



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 3030

December 15, 2015

Via E-mail

John McDermott
Chairman and Chief Executive Officer
Endologix, Inc.
2 Musick
Irvine, CA 92618

**Re: Endologix, Inc.
Registration Statement on Form S-4
Filed November 18, 2015
File No. 333-208081**

Dear Mr. McDermott:

We have limited our review of your 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.

What will I receive for my shares of TriVascular ..., page 2

1. We note the lengthy, complicated formulas and references to "implied value" and "overall value of the merger." Please revise to disclose clearly what investors will be receiving on a per-share basis. While we note from your disclosure that the consideration to be issued will continue to fluctuate based on the variables to which you refer, it is unclear from your disclosure how investors can assess the current value of the consideration they are offered. For example, under a reasonable range of scenarios, what will each investor receive on a per-share basis?

Background of the Merger, page 64

2. We note your references throughout this section to multiple presentations, materials and analyses provided or presented by J.P. Morgan and Piper Jaffray. We also note your

disclosure on page 73 regarding Piper Jaffray's presentation of its fairness opinion to your board of directors. Please revise to provide the disclosure required by Item 4(b) to Form S-4 and file the report, opinion or appraisal as an exhibit, as required by Item 21(c) to Form S-4. Please also provide us with copies of any board books prepared by the financial advisors and related to the transaction.

Note 3. Calculation of Preliminary Merger Consideration and Preliminary Allocation, page 139

3. We see that the estimated number of shares of Endologix common stock to be issued to TriVascular shareholders in connection with the merger is based upon a ratio of .61. Please revise to disclose how you determined the exchange ratio based on the merger consideration discussed on pages 3, 11 and 109.

Note 4. Notes to Unaudited Pro Forma Condensed Combined Balance Sheet, page 142

4. Reference is made to adjustment 4(c). In light of the significant amount of goodwill you plan to record in connection with this acquisition, please include a qualitative discussion of the factors that make up the goodwill to be recorded. We refer you to the guidance in FASB ASC 805-30-50-1.

Note 5. Notes to Unaudited Pro Forma Condensed Combined Statements ..., page 144

5. Reference is made to footnote 5(a) on page 144. We note that you have allocated \$62.7 million of the purchase price to developed technology. Please revise to disclose the following:
 - The nature of the developed technology;
 - How you determined the estimated fair value assigned; and
 - The estimated useful lives of the developed technology.
6. In this regard, we note you estimate that \$41.8 million of the purchase price represents in-process research and development. Please revise to disclose how you determined the fair value assigned to in-process research and development. Please also describe the current status of the project(s) and the nature and timing of the remaining efforts and related cash requirements necessary to develop the incomplete technology into a commercially viable product.

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 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.

You may contact Julie Sherman at (202) 551-3640 or Brian Cascio, Branch Chief, at (202) 551-3676 if you have questions regarding comments on the financial statements and related matters. Please contact Brian Soares at (202) 551-3580 or Geoffrey Kruczek, Senior Attorney, at (202) 551-3641 with any other questions.

Sincerely,

/s/ Geoffrey Kruczek for

Amanda Ravitz
Assistant Director
Office of Electronics and Machinery

cc: Michael L. Lawhead, Esq.
Stradling Yocca Carlson & Rauth