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

DIVISION OF
CORPORATION FINANCE

June 5, 2014

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

Re: Natera, Inc.
Draft Registration Statement on Form S-1
Submitted May 14, 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. Please supplementally provide us with copies of all written communications, as defined in Rule 405 under the Securities Act, that you, or anyone authorized to do so on your behalf, present to potential investors in reliance on Section 5(d) of the Securities Act, whether or not they retain copies of the communications. Similarly, please supplementally provide us with any research reports about you that are published or distributed in reliance upon Section 2(a)(3) of the Securities Act of 1933 added by Section 105(a) of the Jumpstart Our Business Startups Act by any broker or dealer that is participating or will participate in your offering.

2. We will process your amendments without price ranges. As the price range you select will affect disclosure in several sections of the filing, we will need sufficient time to process your amendments once a price range is included and the material information

now appearing blank throughout the document has been provided. Please understand that the effect of the price range on disclosure throughout the document may cause us to raise issues in areas not previously commented on.

3. Prior to effectiveness, please have a representative from the exchange upon which you intend to list your shares call the staff to confirm that your securities have been approved for listing or file the certification on EDGAR.

4. Prior to the effectiveness of the registration statement, please arrange to have FINRA call us or provide us with a letter indicating that FINRA has cleared the underwriting arrangements for the offering.

5. Please provide us with copies of any graphics, maps, photographs, and related captions or other artwork including logos that you intend to use in the prospectus.

6. Please provide support for your factual assertions throughout the prospectus, citing in the prospectus to the source(s) of such information and providing copies supplementally. To expedite our review, please provide us with copies of each source, clearly marked to highlight the portion or section that contains this information and cross-reference it to the appropriate part of the prospectus. For example purposes only, we note the following statements:

   - "Panorama demonstrated… less than 0.1% false positive rate for each syndrome, making it the most accurate NIPT available," page 75
   - "We have also demonstrated the ability to identify fetal sex more accurately than competing NIPTs," page 75
   - "In the United States in 2012, there were approximately 4 million births which included over 550,000 births resulting from pregnancies that were considered high-risk…," page 78
   - "While these tests provided a valuable addition to older diagnostic abnormalities, they generally offer varying levels of sensitivity and specificity…," page 79
   - "The technology that enabled mmPCR involves fundamental changes to the molecular processes of PCR…," page 80

Prospectus Summary, page 1

7. We note your Prospectus Summary and your Business section beginning on page 73 contain highly technical descriptions of your operations using industry-specific terms which may be difficult for investors to understand. Please substantially revise your prospectus so that investors who are not familiar with the molecular diagnostic industry can generally understand what you mean and how you conduct your business. See Rule

421(d) of Regulation C. While in some cases, the definition of technical or industry-specific terms is clarified later in the document, these terms should be defined the first time they are used. For example purposes only we note the following terms used in the Summary:

- Molecular assays;
- Common fetal aneuploidies;
- Primer sets;
- 22q11.2 deletion syndrome; and
- Proprietary polymerase chain reaction.

8. Please clarify what you mean by sensitivity, specificity and coverage and describe how these tests measure the performance of Panorama.

9. We note your statement that you have access to well over 150 million covered lives in the United States. Please tell us how you calculated your market access and revise the prospectus define "covered life." In addition, please clarify how this figure differs from the reference to payers with positive coverage representing more than 174 million covered lives as referenced on page 59.

10. Please revise the revenue growth figures on page 1 to also state the net losses for each period.

Use of Proceeds, page 51

11. We note your risk factor on page 45 regarding your broad discretion over the use of proceeds and your disclosure within this section that you have not provided a specific use for the proceeds of the offering. Please revise to provide a more specific use of proceeds or revise to discuss the principal reasons for the offering. See Item 504 of Regulation S-K. Also, because you have reserved the right to reallocate the proceeds of the offering, please revise to specifically discuss the contingencies which could result in changes to your planned use of proceeds and provide an overview of the potential alternative uses. Otherwise, please delete the reservation regarding the use of proceeds from this section and the risk factor. Refer to Instruction 7 to Item 504 of Regulation S-K.

Management's Discussion and Analysis of Financial Condition and Results of Operations, page 58

Overview, page 58

12. Please revise your overview section to describe the key performance indicators, including non-financial performance indicators, which management uses to assess your business. For example, we note your discussion regarding the number of Panorama tests performed. If the number of tests performed in a commercial setting is a key performance indicator, please identify it as such and explain how management uses it to

assess your business. Also, please describe any other key performance indicators management may use. Lastly, please revise this section to discuss the events, trends, and uncertainties that management views as most critical to your future revenues, financial position, liquidity, plan of operations, and results of operations, to the extent known and foreseeable. For guidance, please refer to Section III.B.1 of SEC Release No. Release No. 33-8350.

