



MRI Interventions, Inc.

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, prospectus supplement no. 6 dated May 8, 2015, prospectus supplement no. 7 dated June 8, 2015, prospectus supplement no. 8 dated August 6, 2015, prospectus supplement no. 9 dated November 13, 2015 and prospectus supplement no. 10 dated December 15, 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 December 21, 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 December 18, 2015, the last reported sale price of our common stock was \$0.40 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 September 30, 2015, which is included in prospectus supplement no. 9, 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 December 21, 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: December 21, 2015 (December 18, 2015)
(Date of earliest event reported)

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

Delaware
(State or other jurisdiction
of incorporation or organization)

000-54575
(Commission File
Number)

58-2394628
(I.R.S. Employer
Identification No.)

5 Musick
Irvine, CA 92618
(Address of principal executive offices, zip code)

(949) 900-6833
(Registrant's telephone number, including area code)

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:

- 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 3.02. Unregistered Sales of Equity Securities.

On December 21, 2015, MRI Interventions, Inc. (the “Company”) completed its previously announced private placement of common stock and warrants (the “Financing Transaction”), pursuant to the terms of a Securities Purchase Agreement dated December 15, 2015 (the “Purchase Agreement”), by and among the Company and certain investors (collectively, the “Investors”). At the closings (December 18, 2015 and December 21, 2015), in accordance with the terms and conditions of the Purchase Agreement, the Company sold to the Investors an aggregate of 16,309,270 units (the “Units”), with each unit consisting of: (i) one share of the Company’s common stock; (ii) series A warrants (“Series A Warrants”), which permit each Investor to purchase 0.40 share of common stock; and (iii) series B warrants (“Series B Warrants”), which permit each Investor to purchase 0.30 share of common stock.

In connection with the sale of the Units, the Company received aggregate gross proceeds of approximately \$5.3 million, before deducting placement agents’ fees of \$380,155 and estimated offering expenses. In addition, the placement agents for the Financing Transaction received, in the aggregate, warrants (“Placement Agent Warrants”) to purchase up to approximately 1.6 million shares of common stock.

In the Financing Transaction, the Units were issued and sold to “accredited investors” (as defined by Rule 501 under the Securities Act of 1933, as amended (the “Securities Act”)) in reliance upon exemptions from registration under the Securities Act afforded by Section 4(a)(2) of the Securities Act and Rule 506 of Regulation D promulgated thereunder and corresponding provisions of state securities laws. The Purchase Agreement contains representations to support the Company’s reasonable belief that the Investors had access to information concerning the Company’s operations and financial condition, that the Investors did not acquire the securities with a view to the distribution thereof in the absence of an effective registration statement or an applicable exemption from registration, and that the Investors are accredited investors. The Company relied upon the representations made by the Investors pursuant to the Purchase Agreement in determining that such exemptions were available. The Company intends to file a Form D in accordance with the requirements of Regulation D under the Securities Act in connection with the sale of the Units.

The following is a brief summary of the Purchase Agreement, the Registration Rights Agreement, the Series A Warrants and the Series B Warrants, which are qualified in their entirety by reference to the full text of such documents.

Purchase Agreement

The Purchase Agreement contains representations and warranties by the Company and the Investors and covenants of the Company and the Investors (including indemnification from the Company in the event of breaches of its representations and warranties), which the Company believes are customary for transactions of this type.

Registration Rights Agreement

In connection with the Financing Transaction, the Company also entered into a Registration Rights Agreement dated as of December 18, 2015 with each of the Investors, pursuant to which the Company is required to prepare and file a registration statement (the “Registration Statement”) with the SEC under the Securities Act covering the resale of the shares of common stock to be issued to the Investors under the Purchase Agreement, as well as the shares of common stock underlying the Series A Warrants, Series B Warrants and the Placement Agent Warrants. The Company will be required to file such Registration Statement on or before January 17, 2016 (the “Filing Deadline”). The Company will be required to use its best efforts to have the Registration Statement declared effective as soon as practicable. Pursuant to the Registration Rights Agreement, if: (i) the Registration Statement is not filed with the SEC on or prior to the Filing Deadline; (ii) the Registration Statement is not declared effective by the SEC on or prior to March 2, 2016 (or April 18, 2016 if the SEC determines to review the

Registration Statement); or (iii) the Company fails to continuously maintain the effectiveness of the Registration Statement (with certain permitted exceptions), the Company will incur certain liquidated damages to the Investors. The Registration Rights Agreement also contains mutual indemnifications by the Company and each Investor, which the Company believes are customary for transactions of this type.

Warrants

The Series A Warrants are exercisable, in full or in part, at any time prior to December 18, 2020, at an exercise price of \$0.4058 per share. The Series A Warrants provide for certain adjustments that may be made to the exercise price and the number of shares issuable upon exercise due to future corporate events or otherwise. In the case of certain fundamental transactions affecting the Company, the holders of Series A Warrants, upon exercise of such warrants after such fundamental transaction, have the right to receive, in lieu of shares of the Company's common stock, the same amount and kind of securities, cash or property that such holder would have been entitled to receive upon the occurrence of the fundamental transaction, had the Series A Warrants been exercised immediately prior to such fundamental transaction. The Series A Warrants contain a "cashless exercise" feature that allows the holders to exercise the warrants without a cash payment to the Company upon the terms set forth in the Series A Warrants.

The Series B Warrants are exercisable, in full or in part, at any time prior to December 18, 2020, at an exercise price of \$0.5275 per share. The Series B Warrants provide for certain adjustments that may be made to the exercise price and the number of shares issuable upon exercise due to future corporate events or otherwise. In the case of certain fundamental transactions affecting the Company, the holders of Series B Warrants, upon exercise of such warrants after such fundamental transaction, have the right to receive, in lieu of shares of the Company's common stock, the same amount and kind of securities, cash or property that such holder would have been entitled to receive upon the occurrence of the fundamental transaction, had the Series B Warrants been exercised immediately prior to such fundamental transaction. The Series B Warrants contain a "cashless exercise" feature that allows the holders to exercise the warrants without a cash payment to the Company upon the terms set forth in the Series B Warrants.

The Placement Agent Warrants have the same terms and conditions as the Series A Warrants, except that the Placement Agent Warrants are exercisable in full or in part, at any time prior to May 18, 2023.

The foregoing description of the terms and conditions of the Purchase Agreement, the Registration Rights Agreement, the Series A Warrants and the Series B Warrants is only a summary and is qualified in its entirety by the full text of the Purchase Agreement, the Registration Rights Agreement, the Series A Warrants and the Series B Warrants, the forms of which were previously filed as Exhibits 10.1, 10.2, 4.1 and 4.2, respectively, to the Company's Current Report on Form 8-K filed with the SEC on December 15, 2015.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

See Exhibit Index immediately following signature page.

SIGNATURE

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: December 21, 2015

EXHIBIT INDEX

Exhibit No.	Description
4.1 ⁽¹⁾	Form of Series A Warrant
4.2 ⁽²⁾	Form of Series B Warrant
10.1 ⁽³⁾	Form of Securities Purchase Agreement by and between the Company and the Investors
10.2 ⁽⁴⁾	Form of Registration Rights Agreement by and between the Company and the Investors

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- (1) Filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on December 15, 2015 and incorporated herein by reference.
- (2) Filed as Exhibit 4.2 to the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on December 15, 2015 and incorporated herein by reference.
- (3) Filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on December 15, 2015 and incorporated herein by reference.
- (4) Filed as Exhibit 10.2 to the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on December 15, 2015 and incorporated herein by reference.