The registrant is submitting this draft registration statement confidentially as an "emerging growth company" pursuant to Section 6(e) of the Securities Act of 1933, as amended.
As confidentially submitted to the Securities and Exchange Commission on November 10, 2020.
This draft registration statement has not been filed with the Securities and Exchange Commission and all information herein remains strictly confidential.

Registration No. 333-

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

AMENDMENT NO. 1
TO
FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

CERTARA, INC.
(Exact name of registrant as specified in its charter)

Delaware	**7372**	**82-2180925**
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(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)

With copies to:

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Washington, D.C. 20004
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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. ☐

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. ☐

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.

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☐
		Emerging growth company	☒

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

TITLE OF EACH CLASS OF SECURITIES TO BE REGISTERED	PROPOSED MAXIMUM OFFERING PRICE PER SHARE[1][2]	AMOUNT OF REGISTRATION FEE[3]
Common stock, $0.01 par value per share	$	$

(1) Estimated solely for the purpose of computing the amount of the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended.
(2) Includes the aggregate offering price of shares of common stock that the underwriters have the option to purchase from the registrant to cover over-allotments.
(3) To be paid in connection with the initial filing of this registration statement.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

SUBJECT TO COMPLETION, DATED NOVEMBER 10, 2020

PROSPECTUS

Shares

COMMON STOCK

This is Certara, Inc.'s initial public offering. We are selling shares of our common stock and the selling stockholders are selling shares of common stock. We will not receive any proceeds from the sale of shares by the selling stockholders.

We expect the initial public offering price of our common stock to be between $ and $ per share. Prior to this offering, no public market existed for our common stock. After pricing of this offering, we expect that shares of our common stock will trade on The Nasdaq Global Select Market (the "Nasdaq") under the symbol "CERT."

We are an "emerging growth company" as defined under the federal securities laws and, as such, have elected to comply with certain reduced public company reporting requirements. See "Prospectus Summary — Implications of Being an Emerging Growth Company." After the completion of this offering, an investment fund advised by an affiliate of EQT AB will continue to own a majority of the shares eligible to vote in the election of our directors. As a result, we will be a "controlled company" within the meaning of the corporate governance standards of the Nasdaq. See "Management — Controlled Company Exception" and "Principal and Selling Stockholders."

Investing in the common stock involves risks. See the "Risk Factors" section beginning on page 16 of this prospectus.

	PER SHARE	TOTAL
Public offering price	$	$
Underwriting discount[(1)]	$	$
Proceeds, before expenses, to us	$	$
Proceeds, before expenses, to the selling stockholders	$	$

(1) See "Underwriting" for a description of the compensation payable to the underwriters.

The underwriters may also exercise their option to purchase up to an additional shares from [us][the selling stockholders], at the public offering price, less the underwriting discount, for 30 days after the date of this prospectus to cover over-allotments. [We will not receive any proceeds from the sale of shares by the selling stockholders pursuant to any exercise of the underwriters' option to purchase additional shares.]

At our request, the underwriters have reserved up to shares of common stock, or % of the shares offered by this prospectus, for sale at the initial public offering price in a directed share program, to our directors, officers, employees and related persons. See "Underwriting."

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The shares will be ready for delivery on or about , 2020.

Jefferies **Morgan Stanley** **BofA Securities**
Credit Suisse **Barclays** **William Blair**

The date of this prospectus is , 2020.


CERTARA
1,600+
customers across 60 countries using our end-to-end platform
27%
increase in revenue from 2018 to 2019
9+
year average tenure for our top 30 customers
4
biosimulation software platforms
17
regulatory agencies utilizing our biosimulation software
~300
employees with PhDs, PharmDs & MDs
200+
regulatory submissions in past 4 years
90%
of companies that received new drug approvals by the FDA in the past 6 years use our software or services

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Through and including , 2021 (the 25th day after the date of this prospectus), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

You should rely only on the information contained in this prospectus, any amendment or supplement to this prospectus or any free writing prospectus we may authorize to be delivered or made available to you. We, the selling stockholders and the underwriters have not authorized anyone to provide any information or to make any representations other than those contained in this prospectus, any amendment or supplement to this prospectus or any free writing prospectuses prepared by us or on our behalf. We, the selling stockholders and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus, any amendment or supplement to this prospectus or any applicable free writing prospectus is an offer to sell only the shares offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus, any amendment or supplement to this prospectus or any applicable free writing prospectus is current only as of its date, regardless of the time of delivery of this prospectus, any amendment or supplement to this prospectus or any applicable free writing prospectus or any sale of the shares. Our business, financial condition, results of operations and prospects may have changed since such date.

For investors outside the United States: We, the selling stockholders and the underwriters have not done anything that would permit a public offering of the shares of our common stock or possession or distribution of this prospectus, any amendment or supplement to this prospectus or any applicable free writing prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States who come into possession of this prospectus, any amendment or supplement to this prospectus or any applicable free writing prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of common stock and the distribution of this prospectus, any amendment or supplement to this prospectus or any applicable free writing prospectus outside of the United States.

Unless otherwise indicated or the context otherwise requires, references in this prospectus to the term:

- "2017 Incentive Plan" means the Class B Profits Interest Unit Incentive Plan of the EQT Investor;
- "2020 Incentive Plan" means the Certara, Inc. 2020 Incentive Plan, an equity incentive plan that we intend to adopt prior to the completion of this offering;
- "ACV" means annual customer value in revenue;
- "Arsenal" means those certain investment funds of Arsenal Capital Partners and its affiliates;
- "Bribery Act" means the U.K. Bribery Act 2010;
- "CAGR" means compound annual growth rate;
- "Credit Agreement" means the credit agreement, dated as of July 15, 2017, among certain of our wholly-owned subsidiaries, as borrowers (collectively, the "Borrowers"), and the lenders thereunder, as amended;
- "Credit Facilities" means the Credit Agreement together with the Loan Agreement;
- "DGCL" means the Delaware General Corporation Law, as amended;
- "EEA" means the European Economic Area;
- "EMA" means the European Medicines Agency;
- "EQT" means those certain investment funds of EQT AB and its affiliates;
- "EQT Investor" means EQT Avatar Parent L.P., an affiliate of EQT and the entity that, until the completion of this offering, will hold all of our outstanding equity;
- "Exchange Act" means the U.S. Securities Exchange Act of 1934, as amended;
- "FCPA" means the U.S. Foreign Corrupt Practices Act;
- "FDA" means the U.S. Food and Drug Administration;
- "GAAP" means U.S. generally accepted accounting principles;
- "GAO" means the U.S. Government Accountability Office;
- "GDPR" means the European Union's General Data Protection Directive;
- "HIPAA" means the Health Insurance Portability and Accountability Act of 1996, as amended by the Health Information Technology for Economic and Clinical Health Act ("HITECH");
- "*in silico*" means trials, studies, or experiments conducted via computer or computer simulation;
- "*in vivo*" means trials, studies, or experiments conducted on living organisms, including humans and animals;
- "JOBS Act" means the U.S. Jumpstart Our Business Startups Act of 2012, as amended;
- "Loan Agreement" means the loan agreement, dated as of July 6, 2017, between the Company, as borrower, and the lender thereunder;
- "NMPA" means the National Medical Products Administration of China;
- "NOLs" means net operating losses;
- "our Compensation Committee" means (i) prior to the completion of this offering, the Compensation Committee of EQT Avatar Parent GP LLC, the general partner of the EQT Investor, and (ii) after the completion of this offering, the Compensation Committee of Certara, Inc.;
- "PD" means pharmacodynamic;
- "PK" means pharmacokinetic;
- "PMDA" means the Pharmaceuticals and Medical Devices Agency of Japan;
- "QSP" means quantitative systems pharmacology;
- "QSTS" means quantitative systems toxicology and safety;
- "R&D" means research and development;

- "Securities Act" means the Securities Act of 1933, as amended;
- "SaaS" means software as a service;
- "SEC" means the U.S. Securities and Exchange Commission;
- "SOX" means the U.S. Sarbanes-Oxley Act of 2002, as amended;
- "TAM" means our total addressable market; and
- "underwriters" means the firms listed on the cover page of this prospectus.

