



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

DIVISION OF
CORPORATION FINANCE

Mail Stop 3030

September 21, 2018

Via E-mail

Dean Irwin
Chief Executive Officer
Ra Medical Systems, Inc.
2070 Las Palmas Drive
Carlsbad, CA 92011

**Re: Ra Medical Systems, Inc.
Amendment No. 2 to Registration Statement on Form S-1
Filed September 17, 2018
File No. 333-226191**

Dear Mr. Irwin:

We have reviewed your amended registration statement and have the following 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.

Overview, page 1

1. We note your added disclosure and revisions in this section. Please revise to disclose the difference between the medical community's use of the term atherectomy and the FDA's definition. In this regard, please clarify what "prespecified improvement in luminal patency" means so that an investor without a medical background will be able to understand the distinction.

We may be subject to enforcement action . . . , page 21

2. We note your added disclosure. Please revise to disclose the basis for your determination in the penultimate sentence of this risk factor, and clarify the potential scope of your liability as a result of the risks disclosed. For example, your disclosure should indicate

the potential liability you face and the incidence of the marketing material that is subject to the claim referenced in this section.

Clinical Studies and Patient Data, page 101

3. Given your added disclosure here and on page 1 regarding your intended pursuit of an investigational device exemption for another indication, please revise to disclose your anticipated timeframe for this action, including any specific milestones and the anticipated costs of performing the disclosed studies.

You may contact Eric Atallah at (202) 551-3663 or Kevin Kuhar, Accounting Branch Chief, at (202) 551-3662 if you have questions regarding comments on the financial statements and related matters. Please contact Caleb French at (202) 551-6947 or Heather Percival, Senior Attorney, at (202) 551-3498 with any other questions.

Sincerely,

/s/ Heather Percival for

Amanda Ravitz
Assistant Director
Office of Electronics and Machinery

cc: Martin J. Waters, Esq.
Wilson Sonsini Goodrich & Rosati, P.C.