



UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

DIVISION OF
CORPORATION FINANCE

Mail Stop 3030

July 28, 2016

Via E-mail

Harold A. Hurwitz
Chief Financial Officer
MRI Interventions, Inc.
5 Musick
Irvine, California 92618

**Re: MRI Interventions, Inc.
Amendment No. 2 to Registration Statement on Form S-1
Filed July 25, 2016
File No. 333-211647**

Dear Mr. Hurwitz:

We have limited our review of your amended registration statement to those issues we have addressed in our comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

Prospectus

1. Please revise your prospectus to include all information except that which may be excluded pursuant to Rule 430A. For example, we note that you continue to omit from your prospectus cover the number of common shares underlying the warrants, and you omit from your prospectus cover the number of securities subject to the over-allotment option and the number of securities to be issued as underwriters' compensation. Also note that your preliminary prospectus should include disclosure, such as "use of proceeds" information, based on a bona fide estimate of the public offering price. See Section II.A.7 of Release 33-6714 (May 27, 1987), and note the requirements of Regulation S-K Item 512(i).

Note Conversion, page 3

2. It appears that you entered into an agreement for investors to participate in this offering before the effective date of this registration statement. Please provide us your analysis of how the timing of this agreement is consistent with Section 5 of the Securities Act. Cite in your response all authority on which you rely.

Exhibit 5.1

3. It is unclear whether this exhibit addresses the common stock issuable upon the exercise of the underwriter warrants. Please file a revised opinion that clearly addresses all securities in the fee table on the facing page of this registration statement.
4. Please file an opinion that addresses whether the rights are binding obligations of the registrant under the law of the jurisdiction governing your warrant agreement. We note that exhibit 5.1 is limited to the Delaware General Corporation Law, but your warrant agreements filed as exhibits 4.5 and 4.6 appear to be governed by the laws of the State of New York.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Act of 1933 and all applicable Securities Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Notwithstanding our comments, in the event you request acceleration of the effective date of the pending registration statement, please provide a written statement from the company acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please refer to Rules 460 and 461 regarding requests for acceleration. We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed

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public offering of the securities specified in the above registration statement. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

Please contact Heather Percival at (202) 551-3498 or me at (202) 551-3617 with any questions.

Sincerely,

/s/ Russell Mancuso

Russell Mancuso
Branch Chief
Office of Electronics and Machinery

cc: Richard F. Mattern, Esq.
Bass Berry & Sims PLC