For ease of reference, we have repeated definitions for certain of these terms in other portions of the body of this prospectus. All such definitions conform to the definitions set forth above.

Trademarks and Service Marks

The Certara design logo, "Certara," and our other registered or common law trademarks, service marks or trade names appearing in this prospectus are our property. Solely for convenience, our trademarks, tradenames, and service marks referred to in this prospectus appear without the ®, TM, and SM symbols, but those references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights to these trademarks, tradenames, and service marks. This prospectus contains additional trademarks, tradenames, and service marks of other companies that are the property of their respective owners. We do not intend our use or display of other companies' trademarks, trade names or service marks to imply relationships with, or endorsement or sponsorship of us by, these other companies.

Market, Industry and Other Data

This prospectus contains statistical data that we obtained from industry publications and reports. These publications generally indicate that they have obtained their information from sources believed to be reliable.

PROSPECTUS SUMMARY

This summary highlights information contained in greater detail elsewhere in this prospectus and does not contain all of the information that you should consider in making your investment decision. Before investing in our common stock, you should carefully read this entire prospectus, including our financial statements and the related notes included elsewhere in this prospectus, and the information set forth under "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations."

Unless otherwise indicated in this prospectus, references to the "Company," "Certara," "we," "us" and "our" refer to Certara, Inc. and its consolidated subsidiaries.

Our Company

We accelerate medicines to patients using biosimulation software and technology to transform traditional drug discovery and development.

Biosimulation is a powerful technology used to conduct virtual trials using virtual patients to predict how drugs behave in different individuals. Biopharmaceutical companies use our proprietary biosimulation software throughout drug discovery and development to inform critical decisions that not only save significant time and money but also advance drug safety and efficacy, improving millions of lives each year.

As a global leader in biosimulation based on 2019 revenue, we provide an integrated, end-to-end platform used by more than 1,600 biopharmaceutical companies and academic institutions across 60 countries, including all of the top 35 biopharmaceutical companies by R&D spend in 2019. Since 2014, customers who use our biosimulation software and technology-enabled services have received over 90% of all new drug approvals by the FDA. Moreover, 17 global regulatory authorities license our biosimulation software to independently analyze, verify, and review regulatory submissions, including the FDA, Europe's EMA, Health Canada, Japan's PMDA, and China's NMPA. Demand for our offerings continues to expand rapidly.

While traditional drug development has led to meaningful therapies, many patients still wait for life-saving medicines, which can take more than 10 years and $2 billion to bring to market. In 2019, according to EvaluatePharma, worldwide biopharmaceutical R&D expenditures reached $186 billion, but the return on investment at the world's 12 leading biopharmaceutical companies was below 2%, down from 10% in 2010, according to a report by the Deloitte Center for Health Solutions. Change is necessary to continue delivering remarkable gains in human health at an accelerated pace. We, and many others in the biopharmaceutical industry, believe that biosimulation enables this change.

We build our biosimulation technology on first principles of biology, chemistry, and pharmacology with proprietary mathematical algorithms to predict how medicines and diseases behave in the body. For over two decades, we have honed and validated our biosimulation technology with an abundance of data from scientific literature, lab research, and preclinical and clinical studies. In turn, our customers use biosimulation to conduct virtual trials to answer critical questions, such as: What will be the human response to a drug based on preclinical data? How will other drugs interfere or interact with this new drug? What is a safe and efficacious dose for children, the elderly, or patients with pre-existing conditions? Virtual trials may be used to optimize dosing on populations that are otherwise difficult to study for ethical or logistical reasons, such as infants, pregnant women, the elderly, and cancer patients.

The benefits of biosimulation are significant. One of our customers, a top 10 global biopharmaceutical company by R&D spend, estimated that they saved more than half a billion dollars over three years using biosimulation to inform key decisions. Biosimulation can reduce the size and cost of human trials, the most expensive and time-consuming part of drug development, and in some cases, eliminate certain human trials completely. An analysis published on Applied Clinical Trials Online, to which we contributed, estimated that $1 billion was saved in clinical trial costs using biosimulation for a specified cancer drug due to consistently shorter completion times in the later phase clinical trials. According to such analysis, the Phase III trial for this cancer drug, which generated more than $10 billion in revenue in 2019, was more than a year shorter than the length of trials for two comparable cancer drugs that did not use biosimulation as extensively. Another global biopharmaceutical customer avoided a Phase III trial after submitting our biosimulation analysis to the

FDA for their central nervous system ("CNS") therapy, which we believe saved them $60 million and 24 months. This is a conservative estimate of savings given that the average duration of a Phase III trial is 32 months and the out-of-pocket cost of the clinical phase is $351 million for a CNS drug, according to the Office of Health Economics.

Biosimulation results need to be incorporated into regulatory documents for compelling submissions. Accordingly, we provide regulatory science solutions and integrate them with biosimulation so that our customers can navigate the complex and evolving regulatory landscape and maximize their chances of approval. Our differentiated regulatory services are powered by submissions management software and natural language processing for scalability and speed, allowing us to deliver more than 200 regulatory submissions over the past four years. Our team of more than 200 regulatory professionals has extensive experience applying industry guidelines and global regulatory requirements.

The final hurdle to delivering medicines to patients is market access, defined as strategies, processes, and activities to ensure that therapies are available to patients at the right price. We believe that biosimulation and market access will continue to be increasingly intertwined as healthcare systems move toward outcomes-based pricing. We have recently expanded into technology-enabled market access solutions, which help our customers understand the real-world impact of therapies and dosing regimens earlier in the process and effectively communicate this to payors and health authorities. Our solutions are underpinned by technologies such as Bayesian statistical software and SaaS-based value communication tools.

We have a proven track record of steady growth, driven by higher adoption of biosimulation, expansion of our technology portfolio, strategic acquisitions, and cross-selling of biosimulation, regulatory science, and market access solutions across our end-to-end platform:

- From 2018 to 2019, our revenue increased by 27% from $163.7 million to $208.5 million.
- From 2018 to 2019, our net loss decreased by 73% from $33.3 million to $8.9 million.
- The number of customers with ACV of $100,000 or more in revenue increased from 197 in 2018 to 228 in 2019, and revenue from these customers grew by 20% from 2018 to 2019.
- The number of customers with ACV of $1,000,000 or more in revenue increased from 37 in 2018 to 44 in 2019.
- Of our top 300 customers, 67% purchased two or more of our four major solution areas (Simcyp, Phoenix and other software, biosimulation services, regulatory science & market access services) in 2019, up from 55% in 2018. We believe there is significant ongoing opportunity to continue cross-selling our integrated suite of solutions to our existing customers.

With continued innovation in and adoption of our biosimulation software and technology-enabled services, we believe more biopharmaceutical companies worldwide will leverage more of our end-to-end platform to reduce cost, accelerate speed to market, and ensure safety and efficacy of medicines for all patients.

Our Markets

We believe our addressable market is large and rapidly expanding. The current total addressable market for our solutions represents an estimated $10 billion today and is expected to grow at a CAGR of approximately 12 to 15% annually over the next five to seven years. Our total addressable market estimate includes the biosimulation market estimated at $2 billion, which is estimated to grow at 15% CAGR over such period according to Grand View Research; the regulatory science market estimated at $7 billion, which is estimated to grow at 12% CAGR over such period according to Grand View Research; and the market access market estimated at $1 billion, which is estimated to grow at 13% CAGR over such period according to SpendEdge. With increasing adoption of technology across all stages of drug discovery and development, we believe our end-to-end platform and growth strategies position us to further penetrate the rapidly growing technology-enabled biopharmaceutical R&D market in the future.

