, by press release or otherwise. The Company undertakes no duty or obligation to publicly update or revise the information contained in this report, although it may do so from time-to-time as its management believes is warranted. Any such updating may be made through the filing or other reports or documents with the SEC, through press releases or other public disclosure.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

The following exhibits are furnished herewith:

Exhibit 99.1 MRI Interventions, Inc. Investor Presentation dated June 9, 2016

Exhibit 99.2 LD Micro Invitational Investor Presentation dated June 9, 2016

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 9, 2016

INDEX TO EXHIBITS

<u>Exhibit Number</u>	<u>Description</u>
Exhibit 99.1	MRI Interventions, Inc. Investor Presentation dated June 9, 2016
Exhibit 99.2	LD Micro Invitational Investor Presentation dated June 9, 2016
