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

DIVISION OF
CORPORATION FINANCE

August 22, 2014

Via E-mail
Herm Rosenman
Chief Financial Officer
Natera, Inc.
201 Industrial Road, Suite 410
San Carlos, California 94070

Re: Natera, Inc.
Amendment No. 1 to Draft Registration Statement on Form S-1
Submitted August 12, 2014
CIK No. 0001604821

Dear Mr. Rosenman:

We have reviewed your draft 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 providing the requested information and either submitting an amended draft registration statement or publicly filing your registration statement on EDGAR. 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 the information you provide in response to these comments and your amended draft registration statement or filed registration statement, we may have additional comments.

General

1. We partially reissue comment 6 from our letter dated June 5, 2014. We note the various articles of support provided with your response. Please cite the specific source(s) provided as supplemental support for your factual assertions within the prospectus.

Prospectus Summary, page 1

2. We note your response to comment 7 in our letter dated June 5, 2014 and we reissue, in part, the comment. Where you have used technical terms, please provide the definitions the first time such terms are used. For example purposes only, we note "single reaction mixture" on page 1 and "free-floating DNA" on page 3. Also, please clarify your disclosure regarding your product so that an investor who is not familiar with your

industry can understand how you operate. For example purposes only, please clarify the following:

- Please clarify what it means to "amplify the number of copies of DNA in a sample" and why this is necessary to run your bioinformatics algorithm;
- What is a primer set and how is it used in running your tests;
- How your NIPT is different from the first-generation NIPTs which use the counting method.

Use of Proceeds, page 51

3. We note your response to comment 11 from our letter dated June 5, 2014 and that you have retained discretion in your use of proceeds to include, among other things, investments in research and development and acquisitions. Please revise the disclosure in this section to provide more specificity regarding your use of proceeds, as required by Item 504 of Regulation S-K. In addition, specifically discuss the contingencies which could result in changes to your planned use of proceeds and discuss the potential alternative uses. Otherwise, please delete the reservation regarding the use of proceeds from this section and the risk factor on page 48. Refer to Instruction 7 to Item 504 of Regulation S-K.

Management's Discussion and Analysis of Financial Condition and Results of Operations, page 61

Overview, page 61

4. We note your response to comment 14 from our letter dated June 5, 2014 and we reissue, in part, the comment. We note the related revised disclosure on page 62 that your target market is a much smaller subset of the total 150 million covered lives market. Given that the 150 million covered lives market includes many individuals for whom your tests would be inappropriate, such as men, please explain the relevance of the number of covered lives to your operations and how management uses the number to gauge your market opportunity.

5. Please revise the disclosure on page 63 to disclose the percent of revenues attributable to each of your largest laboratory distribution partners in the interim financial period for 2014.

Components of the Results of Operations, page 63

Revenues, page 63

6. We note your disclosures on page 63 and your response to prior comment 17. Please disclose the percentage of revenues recognized on a cash basis for each period presented. Please also further expand your disclosures here or in the results of operations discussion on pages 71 through 74 to better convey the proportion of tests accessioned for which you ultimately recognized revenue. For example, please disclose the number of total tests and the number of Panorama tests accessioned in each period presented as compared to the number of each for which you recognized revenue in the same reporting period that the test was performed. Please also disclose for each period presented the number of total tests and the number of Panorama tests for which revenue was recognized related to tests performed in earlier periods.

Business, page 82

Our development pipeline beyond prenatal testing, page 89

7. Please expand the disclosure in this section to generally describe the status of the other products in your pipeline such as your CNV detection and whether significant expense would be required to bring these products to market. See Item 101(c)(1)(ii) of Regulation S-K.

Transition to Cloud-Based Distribution of our tests to Expand Patient Access, page 94

8. We note your response to comment 26 in our letter dated June 19, 2014 and we reissue, in part, the comment. Aside from approval by the FDA, please revise to please explain whether there will be additional effort or capital expenditures required in order to bring the cloud-based model to market.

9. We note your disclosure on page 17 that currently, all blood samples that are necessary to perform your tests, except for your non-invasive prenatal paternity test, are sent to your laboratory in San Carlos. Where appropriate, please clarify whether your cloud-based distribution model will be driven by your "proprietary polymerase chain reaction" or whether other labs will use their own LDTs in connection with your bioinformatics algorithm. In other words, please clarify what is being distributed in your cloud-based model and how it will be distributed.

Distribution Channels, page 101

10. We note that you have removed the disclosure regarding Quest and Progenity from page 102. Please revise to provide the disclosure required by Item 101(c)(1)(vii) of Regulation S-K.

Key Relationships, page 103

Clinical Laboratory Partners, page 103

11. We note your response to comment 30 in our letter dated June 5, 2014 and we reissue the comment. Although your response notes that you are not substantially dependent upon your agreement with Quest, your risk factor on page 14 states that the loss of your laboratory partners could impair your ability to market Panorama or generate future revenues. We also note that you hope to provide your algorithm to Quest in connection with its own LDT. Given your risk factor disclosure, please further explain why you are not substantially dependent upon your agreement with Quest. Your response should take into account qualitative and quantitative factors which may indicate whether or not the agreement is material to investors.

Competition, page 104

12. We note your response to comment 31 from our letter dated June 5, 2014 and we reissue the comment. Please discuss your competitive position within your industry. See Item 101(c)(1)(x) of Regulation S-K. To this extent, we note your revised disclosure that your biggest distributor, Quest Diagnostics, will soon begin distributing a competitor's product.

Management, page 120

13. We note your response to comment 34 from our letter dated June 5, 2014 and we reissue the comment with respect to Mr. Driscol. Please clarify his principal position(s) of employment and the dates such positions were held from July 2012 to the present.

Financial Statements

Note 2. Summary of Significant Accounting Policies

Revenue Recognition, page F-9

14. We note your revisions on page F-35 of your interim financial statements in response to prior comment 42. Please also similarly revise your revenue recognition policy in the notes to your audited financial statements on page F-9.

Exhibits

15. We reissue comment 45 from our letter dated June 5, 2014. We note that Exhibit 10.5 includes Exhibit B to Exhibit A, which states it is attached, when nothing is attached and we also note nothing is included in Exhibits D and E. With regard to Exhibit 10.6, we are unable to locate Exhibit A, D and F.

If you intend to respond to these comments with an amended draft registration statement, please submit it and any associated correspondence in accordance with the guidance we provide in the Division's October 11, 2012 announcement on the SEC website at http://www.sec.gov/divisions/corpfin/cfannouncements/drsfilingprocedures101512.htm.

Please keep in mind that we may publicly post filing review correspondence in accordance with our December 1, 2011 policy (http://www.sec.gov/divisions/corpfin/cfannouncements/edgarcorrespondence.htm). If you intend to use Rule 83 (17 CFR 200.83) to request confidential treatment of information in the correspondence you submit on EDGAR, please properly mark that information in each of your confidential submissions to us so we do not repeat or refer to that information in our comment letters to you.

You may contact Suying Li at (202) 551-3335 or Rufus Decker at (202) 551-3769 if you have questions regarding comments on the financial statements and related matters. Please contact Adam F. Turk at (202) 551-3657 or Pamela Howell at (202) 551-3357 with any other questions.

Sincerely,

/s/ Pamela Howell
for

John Reynolds
Assistant Director

cc: Robert V. Gunderson, Jr., Esq.
Gunderson Dettmer Stough Villeneuve Franklin & Hachigian, LLP