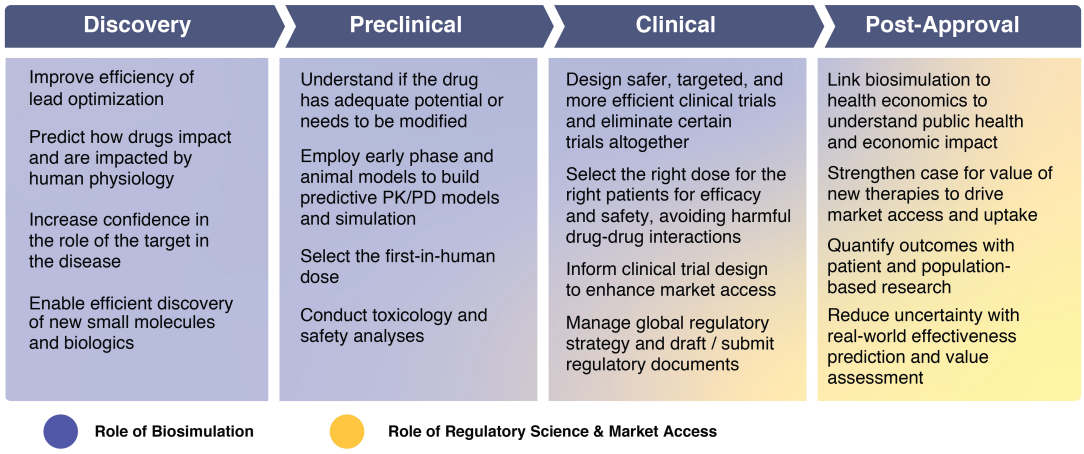
Traditional drug discovery and development is costly and prone to failure. The biopharmaceutical industry was estimated to have spent a total of approximately $186 billion in 2019 on R&D. It can take more than 10 years to bring a drug to market, and the cost has grown significantly in the past decade from $1.2 billion

in 2010 to $2.0 billion in 2019. At the same time, scientific advances are driving increased complexity as the R&D pipeline shifts from small molecules to biologics and cell and gene therapies. The increasing cost, time and complexity of developing drugs have driven down the rate of return on R&D to less than 2% in 2019 for the 12 leading biopharmaceutical companies analyzed in a report by the Deloitte Center for Health Solutions.

Continued development and innovation in software and technology such as biosimulation, virtual trials, and real-world evidence tools are helping biopharmaceutical companies increase efficiency and decrease costs. In addition, the COVID-19 pandemic has highlighted some of the limitations of human trials and is expected to drive increased utilization of technology during and after the pandemic. We believe we are still in the early stages of a long-term trend that will continue to advance traditional drug discovery and development into a technology-enabled era of advanced modeling and analytics.

We have purpose-built our innovative end-to-end platform to capitalize on industry trends by delivering biosimulation software and technology-enabled services that span all stages of the drug discovery and development continuum.

Role of Our Platform across the Stages of Drug Discovery and Development



Our core markets today include:

- ***Biosimulation***: Biosimulation is the computer-aided mathematical modeling of biological processes and systems to simulate how a drug affects the body, how the body affects the drug, how potential doses will affect different patient groups, and how patients will respond under various clinical scenarios. Biosimulation informs every stage of the drug discovery and development process and brings value through identifying winners and losers earlier, streamlining preclinical and clinical studies, optimizing dosing for different populations for safety and efficacy, and increasing probability of success and return on R&D.
- ***Regulatory Science***: Regulatory science is the development and application of scientific methods, tools, and approaches to support regulatory and other policy objectives. Expert management of these processes is critical to drugs receiving regulatory approval and ultimately reaching patients and generating sales.
- ***Market Access***: To achieve commercial access, sponsors must assess, optimize, and persuasively communicate the therapeutic and economic value of a new therapy in a manner that stakeholders such as payors and health care providers will accept and act on. Market access services include real-world evidence and health economics outcomes research.

We believe that our end-to-end platform is well-positioned to continue benefiting from market trends. In addition to the continued growth in our core markets, we expect to capture a broader share of the overall biopharmaceutical R&D spend as we continue to innovate and add new solutions to our end-to-end platform.

Our Competitive Strengths

We compete by offering a broad and deep combination of industry-standard biosimulation software and technology-enabled services across all stages of the continuum, from discovery and development to regulatory approval and market access. We have cultivated the following competitive strengths for more than two decades:

- ***Our Proprietary, Scalable Biosimulation Software***: Our proprietary, scalable biosimulation software, built on first principles and including more than 9.3 million lines of code, integrates biosimulation models, scientific knowledge, and data, which we believe would require years of effort, immense resources, and scarce expertise to duplicate. Our versatile biosimulation software is deployed to public and private cloud networks, on-premises, and data centers. We protect our proprietary technology through intellectual property rights, including copyrights, patents, trade secrets, know-how, and trademarks.
- ***Our Integrated End-to-End Platform***: We have developed a differentiated, integrated end-to-end platform of software and technology-enabled services, powered by proprietary technology and unique talent, spanning discovery through market access. Our integrated set of solutions, anchored in our biosimulation technology combined with our world-leading experts, uniquely positions us to be our customers' first-choice partner to accelerate their R&D programs and achieve regulatory and commercial success. Ninety percent of our top 50 customers by revenue use both our biosimulation solutions and regulatory and market access offerings.
- ***Our Innovation Framework***: We are at the forefront of innovation in biosimulation, advancing both incremental and breakthrough innovations in biosimulation to transform traditional drug discovery and development. Our innovation framework is built on four pillars: customer-centricity, alignment with regulators, scalable data collection and curation, and scientific research.
- ***Our Trusted, Long-Term Customer and Regulatory Partnerships***: We work continuously and closely with our customers to provide software and technology-enabled services from drug discovery and development to regulatory science and market access, applying biosimulation throughout the continuum to maximize R&D productivity and increase the probability of success. We have substantial repeat business and long-term partnerships — our top 30 customers by revenue in 2019 have been with us for more than nine years on average. Our consortium model with biopharmaceutical companies provides for detailed customer input into software enhancements. Our customer relationships are bolstered by our regulatory partnerships — 17 regulatory agencies use our biosimulation software. We have received four grants and a Cooperative Research and Development Agreement from the FDA, as well as grants from six European organizations.
- ***The Deep Expertise of Our People and Our Culture of Innovation***: We are led by a diverse, global, and talented team of scientists, software engineers, and subject matter experts who not only advance our technology but also seek to understand and tackle our customers' greatest challenges. Sharing core values of dedication, quality, and respect, the executive management team is focused on fostering our passion for science and growing our culture of innovation, excellence, collaboration, and customer-centricity, as well as delivering exceptional performance.

Our Growth Strategy

Our growth strategy is to build upon our scalable end-to-end platform. We continue to innovate in biosimulation, engage with regulatory agencies, and land and expand our customer partnerships. We remain focused on reducing the cost, time, and probability of failure of clinical trials for our customers, so that they can materially accelerate the availability of future therapies that are needed by patients worldwide. As exciting, new research areas arise, such as cell and gene therapy, we attract and hire specialized talent and acquire businesses to expand our offerings accordingly.

- ***Advance Our Technology***: The science, technology, and data behind biosimulation continue to advance rapidly, and our top investment priority is to develop additional functionality and uses for biosimulation to improve patient outcomes. We release new software, additional features, and upgrades

on a frequent and regular basis, and have introduced more than 10 new software applications and upgrades in the past two years.

We are investing in three major areas to elevate our technology:

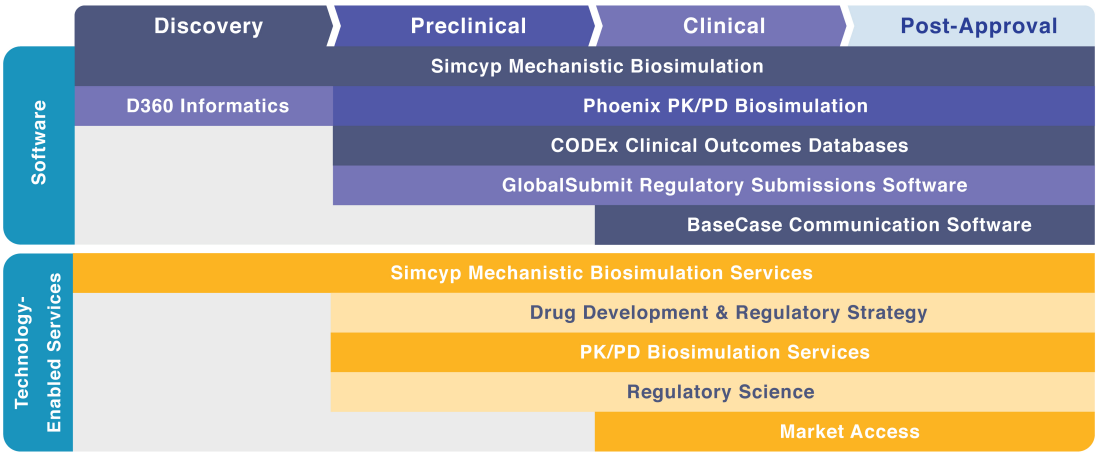
- *Spearheading the frontier of quantitative systems pharmacology ("QSP") and toxicology*, an emerging approach with enormous potential for industry-wide transformation to optimize decisions in both drug discovery and development;
- *Continuing to develop cloud-based solutions*, such as Certara Integral Data Repository, CODEx Clinical Outcomes Databases, and BaseCase Value Communication Software, which enhance computing scalability, significantly reduce maintenance time and cost, and promote access, collaboration, and mobility; and
- *Architecting an ecosystem of interconnected software applications* to facilitate seamless workflows and sharing of data across the drug discovery and development continuum for efficiency and speed.

