



DIVISION OF
CORPORATION FINANCE

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

October 13, 2011

Via E-mail

Gordon E. Nye
President and Chief Executive Officer
ZELTIQ Aesthetics, Inc.
4698 Willow Road, Suite 100
Pleasanton, CA 94588

**Re: ZELTIQ Aesthetics, Inc.
Registration Statement on Form S-1
Amended October 7, 2011, October 11, 2011 and October 13, 2011
File No. 333-175514**

Dear Mr. Nye:

We have reviewed your 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.

Cover Page

1. Information on the cover page should be limited to information that is key to an investment decision. Please tell us why you have included the information about the stockholder that has expressed interest in purchasing your common stock in the offering. Further, please ensure that you have provided appropriate disclosure of this transaction and related lockup throughout your prospectus including the summary, the risk factors section, the selling stockholder section and the related party transactions section.

Our Business, page 1

2. We note your added disclosure regarding the other published clinical studies conducted by you and independent physicians. Based on the information you have previously provided, it is unclear why you believe it is appropriate to disclose that 92% of patients

achieved noticeable aesthetic benefits. Please advise or revise. Also, please clarify whether each study involved more than 100 patients or the studies collectively involved more than 100 patients.

Stock-Based Incentive Awards, page 110

3. We note your added disclosure on page 112. Please revise the second bullet point to disclose the “internal and external factors” that you used to determine the number of options granted to Mr. Heagy and Ms. Newman.

Principal and Selling Stockholders, page 126

4. We note that your added disclosure in the footnotes to the selling stockholders table assumes the exercise of options to purchase shares. Please expand your disclosure to identify when and how those options were acquired by each selling stockholder and disclose the exercise price of the options to be exercised.

Index to the Financial Statements, page F-1

Report of Independent Registered Public Accounting Firm, page F-2

5. Prior to going effective the audit report should be signed and unrestricted.

Exhibit 5.1

6. We note your response to our prior comment 2. It is unclear why, in this firm commitment offering, you are permitting the selling stockholders to exercise their options “prior to completion of the offering” rather than prior to effectiveness. Please revise or advise.
7. Refer to the fifth paragraph of the opinion. Confirm that you will file an updated opinion prior to the time of effectiveness confirming that the shares are duly authorized.

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 Tara Harkins at 202-551-3639 or Kevin Vaughn, Accounting Branch Chief, at 202-551-3643 if you have questions regarding comments on the financial statements and related matters. Please contact Jay Mumford at 202-551-3637 or Daniel Morris, Special Counsel, at 202-551-3314 with any other questions.

Sincerely,

/s/ Daniel Morris

Amanda Ravitz
Assistant Director

cc (via e-mail): Jeffery C. Thacker, Esq.