



DIVISION OF
CORPORATION FINANCE

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

April 21, 2015

Via E-mail

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

**Re: Natera, Inc.
Amendment No. 4 to Draft Registration Statement on Form S-1
Submitted April 15, 2015
CIK No. 0001604821**

Dear Mr. Rosenman:

We have reviewed your amended 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.

The Offering, page 9

1. Please revise the number of shares outstanding on page 10 as of the most recent practicable date, as you have done for the beneficial ownership disclosure.

Executive Compensation, page 126

2. We note the significant increase in compensation to your named executive officers due to the issuance of options. Please revise the narrative following the table to discuss in greater detail these option awards.

Herm Rosenman
Natera, Inc.
April 21, 2015
Page 2

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 Ronald E. Alper at (202) 551-3329 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