- ***Grow Within Existing Customers***: As we continue to expand our portfolio of offerings, we integrate our solutions and sell more across our end-to-end platform. Our customer relationships grow steadily over time, driven by higher adoption of biosimulation with additional user licenses and more modules. We also cross-sell our software and technology-enabled services — of our top 300 customers in 2019 by revenue, 67% purchased two or more of our major solution areas.
- ***Expand Our Customer Base Globally***: We are growing our footprint globally to match that of the biopharmaceutical industry. There are more than 4,800 biopharmaceutical companies worldwide with active R&D pipelines, up from nearly 2,400 in 2011, according to Informa's Pharma R&D Annual Review 2020. Informa also estimates that the R&D pipeline encompasses approximately 18,000 drug programs in 2020. As drug discovery and development in Asia Pacific grows, we are investing heavily to expand our presence in the region to work with these customers where they are, just as we already have in North America, Europe, and Japan.
- ***Scale Through Acquisitions***: We have a proven record of successfully acquiring and integrating software and services companies. To date, we have acquired 12 companies of which nine included software or technology such as Simcyp, the core of our mechanistic biosimulation platform, and Xenologiq, which jumpstarted our biosimulation initiative using QSP. As we build out the depth and breadth of our biosimulation platform, we continually seek and assess a range of highly focused opportunities, whether through acquisitions, licenses, or partnerships.
- ***Inspire Our People***: Our people, 900 strong, are the key to our success. The diversity and depth of expertise, experience, and backgrounds in our vibrant community bring richness of ideas, problem-solving capabilities, and mutual respect. We are dedicated to attracting, retaining, and growing leading scientists and experts who are passionate about developing medicines that matter. We strive to encourage intellectual curiosity and offer a myriad of professional development opportunities. We continue to invest in our people to help them thrive and solidify our position as an employer of choice in our industry.

The Certara End-to-End Platform

We provide both software and technology-enabled services to enable customers to realize the full benefits of biosimulation in drug discovery, preclinical and clinical research, regulatory submission, and market access. Our software is primarily subscription-based with licenses ranging from one to three years. We estimate that 65% of our revenue in 2019 came from the application of our solutions in the clinical stage, the most expensive and time-consuming part of the drug discovery and development process, according to Nature Reviews Drug Discovery. We estimate that in 2019, 10% of our total revenues were attributed to the use of our solutions in the discovery stage, 15% in the preclinical stage and 10% in the post-approval stage.

Certara End-to-End Platform



Software

Our software, utilized by more than 20,000 licensed users in biosimulation and 28,000 more in regulatory science and market access, addresses six main applications: (1) mechanistic biosimulation; (2) empirical pharmacokinetic and pharmacodynamic biosimulation; (3) scientific informatics; (4) clinical outcomes databases for biosimulation; (5) authoring and management of regulatory submissions; and (6) market access communication. We deploy our software to customers on public and private cloud networks, on-premises, and in data centers.

- ***Mechanistic Biosimulation Platform (Simcyp)***: Mechanistic biosimulation predicts both how a drug is handled within the body (known as "pharmacokinetics" or "PK") and drug effect (known as "pharmacodynamics" or "PD"), without the need for actual *in vivo* human or animal studies. Seventeen of the top 20 biopharmaceutical companies by R&D spend in 2019 license Simcyp.

  Our biosimulation platform has generated results that inform approximately 200 label claims for more than 70 drugs. Had customers attempted to acquire the same information through conventional human trials, we believe they would have faced millions of dollars in additional costs and significant launch delays, given that clinical trials are estimated to take 1 to 2.5 years on average and cost many millions of dollars, according to Nature Reviews Drug Discovery.

- ***Empirical Pharmacokinetic/Pharmacodynamic Biosimulation Platform (Phoenix)***: Phoenix includes multiple modules for the full empirical biosimulation workflow including conventional and biosimulation-driven interpretation, and related workflow modules for validated data handling, model management, and regulatory reporting. Customers benefit by gaining a validated, streamlined workflow for reporting their clinical pharmacology information to the FDA and other agencies. Furthermore, customers can be confident they are using the same tools used by regulators to evaluate their products.

- ***Scientific Informatics Platform (D360)***: D360 provides customers with self-service access and analytics to manage their small molecule and biologics discovery projects. The platform includes chemical structure search capabilities for structure-activity relationship analysis, molecular design tools, and visualization solutions. We estimate that more than 6,000 discovery research scientists worldwide use D360.

- ***Clinical Outcomes Databases for Biosimulation (CODEx)***: Our customers license our 40+ proprietary CODEx databases in a range of disease areas for meta-analysis of a new drug's safety and efficacy in relation to competitive products.

- ***Authoring and Management of Regulatory Submissions Platform (GlobalSubmit)***: Our customers license our advanced, cloud-based software for publishing, review, validation and electronic filing of regulatory submissions.

- ***Market Access Communication Platform (BaseCase)***: We license a cloud-based SaaS platform for drag-and-drop visualization of biosimulation results and other complex data. Customers use our software to communicate the value of a new therapy to payors and providers to gain formulary acceptance and reimbursement.

Technology-Enabled Services

Our technology-enabled biosimulation services help customers who do not have staff capability or availability to gain the benefits of biosimulation. We also provide related technology-enabled services to guide our customers' new drugs through the regulatory submission process and into the market. Our technology-enabled services include mechanistic biosimulation, empirical biosimulation, drug development and regulatory strategy, clinical pharmacology, model-based meta-analysis, regulatory writing and medical communications, regulatory operations, and market access.

- ***Mechanistic Biosimulation***: We utilize our Simcyp Platform for predicting PK to determine first-in-human dose selection, design more efficient and effective clinical studies, evaluate new drug formulations, and predict drug-drug interactions. We use our QSP and QSTS software to advise customers on target selection and ranking, and strategies for avoiding toxicities.
- ***Empirical Biosimulation***: We use our Phoenix Platform and other tools to provide a wide range of quantitative biosimulation approaches, such as non-compartmental analysis, PK/PD modeling, and population PK/PD analyses.
- ***Drug Development and Regulatory Strategy***: We develop and deliver drug development and regulatory plans and provide high-level regulatory input to customer projects, incorporating biosimulation and supporting decision making through critical development and investment stage gates.
- ***Clinical Pharmacology***: We provide early-phase development plans and study designs across the development life-cycle, often incorporating biosimulation. We use clinical pharmacology gap analysis and modeling to anticipate and manage development risks.
- ***Model-Based Meta-Analysis***: We utilize curated clinical trial data from our CODEx clinical outcomes database platform together with model-based meta-analysis to assess a new drug's safety and efficacy in relation to competitive products.
- ***Regulatory Writing and Medical Communications***: We support submissions from early-stage investigational new drugs to late-stage new drug applications, biologics license applications, and market authorization applications, by writing regulatory documents such as clinical study protocols/reports, safety submissions, and other summary documents for submission to the FDA and global regulatory authorities. We manage technical editing including transparency and disclosure services to ensure that our customers' regulatory documents are "filing-ready." Our team also offers advanced publication planning and writing support for scientific and medical publications. We deploy natural language processing software and other technology to enable efficient and scalable document creation.
- ***Regulatory Operations***: We manage the submission of regulatory documents using our GlobalSubmit platform. Our submission management services include submission leadership, program management and planning, due diligence and readiness preparation, submission compilation, and electronic common technical document publishing. We support applications to all major health agencies, including the FDA, Europe's EMA, Health Canada, Japan's PMDA, and China's NMPA.
- ***Market Access*****:** We assist customers in demonstrating the value of new drugs and health technologies to payors and other stakeholders to support their efforts in securing reimbursement and access in global markets. These services include conducting real-world evidence and health economics outcomes research, delivering value and access consultancy solutions, creating cost and comparative effectiveness models to support pricing and payor reimbursement, and collecting and analyzing real-world data for use in market and payor communications. We use our proprietary technology called the Health Outcomes Performance Estimator (HOPE), based on a Bayesian engine, that translates clinical trial findings and population health knowledge into expected real-world impact.

