



DIVISION OF
CORPORATION FINANCE

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

January 18, 2013

Via E-mail

Panna L. Sharma
Chief Executive Officer
Cancer Genetics, Inc.
201 Route 17 North, 2nd Floor
Rutherford, NJ 07070

**Re: Cancer Genetics, Inc.
Amended Registration Statement on Form S-1
Filed January 8, 2013
File No. 333-178836**

Dear Mr. Sharma:

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.

General

1. We note your response to comment 2 of our letter dated December 21, 2012. Please advise us whether you will file the final, executed articles of incorporation with the state of Delaware prior to effectiveness.

Undertakings, page II-9

2. Please revise to provide the undertaking required by Item 512(a)(5)(ii) of Regulation S-K.

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 Joanna Lam, Staff Accountant, at (202) 551-3476 or John Archfield, Senior Staff Accountant, at (202) 551-3315 if you have questions regarding comments on the financial statements and related matters. Please contact Jim Lopez, Legal Branch Chief, at (202) 551-3536 with any other questions.

Sincerely,

/s/ James Lopez (for)

John Reynolds
Assistant Director