13. We note your statement on page 59 listing the payers which have positive NIPT coverage decisions. Please revise to clarify whether these positive NIPT decisions relate specifically to products you offer, and also whether you have any relationship with the payers named.

14. We note your statement that the payers with positive coverage decisions for NIPT represent more than 174 million covered lives. Please clarify what you mean by "covered lives." Also we note your statement within this section the NIPT procedures are reimbursed based on positive coverage decisions in high-risk pregnancies. Given that the relevant reimbursement decisions relate to high-risk pregnancies, please tell us the relevance of reporting the number of covered lives for insurance companies who have made a positive coverage decision. Alternatively please revise to delete this information.

15. We note your disclosure on page 90 that your direct sales business accounted for 47% of your total revenues. Please provide a discussion of your success in achieve third-party reimbursement for your direct sales.

Components of the Results of Operations, page 59

Revenues, page 59

16. In order to enhance an investor's understanding of your business and the composition of your accounts receivable balances, please expand your disclosures to include the following:

    a. Disclose the payor mix classifications and related aging of accounts receivable as of each balance sheet date. The aging schedule may be based on management's own reporting criteria (i.e. unbilled, less than 30 days, 30 to 60 days etc.) or some other reasonable presentation. At a minimum, the disclosure should indicate the past due amounts and a breakdown by payor classification (i.e. Medicaid, Self-pay, etc.). We would expect Self-pay to be separately classified from any other grouping. If your billing system does not have the capacity to provide an aging schedule of your receivables, please disclose that fact and clarify how this affects your ability to estimate your allowance for doubtful accounts.

    b. If you have amounts that are pending approval from third party payors (i.e. Medicaid Pending), please disclose the balances of such amounts, where they have been classified in your aging categories, and what payor classification they have been

grouped with. If amounts are classified outside of Self-pay, tell us why this classification is appropriate, and disclose the historical percentage of amounts that get reclassified into Self-pay.

17. Your disclosure states that 44% of your revenues in 2013 were recognized on a cash basis. Considering the significant percentage of revenues you recognize upon cash collection, it appears that investors could benefit from disclosure that conveys in some manner for each period presented your success rate in receiving payment for tests performed with a cash basis revenue recognition policy, along with the timing of payment receipt. Please revise your disclosure accordingly.

Results of Operations, page 67

Comparison of the Years Ended December 31, 2012 and 2013, page 67

18. You attribute the increases in your revenues and cost of product revenues over the reporting periods to the commercialization of Panorama. From 2012 to 2013, your revenues increased 287% and your cost of product revenues increased 234%, while the number of tests accessioned increased 567%. Please revise your disclosure to describe and quantify underlying material activities that generate revenue and cost variances between periods. Please ensure to quantify the effect of each causal factor that you cite for material changes in your financial statements. Your revised variance analysis should fully explain the changes between periods. Refer to Item 303 of Regulation S-K and SEC Release No. 33-8350.

Liquidity and Capital Resources, page 68

Senior Secured Term Loan, page 68

19. Please state whether you currently meet the requirements to draw upon the remaining $10 million term loan which is available to you until December 31, 2014.

Equipment Financing Facility, page 69

20. Please clarify how you determine the Prime Reference Rate for the purposes of this facility. Also, please disclose the actual interest rate on each financing as of a recent date.

Cash Flows, page 69

21. Please revise to clarify whether you have sufficient cash or other means to fund your operations for the next 12 months without the offering. Clearly disclose if you are dependent upon the offering.

Business, page 73

Proprietary technology drives our test performance and pipeline, page 74

22. We note your disclosure on page 83 that your mmPCR technology is sufficiently robust to be run in standard equipment. Given this, within this section please explain which element(s) of your technology are proprietary.

23. We note the figure on page 75; however, certain elements of the figure are unclear. In a caption or otherwise, please clarify what you mean by "copy number hypothesis" and "crossover sub-hypothesis." Also clarify how you generate these hypotheses. While your disclosure on page 74 states those hypotheses are generated by your bioinformatics algorithm, it is unclear if this is a separate algorithm from your maximum likelihood algorithm.

Panorama: applying our molecular technology and bioinformatics to prenatal diagnostics, page 75

24. We note your statement on page 76 that within one month of launching your microdeletions panel in March 2014, 75% of patients who ordered basic Panorama and had a form with the ability to order microdeletions also ordered screening for 22q11.2. Revise to state, if known, how many Panorama panels had the requisition form which allowed the ordering of the microdeletions panel.

25. We note your statement regarding the graph on page 76 which indicates the relative incidence of Down syndrome and genetic diseases caused by microdeletions screened for by Panorama varies with maternal age. Please revise to clarify whether Panorama, itself, tests for microdeletions or whether your microdeletions product is required in addition to the standard Panorama to test for this.