Risks Related to Our Business

Investing in our common stock involves a high degree of risk. You should carefully consider these risks before investing in our common stock, including the risks related to our business and industry described under

"Risk Factors" elsewhere in this prospectus. In particular, the following considerations, among others, may offset our competitive strengths or have a negative effect on our business strategy, which could cause a decline in the price of our common stock and result in a loss of all or a portion of your investment:

- our ability to compete within our market;
- any deceleration in, or resistance to, the acceptance of model-informed biopharmaceutical discovery;
- changes or delays in government regulation relating to the biopharmaceutical industry;
- increasing competition, regulation and other cost pressures within the pharmaceutical and biotechnology industries;
- trends in R&D spending, the use of third parties by biopharmaceutical companies and a shift toward more R&D occurring at smaller biotechnology companies;
- consolidation within the biopharmaceutical industry;
- reduction in the use of our products by academic institutions;
- pricing pressures due to increased customer utilization of our products;
- our ability to successfully enter new markets, increase our customer base and expand our relationships with existing customers;
- the occurrence of natural disasters and epidemic diseases, such as the recent COVID-19 pandemic;
- any delays or defects in our release of new or enhanced software or other biosimulation tools;
- failure of our existing customers to renew their software licenses or any delays or terminations of contracts or reductions in scope of work by our existing customers;
- our ability to accurately estimate costs associated with our fixed-fee contracts;
- our ability to retain key personnel or recruit additional qualified personnel;
- risks related to our contracts with government customers, including the ability of third parties to challenge our receipt of such contracts;
- our ability to sustain recent growth rates;
- any future acquisitions and our ability to successfully integrate such acquisitions;
- the accuracy of our addressable market estimates;
- the length and unpredictability of our software and service sales cycles;
- our ability to successfully operate a global business;
- our ability to comply with applicable anti-corruption, trade compliance and economic sanctions laws and regulations;
- risks related to litigation against us;
- the adequacy of our insurance coverage and our ability to obtain adequate insurance coverage in the future;
- our ability to perform our services in accordance with contractual requirements, regulatory standards and ethical considerations;
- the loss of more than one of our major customers;
- our future capital needs;
- the ability or inability of our bookings to accurately predict our future revenue and our ability to realize the anticipated revenue reflected in our backlog;
- any disruption in the operations of the third-party providers who host our software solutions or any limitations on their capacity or interference with our use;
- our ability to reliably meet our data storage and management requirements, or the experience of any failures or interruptions in the delivery of our services over the internet;
- our ability to comply with the terms of any licenses governing our use of third-party open source software utilized in our software solutions;
- any breach of our security measures or unauthorized access to customer data;

- our ability to comply with applicable privacy and data security laws;
- our ability to adequately enforce or defend our ownership and use of our intellectual property and other proprietary rights;
- any allegations that we are infringing, misappropriating or otherwise violating a third party's intellectual property rights;
- our ability to meet the obligations under our current or future indebtedness as they become due and have sufficient capital to operate our business and react to changes in the economy or industry;
- any limitations on our ability to pursue our business strategies due to restrictions under our current or future indebtedness or inability to comply with any restrictions under such indebtedness;
- any impairment of goodwill or other intangible assets;
- our ability to use our NOLs and R&D tax credit carryforwards to offset future taxable income;
- the accuracy of our estimates and judgments relating to our critical accounting policies and any changes in financial reporting standards or interpretations;
- actions by our controlling stockholders;
- any inability to design, implement and maintain effective internal controls when required by law;
- the costs and management time associated with operating as a publicly traded company; and
- the other factors discussed under "Risk Factors."

Our Sponsor

EQT is a differentiated global investment organization with more than €62 billion in raised capital and around €40 billion in assets under management across 19 active funds. EQT funds have portfolio companies in Europe, Asia-Pacific and North America with total sales of more than €27 billion and approximately 159,000 employees. EQT works with portfolio companies to achieve sustainable growth, operational excellence and market leadership. Over the last 20 years, EQT has completed more than 27 acquisitions in the healthcare sector, including current investments in Aldevron, Waystar, Galderma and WS Audiology and former investments in Press Ganey, CaridianBCT, BSN Medical and Clinical Innovations.

In August 2017, investment funds affiliated with EQT, together with certain other institutional and other investors, acquired a majority of the indirect equity interests in our Company from certain affiliates of Arsenal Capital Partners and other existing equityholders. After completion of this offering, such EQT investment funds and their affiliates will own, directly or indirectly, approximately % of our outstanding common stock, or approximately % if the underwriters exercise in full their option to purchase additional shares. We intend to enter into a stockholders agreement with EQT, Arsenal and certain other stockholders in connection with this offering that will provide (i) affiliates of EQT with the right to nominate to our board of directors a number of nominees equal to (x) the total number of directors comprising our board of directors at such time, multiplied by (y) the percentage of our outstanding common stock held from time to time by such affiliates of EQT and (ii) affiliates of Arsenal with the right to nominate to our board of directors one nominee for so long as such affiliates collectively own at least 5% of our outstanding common stock. See "Certain Relationships and Related Party Transactions — Stockholders Agreement."

Corporate Information

Certara, Inc. was incorporated in Delaware on June 27, 2017. Our principal executive offices are located at 100 Overlook Center, Suite 101, Princeton, New Jersey 08540. Our telephone number is (609) 716-7900. Our website address is www.certara.com. Information contained in, or that can be accessed through, our website does not constitute part of this prospectus, and inclusions of our website address in this prospectus are inactive textual references only.

Implications of Being an Emerging Growth Company

We qualify as an "emerging growth company" as defined in the JOBS Act. For so long as we remain an emerging growth company, we are permitted and currently intend to rely on the following provisions of the

JOBS Act that contain exceptions from disclosure and other requirements that otherwise are applicable to companies that conduct initial public offerings and file periodic reports with the SEC. These provisions include, but are not limited to:

- being permitted to present only two years of audited financial statements in this prospectus and only two years of related "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our periodic reports and registration statements, including this prospectus;
- not being required to comply with the auditor attestation requirements of Section 404 of the SOX;
- reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements and registration statements, including in this prospectus; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

We will remain an emerging growth company until:

- the first to occur of the last day of the fiscal year (i) that follows the fifth anniversary of the completion of this offering, (ii) in which we have total annual gross revenue of at least $1.07 billion or (iii) in which we are deemed to be a "large accelerated filer," as defined in the Exchange Act; or
- if it occurs before any of the foregoing dates, the date on which we have issued more than $1 billion in non-convertible debt over a three-year period.

We have elected to take advantage of certain of the reduced disclosure obligations in this prospectus and may elect to take advantage of other reduced reporting requirements in our future filings with the SEC. As a result, the information that we provide to our stockholders may be different than what you might receive from other public reporting companies in which you hold equity interests.

We have elected to avail ourselves of the provision of the JOBS Act that permits emerging growth companies to take advantage of an extended transition period to comply with new or revised accounting standards applicable to public companies. As a result, we will not be subject to new or revised accounting standards at the same time as other public companies that are not emerging growth companies.

