Registration No. 333-

As filed with the Securities and Exchange Commission on December 10, 2020

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

FORM S-1 REGISTRATION STATEMENT UNDER

THE SECURITIES ACT OF 1933

CERTARA, INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

7372 (Primary Standard Industrial Classification Code Number) **82-2180925** (I.R.S. Employer Identification Number)

100 Overlook Center, Suite 101 Princeton, New Jersey 08540 (609) 716-7900

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Richard M. Traynor Senior Vice President and General Counsel 100 Overlook Center, Suite 101 Princeton, New Jersey 08540 (609) 716-7900

(Name, address, including zip code, and telephone number, including area code, of agent for service)

William B. Brentani Simpson Thacher & Bartlett LLP 2475 Hanover Street Palo Alto, California 94304 Tel: (650) 251-5000 Fax: (650) 251-5002 With copies to:

Jason M. Licht Wesley C. Holmes Latham & Watkins LLP 555 Eleventh Street, NW — Suite 1000 Washington, D.C. 20004 Tel: (202) 637-2200 Fax: (202) 637-2201

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this registration statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. \boxtimes Registration No. 333-250182

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. \Box

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Accelerated filer Smaller reporting company Emerging growth company

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If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

CALCULATION OF REGISTRATION FEE

	Amount	Proposed Maximum	Proposed Maximum	
Title of Each Class of	to be	Offering Price Per	Aggregate Offering	Amount of
Securities to be Registered	Registered(1)	Share(2)	Price(1)(2)	Registration Fee
Common stock, \$0.01 par value per share	5,364,750	\$23.00	\$123,389,250	\$13,461.77

 Represents only the additional number of shares of the registrant's common stock being registered, and includes 699,750 additional shares of common stock that the underwriters have the option to purchase. Does not include the securities that the registrant previously registered on the Registration Statement on Form S-1, as amended (File No. 333-250182).

(2) Calculated pursuant to Rule 457(a) under the Securities Act of 1933, as amended, or the Securities Act, for the purpose of determining the registration fee. The registrant previously registered securities with a proposed maximum aggregate offering price not to exceed \$617,067,000.00 on the Registration Statement on Form S-1, as amended (File No. 333-250182), which was declared effective by the Securities and Exchange Commission on December 10, 2020. In accordance with Rule 462(b) under the Securities Act, an additional amount of securities having a proposed maximum aggregate offering price of \$123,389,250.00 are hereby registered.

This Registration Statement shall become effective upon filing with the Securities and Exchange Commission in accordance with Rule 462(b) of the Securities Act.

EXPLANATORY NOTE AND INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

Certara, Inc., a Delaware corporation (the "Registrant"), is filing this Registration Statement on Form S-1 with the Securities and Exchange Commission (the "Commission") pursuant to Rule 462(b) under the Securities Act of 1933, as amended. This Registration Statement relates to the public offering of securities contemplated by the Registration Statement on Form S-1, as amended (File No. 333-250182) (the "Prior Registration Statement"), which was declared effective by the Commission on December 10, 2020.

The Registrant is filing this Registration Statement for the sole purpose of increasing by 5,364,750 shares the number of shares of common stock offered by the selling stockholders reflected in the Prior Registration Statement, 699,750 of which are subject to purchase upon exercise of the underwriters' option to purchase additional shares of the Registrant's common stock. The additional shares that are being registered for sale are in an amount and at a price that together represents no more than 20% of the maximum aggregate offering price set forth in the Calculation of Registration Fee table contained in the Prior Registration Statement. The information set forth in the Prior Registration Statement, and all exhibits to the Prior Registration Statement.

The required opinions and consents are listed on the Exhibit Index attached hereto and filed herewith.

EXHIBIT INDEX

Exhibit			
Number	Description		
<u>5.1†</u>	Opinion of Simpson Thacher & Bartlett LLP (incorporated by reference to Exhibit 5.1 filed with Amendment No. 2 to the Registrant's		
	Registration Statement on Form S-1 (File No. 333-250182) filed with the Commission on December 3, 2020)		
<u>23.1</u>	Consent of CohnReznick LLP		
<u>23.2†</u>	Consent of Simpson Thacher & Bartlett LLP (included in Exhibit 5.1)		
<u>24.1†</u>	Power of Attorney (included on the signature page to the Registrant's Registration Statement on Form S-1 (File No. 333-250182) filed		
	with the Commission on November 18, 2020 and incorporated herein by reference)		

† Previously filed.

Signatures

Pursuant to the requirements of the Securities Act, we have duly caused this registration statement on Form S-1 to be signed on our behalf by the undersigned, thereunto duly authorized, in the City of Princeton, New Jersey, on December 10, 2020.

Certara, Inc.

By: /s/ WILLIAM F. FEEHERY

Name: William F. FeeheryTitle: Chief Executive Officer and Director

Pursuant to the requirements of the Securities Act, this registration statement has been signed by the following persons in the capacities indicated on December 10, 2020.

Signature	Title
/s/ WILLIAM F. FEEHERY	Chief Executive Officer and Director
William F. Feehery	(Principal Executive Officer)
/s/ M. ANDREW SCHEMICK	Chief Financial Officer
M. Andrew Schemick	(Principal Financial Officer and Principal Accounting Officer)
*	
Sherilyn S. McCoy	Chairman
*	
James E. Cashman III	Director
*	
Eric C. Liu	Director
*	
Stephen M. McLean	Director
*	
Mason P. Slaine	Director
*	
Matthew Walsh	Director
*	Director
Ethan Waxman	Director
*By: /s/ William F. Feehery	
Name: William F. Feehery	
Title: Attorney-in-Fact	

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in this Registration Statement of Certara, Inc. on Form S-1 of our report dated October 7, 2020, except for the effects of the matter discussed in Note 16 ("Stock Split") which is as of November 24, 2020, on our audits of the consolidated financial statements of Certara, Inc. and Subsidiaries as of December 31, 2019 and 2018, and for the years then ended. We also consent to the reference to our firm under the caption "Experts" in the prospectus incorporated by reference into this Registration Statement.

/s/ CohnReznick LLP December 9, 2020 Parsippany, New Jersey