Transition to Cloud-Based Distribution of Our Tests to Expand Patient Access, page 83

26. Please expand upon your description of the status of your cloud-based model to explain the steps required in order to bring the cloud-based model to market. While we note you are in discussions with the FDA to offer the model to your commercial partners in the United States, the status of these discussions is unclear. Also, assuming the discussions with the FDA are successful, please explain whether there will be additional effort or capital expenditures required in order to bring the cloud-based model to market. See Item 101(c)(1)(ii) of Regulation S-K.

Publication, Presentations, and On-Going Clinical Trials, page 88

27. We note that you are participant in an international study designed such that the results could be used in a filing with the FDA if you decide to seek approval of Panorama as an

IVD. Please revise to explain the differences between an LDT and an IVD and why you would choose to seek approval of Panorama as an IVD.

Distribution Channels, page 89

28. We note your statement on page 90 that in many instances your laboratory partners are contractually obligated not to sell any competing products. Please revise this section to be more specific about which partners are obligated not to sell competing products given your disclosure on page 13 that Quest Diagnostics, your largest laboratory partner, is explicitly permitted to develop, commercialize, license and sell NIPTs developed by other companies.

Importance of Professional Societies and Patient Advocacy Groups, page 91

29. We note your disclosure on page 91 that you have a relationship with the International 22q11.2 Deletion Syndrome Foundation, Inc. Please revise to explain the nature of your relationship with this entity and the nature of any consideration which is provided in furtherance of this relationship.

Key Relationships, page 91

Clinical Laboratory Partners, page 91

30. Given that Quest Diagnostics accounts for 16% of your total revenue, and is one of two laboratories which account for roughly 51% of the sales for Panorama, please tell us what consideration you gave to filing the Quest Agreement pursuant to Item 601(b)(10) of Regulation S-K and to providing additional specific disclosure regarding the material terms of this agreement within this section. If you do not file the agreement, please explain why it is not material to investors. Provide similar analysis for Progenity Inc., which accounted for 12% of total revenues.

Competition, page 92

31. Please expand this section to describe your competitive position within your industry. See Item 101(c)(1)(x) of Regulation S-K.

Intellectual Property, page 94

32. We note that as of March 31, 2014 you had four issued U.S. Patents. Please clarify the importance of each patent to your operations and provide the specific expiration date of each. See Item 101(c)(1)(iv) of Regulation S-K.

Reimbursement, page 101

33. Please expand this section to explain whether there are existing CPT codes for any of your tests and the importance of having a CPT code for individual tests.

Management, page 104

34. Please clarify the principal occupations and employment during the previous five years for Messrs. Rosenman**,** Cozzens, Driscoll and Steuart.

Executive Compensation, page 110

35. We note the disclosure on page 110 to amended letter agreements with your named executive officers. Please file all employment agreements with your named executive officers as exhibits.

36. If compensation will change as a result of becoming a public company, please disclose the changes, if known.

Principal and Selling Stockholders, page 120

37. We note that you have provided beneficial ownership as of March 31, 2014. Please revise this section to provide the information as of the most recent practicable date or advise. See Item 403(a) and (b) of Regulation S-K.

38. Please provide a brief description of the nature of your relationship with each selling shareholder or provide a cross-reference to the section in the prospectus where such information might be found. See Item 507 of Regulation S-K.

39. Please disclose the control person(s) for each entity listed in the table.

40. Please clarify whether any of the overallotment will come from the selling shareholders. If so, consider adding a separate column reflecting the overallotment.

Financial Statements

Balance Sheets, page F-3

41. Please disclose the number of shares of common stock issued and outstanding on a pro forma basis.

Note 2. Summary of Significant Accounting Policies

Revenue Recognition, page F-9

42. Your disclosure on page 89 indicates that you distribute your products through direct sales and your laboratory partners. Please expand your revenue recognition policy disclosure to elaborate upon how each of the criteria outlined in SAB 104 specifically applies to each of your revenue streams.

Item 15. Recent Sales of Unregistered Securities, page II-2

43. Please disclose the persons or class of persons to whom the shares were sold, as required by Item 701(b) of Regulation S-K. In addition, please discuss the sophistication of the investors in the first footnote.

Exhibits

44. We note that many of your exhibits including your legality opinion will be filed by amendment. Please note we will need adequate time to review your exhibits prior to the effectiveness of the registration statement. If you intend to request confidential treatment for portions of any exhibits, please note that we will provide any comments on your confidential treatment request under separate cover. Please note that any comments on your application for confidential treatment will need to be addressed prior to the effectiveness of your registration statement.

45. Exhibits 10.5, 10.6 and 10.8 appear to be missing exhibits, schedules and/or attachments. Please refile these exhibits in their entirety or advise.

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