For additional information, see the section titled "Risk Factors — Risks Related to this Offering and Ownership of Our Common Stock — We are an "emerging growth company" and the reduced disclosure requirements applicable to emerging growth companies may make our common stock less attractive to investors."

THE OFFERING

Common stock offered by us	shares.
Common stock offered by the selling stockholders	shares.
Common stock to be outstanding immediately after this offering	shares.
Option to purchase additional shares	The underwriters have been granted an option to purchase up to additional shares of common stock from [us][the selling stockholders] at any time within 30 days from the date of this prospectus to cover over-allotments.
Use of proceeds	We estimate that the net proceeds to us from this offering, after deducting underwriting discounts and commissions and estimated offering expenses payable by us, will be approximately $ million, based on the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the front cover of this prospectus. We will not receive any proceeds from the sale of shares of our common stock by the selling stockholders. We intend to use the net proceeds received by us from this offering to repay outstanding indebtedness under the Agreement, a portion of our term loan under our Credit Agreement and the remainder for general corporate purposes. See “Use of Proceeds.” A $1.00 increase (decrease) in the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the front cover of this prospectus, would increase (decrease) the net proceeds to us from this offering by $ million, assuming the number of shares offered by us, as set forth on the front cover of this prospectus, remains the same and after deducting the assumed underwriting discounts and commissions and estimated offering expenses payable by us. An increase (decrease) of 100,000 shares from the expected number of shares to be sold by us in this offering, assuming no change in the assumed initial public offering price per share, which is the midpoint of the price range set forth on the front cover of this prospectus, would increase (decrease) our net proceeds from this offering by $ million.
Risk factors	See “Risk Factors” and the other information included in this prospectus for a discussion of the factors you should consider carefully before deciding to invest in our common stock.
Dividend policy	We currently do not intend to declare any dividends on our common stock in the foreseeable future. Our ability to pay dividends on our common stock is limited by the covenants of the credit agreement governing our Credit Facilities. See “Dividend Policy.”

Directed share program	At our request, the underwriters have reserved up to shares of common stock, or up to % of the shares offered by this prospectus, for sale at the initial public offering price through a directed share program to our directors, officers, employees and related persons. The sales will be made at our direction by and its affiliates through a directed share program. The number of shares of our common stock available for sale to the general public in this offering will be reduced to the extent that such persons purchase such reserved shares. Any reserved shares not so purchased will be offered by the underwriters to the general public on the same terms as the other shares of common stock offered by this prospectus. Participants in the directed share program will not be subject to lock-up or market standoff restrictions with the underwriters or with us with respect to any shares purchased through the directed share program, except in the case of shares purchased by any director or executive officer. For additional information, see "Underwriting."
Nasdaq symbol	"CERT"

Except as otherwise indicated, all information in this prospectus:

- assumes no exercise by the underwriters of their option to purchase up to additional shares of common stock from [us][the selling stockholders];
- assumes the effectiveness, at the time of this filing, of our amended and restated certificate of incorporation and our amended and restated bylaws, the forms of which are filed as exhibits to the registration statement of which this prospectus is a part;
- assumes an initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover of this prospectus;
- assumes a for 1 forward stock split to be effected upon the filing of our amended and restated certificate of incorporation;
- assumes the issuance of shares of common stock to be issued to certain holders of units (the "Former Unit Holders") of the EQT Investor in connection with the closing of this offering (which amount of shares is based upon an assumed initial public offering price of $ per share, which is the midpoint of the range set forth on the cover page of this prospectus), which issuance we refer to as the "EQT Equity Conversion"; and
- does not reflect shares of common stock available for future issuance under our 2020 Incentive Plan or shares of common stock available for future issuance under our 2020 Employee Stock Purchase Plan.

A $1.00 increase in the assumed initial public offering price referred to above shall modify the forward stock-split ratio and the number of shares to be received by the Former Unit Holders resulting in an increase to the number of shares of common stock to be outstanding immediately after this offering by shares and an increase of shares to be received by the Former Unit Holders.

A $1.00 decrease in the assumed initial public offering price referred to above shall modify the forward stock-split ratio and the number of shares to be received by the Former Unit Holders resulting in a decrease to the number of shares of common stock to be outstanding immediately after this offering by shares and a decrease of shares to be received by the Former Unit Holders.

Until the completion of the EQT Equity Conversion, all of our outstanding common stock will be held by the EQT Investor.

SUMMARY CONSOLIDATED FINANCIAL DATA

The following table summarizes our consolidated financial and other data for the periods and dates indicated. The balance sheet data as of September 30, 2020 and the statements of operations and comprehensive income (loss) and cash flow data for the nine months ended September 30, 2020 and 2019 have been derived from our unaudited condensed consolidated financial statements included elsewhere in this prospectus. The statements of operations and comprehensive income (loss) and cash flow data for the years ended December 31, 2019 and 2018 have been derived from our audited consolidated financial statements included elsewhere in this prospectus. Our unaudited condensed consolidated interim financial statements were prepared in accordance with GAAP, on the same basis as our audited consolidated financial statements and include, in the opinion of management, all adjustments, consisting of normal recurring adjustments, that are necessary for the fair statement of the financial information set forth in those financial statements. Our historical results are not necessarily indicative of the results that may be expected in the future, and results for the nine months ended September 30, 2020 are not necessarily indicative of results that may be expected for the full fiscal year or any other period. The summary consolidated financial data set forth below should be read in conjunction with "Risk Factors," "Capitalization," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our unaudited condensed consolidated financial statements and audited consolidated financial statements included elsewhere in this prospectus.

	NINE MONTHS ENDED SEPTEMBER 30,		YEAR ENDED DECEMBER 31,	
	2020	2019	2019	2018
	(in thousands)			
Statement of operations and comprehensive income (loss) data:				
Revenues:				
Software	$ 55,925	$ 51,453	$ 68,341	$ 46,849
Services	122,964	103,201	140,170	116,870
Total revenues	178,889	154,654	208,511	163,719
Cost of revenues:				
Software	9,806	8,786	12,544	11,223
Services	56,054	49,031	67,226	59,820
Total cost of revenues	65,860	57,817	79,770	71,043
Operating expenses:				
Sales and marketing	8,773	7,946	10,732	9,416
Research and development	9,139	8,651	11,633	10,478
General and administrative	36,125	35,630	47,926	43,393
Intangible asset amortization	28,056	26,908	36,241	31,625
Depreciation and amortization expense	1,836	2,140	2,596	2,416
Total operating expenses	83,929	81,275	109,128	97,328
Income (loss) from operations	29,100	15,562	19,613	(4,652)
Other expenses:				
Interest expense	(19,810)	(21,011)	(28,004)	(27,802)
Miscellaneous, net	456	(163)	(760)	(107)
Total other expenses	(19,354)	(21,174)	(28,764)	(27,909)
Income (loss) before income taxes	9,746	(5,612)	(9,151)	(32,561)
Provision for (benefit from) income taxes	4,696	(2,701)	(225)	697
Net income (loss)	5,050	(2,911)	(8,926)	(33,258)
Other comprehensive (loss):				
Foreign currency translation adjustment	513	(3,383)	433	(16,721)
Change in fair value of interest rate swap, net of tax	(1,530)	(4,441)	(4,283)	1,079
Total other comprehensive loss	(1,017)	(7,824)	(3,850)	(15,642)
Comprehensive income (loss)	$ 4,033	$ (10,735)	$ (12,776)	$ (48,900)

	NINE MONTHS ENDED SEPTEMBER 30,		YEAR ENDED DECEMBER 31,	
Per share data:				
Net income (loss) per share attributable to common stockholders:				
Basic	$ 50,500	$ (29,110)	$ (89,260)	$ (332,580)
Diluted	50,500	(29,110)	(89,260)	(332,580)
Weighted average common shares outstanding:				
Basic	100	100	100	100
Diluted	100	100	100	100

	NINE MONTHS ENDED SEPTEMBER 30,		YEAR ENDED DECEMBER 31,	
	2020	2019	2019	2018
	(in thousands)			
Cash flow data:				
Net cash provided by (used in):				
Operating activities	$ 32,129	$ 15,783	$38,025	$ 11,592
Investing activities	(7,209)	(6,866)	(9,517)	(73,905)
Financing activities	(24,103)	(7,640)	(8,489)	57,296
Cash paid for interest	21,077	21,407	26,428	25,713
Cash paid for taxes	6,675	3,149	4,109	3,165
Non-GAAP Metrics:				
Adjusted EBITDA[1]	$ 65,713	$ 52,156	$68,411	$ 44,964

	AS OF SEPTEMBER 30, 2020	
	ACTUAL	AS ADJUSTED[2]
	(in thousands)	
Balance sheet data:		
Cash and cash equivalents	$ 29,937	$
Total assets	1,020,380	
Total liabilities	522,842	
Total stockholders' equity	497,538	

(1) We define Adjusted EBITDA as net income (loss) excluding interest expense, provision (benefit) for income taxes, depreciation and amortization expense, intangible asset amortization, equity-based compensation expense, acquisition and integration expense and other items not indicative of our ongoing operating performance. We use Adjusted EBITDA to supplement GAAP measures of performance to evaluate the effectiveness of our business strategies, to make budgeting decisions, make certain compensation decisions, and to compare our performance against that of other peer companies using similar measures. In addition, it provides a useful measure for period-to-period comparisons of our business, as it removes the effect of certain non-cash expenses and other items not indicative of our ongoing operating performance. Management believes it is useful to investors and analysts to evaluate this non-GAAP measure on the same basis as management uses to evaluate our operating results.

Adjusted EBITDA is not calculated or presented in accordance with GAAP and other companies in our industry may calculate adjusted EBITDA differently than we do. As a result, this financial measure has limitations as an analytical and comparative tool and you should not consider this item in isolation, or as a substitute for analysis of our results as reported under GAAP. Adjusted EBITDA should not be considered a measure of discretionary cash available to us to invest in the growth of our business. In addition, in evaluating Adjusted EBITDA, you should be aware that in the future we may incur expenses similar to those eliminated in this presentation. Our presentation of Adjusted EBITDA should not be construed as an inference that our future results will be unaffected by unusual items.

The following table reconciles net income (loss) to adjusted EBITDA.

	NINE MONTHS ENDED SEPTEMBER 30,		YEAR ENDED DECEMBER 31,	
	2020	2019	2019	2018
	(in thousands)			
Adjusted EBITDA:				
Net income (loss)	$ 5,050	$ (2,911)	$ (8,926)	$(33,258)
Interest expense[(a)]	19,810	21,011	28,004	27,802
Provision (benefit) for income taxes[(a)]	4,696	(2,701)	(225)	697
Intangible asset amortization[(a)]	29,804	28,505	38,964	34,595
Depreciation and amortization expense[(a)]	1,836	2,140	2,596	2,416
Equity-based compensation expense[(b)]	2,286	1,141	1,691	1,711
Acquisition-related expense[(c)]	1,165	1,994	2,471	6,718
Integration expense[(d)]	57	501	546	2,822
Severance expense[(e)]	361	1,932	2,057	1,356
Reorganization expense[(f)]	190	172	222	—
Currency gain (loss)[(a)]	(190)	78	431	23
Gain (loss) on disposal of fixed assets[(g)]	9	10	113	91
Interest income[(a)]	(36)	(6)	(9)	(9)
Executive recruiting expense[(h)]	188	290	476	—
Transaction related expenses[(i)]	487	—	—	—
Adjusted EBITDA	$ 65,713	$ 52,156	$ 68,411	$ 44,964

(a) Represents amounts as determined under GAAP.

(b) Represents expense related to equity-based compensation. Equity-based compensation has been, and will continue to be for the foreseeable future, a recurring expense in our business and an important part of our compensation strategy.

(c) Represents costs associated with mergers and acquisitions and any retention bonuses pursuant to the acquisitions.

(d) Represents integration costs related to post-acquisition integration activities.

(e) Represents charges for severance provided to former executives and non-executives.

(f) Represents expense related to reorganization, including legal entity reorganization.

(g) Represents the gain/loss related to disposal of fixed assets.

(h) Represents recruiting expenses related to hiring a CEO and other senior executives.

(i) Represents costs associated with our initial public offering that are not capitalized.

(2) The as adjusted balance sheet data as of September 30, 2020 gives effect to (i) the sale by us of shares of our common stock in this offering at an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the front cover of this prospectus, and after deducting the underwriting discount and estimated offering expenses payable by us and (ii) the application of the net proceeds received by us from this offering to repay outstanding indebtedness under the Loan Agreement and a portion of our term loan under our Credit Agreement, as described in "Use of Proceeds."

A $1.00 increase or decrease in the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the front cover of this prospectus, would increase or decrease, as applicable, on an as adjusted basis, cash and cash equivalents, total assets and total stockholders' equity by $ million, assuming the number of shares offered by us, as set forth on the front cover of this prospectus, remains the same and after deducting the assumed underwriting discount and estimated offering expenses payable by us and the application of the net proceeds thereof as described in "Use of Proceeds." An increase or decrease of 100,000 shares in the number of shares sold in this offering by us would increase or decrease, as applicable, on an as adjusted basis, cash and cash equivalents, total assets and total stockholders' equity by $ million, assuming an initial public offering price of $ per share, which is the midpoint of the price range set forth on the front cover of this prospectus, and after deducting the underwriting discount and estimated offering expenses payable by us and the application of the net proceeds thereof as described in "Use of Proceeds."

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the following risk factors together with other information in this prospectus, including our consolidated financial statements and related notes included elsewhere in this prospectus, before deciding whether to invest in shares of our common stock. The occurrence of any of the events described below could harm our business, financial condition, results of operations and growth prospects. In such an event, the trading price of our common stock may decline and you may lose all or part of your investment.

Risks Related to Our Industry

We compete in a competitive and highly fragmented market.

The market for our biosimulation products and related services for the biopharmaceutical industry is competitive and highly fragmented. In biosimulation software, we compete with other scientific software providers, technology companies, in-house development by biopharmaceutical companies, and certain open source solutions. In the technology-enabled services market, we compete with specialized companies, in-house teams at biopharmaceutical companies, academic and government institutions. In some standard biosimulation services, and in regulatory, and market access, we also compete with contract research organizations. Some of our competitors and potential competitors have longer operating histories in certain segments of our industry than we do and could have greater financial, technical, marketing, research and development and other resources. Some of our competitors offer products and services directed at more specific markets than those we target, enabling these competitors to focus a greater proportion of their efforts and resources on those specific markets. Some competing products are developed and made available at lower cost by government organizations and academic institutions, and these entities may be able to devote substantial resources to product development. Some clinical research organizations or technology companies may decide to enter into or expand their offerings in the biosimulation area, whether through acquisition or internal development. We also face competition from open source software initiatives, in which developers provide software and intellectual property free of charge, such as R and PK-Sim software. In addition, some of our customers spend significant internal resources in order to develop their own solutions. There can be no assurance that our current or potential competitors will not develop products, services or technologies that are comparable, or superior to, or will render obsolete, the products, services and technologies we offer. There can be no assurance that our competitors will not adapt more quickly than we do to technological advances and customer demands, thereby increasing such competitors' market share relative to ours. Any material decrease in demand for our technologies or services may have a material adverse effect on our business, financial condition and results of operations.

Deceleration in, or resistance to, the acceptance of model-informed biopharmaceutical discovery and development by regulatory authorities could damage our reputation or reduce the demand for our products and services.

The use of computer-aided modeling and simulation in the field of biopharmaceutical discovery and development has been evolving for many years. Support for the use of biosimulation in discovery and development from regulatory bodies, such as the FDA and EMA, has been critical to its rapid adoption by the biopharmaceutical industry. There has been a steady increase in the recognition by regulatory and academic institutions of the role that modeling and simulation can play in the biopharmaceutical development and approval process, as demonstrated by new regulations and guidance documents describing and encouraging the use of modeling and simulation in the biopharmaceutical discovery, development, testing and approval process, which has directly led to an increase in the demand for our services. Changes in government or regulatory policy, or a reversal in the trend toward increasing the acceptance of and reliance upon *in silico* data in the drug approval process, could decrease the demand for our products and services or lead regulatory authorities to cease use of, or to recommend against the use of, our products and services. This, in turn, could have a material adverse impact on our revenue and future growth.

Our software products are licensed by the FDA, the EMA and 15 other regulatory authorities, who use them in assessing new drug applications. These licenses, which accounted for 0.2% of our annual revenue in 2018, and 0.2% in 2019, are typically renewed on an annual basis, and there is no obligation for these regulatory authorities to renew these licenses at the same or any level. Although we do not believe that reduction or elimination of the use of any of our software products that are currently licensed by regulatory authorities would

have a direct impact on the use of those products by our industry customers, it could diminish our reputation and negatively impact our ability to effectively market and sell our software products, particularly if such move were part of a wider reversal of government or regulatory acceptance of *in silico* data.

Changes or delays in government regulation relating to the biopharmaceutical industry could decrease the need for some of the services we provide.

Governmental agencies throughout the world, but particularly in the United States where the majority of our customers are based, strictly regulate the biopharmaceutical development process. Our business involves helping biopharmaceutical companies strategically and tactically navigate the regulatory approval process. New or amended regulations are expected to result in higher regulatory standards and often additional revenues for companies that service these industries. However, some changes in regulations, such as a relaxation in regulatory requirements or the introduction of streamlined or expedited approval procedures, or an increase in regulatory requirements that we have difficulty satisfying or that make our regulatory strategy services less competitive, could eliminate or substantially reduce the demand for our regulatory services. Regulatory developments that could potentially increase demand for our services could also be postponed or not fully implemented. For example, the EMA issued proposed rules that would require our customers to publish suitably redacted clinical reports submitted as part of a regulatory application. We provide a technology-enabled service for automated redaction of these large, complex documents. The EMA has since delayed implementation of this requirement, reducing demand for our document redaction technology and services. Any material decrease or delay in demand for our technologies or services may have a material adverse effect on our business, financial condition and results of operations.

We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, or changes to governmental regulation that may be required as a result of judicial decisions, either in the United States or abroad. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, our business may be harmed.

Increasing competition, regulation and other cost pressures within the pharmaceutical and biotechnology industries, as well as delays in the drug discovery and development process, may reduce demand for our products and services and negatively impact our results of operations and financial condition.

Our pharmaceutical and biotechnology customers' demand for our products and services is driven by continued demand for their products, and dependent upon our customers' research and development needs and available funding. Demand for our customers' products could decline, and prices charged by our customers for their products may decline, as a result of increasing competition. In addition, our customers' expenses could continue to increase as a result of the higher costs of developing more complex drugs and biologics and complying with more onerous government regulations. A decrease in demand for our customers' products, pricing pressures associated with the sales of these products, and additional costs associated with product development could cause our customers to reduce or delay research and development expenditures.

Furthermore, our customers' profitability could decline as a result of efforts by government and third-party payors to reduce the cost of healthcare. Governments worldwide have increased efforts to expand healthcare coverage while at the same time curtailing and better controlling the increasing costs of healthcare. If cost-containment efforts or other measures substantially changing existing insurance models limit our customers' profitability, they may decrease research and development spending, which could decrease the demand for our services and materially adversely affect our growth prospects.

In the United States, over the past few years, there has been heightened governmental scrutiny over the manner in which biopharmaceutical companies set prices for their marketed products, which has resulted in several Congressional inquiries, and proposed and enacted legislation and regulations, guidance documents, and executive actions designed, among other things, to bring more transparency to product pricing, reform government program reimbursement methodologies for drug products, and provide procedures for the importation of certain prescription drugs authorized for sale in a foreign country. Individual states in the United States have also become increasingly active in implementing laws and regulations designed to control pharmaceutical product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access such as prior authorization requirements or right-to-try laws, and marketing cost disclosure and transparency measures, and, in some cases, mechanisms to encourage importation from other countries

and bulk purchasing. Furthermore, there has been increased interest by third-party payors and governmental authorities in reference-pricing systems and publication of discounts and list prices. Most recently, President Trump signed four Executive Orders on drug pricing directing the Secretary of the U.S. Department of Health and Human Services to take several steps to lower the costs of prescription drugs, including an executive order intended to ensure that the Medicare program pays no more for the most costly Medicare Part B drugs than any economically comparable country that is a member of the Organization for Economic Co-operation and Development. Any of these legislative, regulatory, or executive efforts could harm our customers' businesses, which could cause them to reduce their spending on research and development, which, in turn, could negatively impact our business. Furthermore, delays in the biopharmaceutical development cycle, particularly related to clinical trials being delayed or canceled, such as those caused by the recent COVID-19 pandemic, could also impact the demand for our products and services.

Because our products and services depend on our customers' research and development expenditures, our revenues may be materially negatively affected by any economic, competitive, regulatory, demand, or other market impact that decreases our customers' profitability or causes them to decrease or delay research and development spend. In such an event, our revenues may be reduced through increased downward pricing pressure, reduction in the scope of projects, delays or cancellations of ongoing projects, or our customers' shifting away from using third parties for their modeling and simulation work. Any material decrease in demand for our technologies or services may have a material adverse effect on our business, financial condition and results of operations.

Trends in research and development spending, the use of third parties by biopharmaceutical companies and a shift toward more research and development occurring at smaller biotechnology companies could adversely affect our growth potential, business, results of operations, financial condition and/or cash flows.

We provide biosimulation software platforms and services to the biopharmaceutical industry, both private and public companies as well as government and academic institutions, and our direct revenues, growth prospects and bookings are highly dependent on their research and development spending levels and use of third parties. Our customers determine the amounts that they will spend on research and development on the basis of, among other things, available resources and their need to develop new products, which, in turn, is dependent upon a number of factors, including their competitors' research, development, and production initiatives. Our customers finance their research and development spending from both private and public sources, including the capital markets. As a result, our revenues and financial performance may be adversely impacted if our customers are unable to obtain sufficient capital on acceptable terms to finance their research and development spending. Government and university-based funding of scientific research can vary for a number of reasons, including general economic conditions, political priorities, changes in the number of students and other demographic changes. Smaller biotechnology companies increasingly represent a larger proportion of industry research and development expenditures, and these small companies may not be as familiar with our company or products. If we are not successful in marketing to and establishing relationships with these smaller companies, our continued revenue growth could be impacted.

Industry trends, economic factors, regulatory developments, patent protection and political and other events and circumstances that affect the biopharmaceutical industry, such as volatility or declines in securities markets limiting capital and liquidity or decreased government funding of scientific research, or other circumstances that decrease our customers' research and development spending also affect us. Furthermore, our financial success depends upon the creditworthiness and ultimate collection of amounts due from our customers. If we are not able to collect amounts due from our customers in a timely fashion due to funding or liquidity challenges or for any other reason, we may be required to write-off significant accounts receivable and recognize bad debt expenses, which could materially and adversely affect our operating results. All of these events could have a material adverse effect on our business, results of operations or financial condition.

Consolidation within the biopharmaceutical industry may reduce the pool of potential customers for our products and services or reduce the number of licenses for our software products.

A significant portion of our customer base consists of biopharmaceutical companies, and our revenue is dependent upon expenditures by these customers. Consolidation through mergers or business failures within the biopharmaceutical industry may reduce the number of potential customers, particularly larger customers, for our products and services. Consolidation of major biopharmaceutical companies could result in consolidation of software licenses used by those companies, reduction of the number of individual user

licenses, or increased pressure to negotiate price discounts or other terms for service that are less favorable to us, which may have a material adverse effect on our revenue and financial condition. Personnel redundancies and layoffs by merged companies to achieve deal synergies would result in a commensurate reduction in total users of our software, reducing the license fees we charge based on number of users.

Reduction in the use of our products by academic institutions could have a negative impact on our current and future business, as well as our reputation.

We work closely with the global academic community on research, publications, and training of the next generation of biopharmaceutical scientists. Our software products are used in many academic institutions, often free of charge, where students, including PhD candidates, are first exposed to the types of tools and models that we offer. Upon graduating, these students often become employed by biopharmaceutical companies, where they continue to use our products and advocate for their continued use. If academic institutions decide to use competitive products, or develop their own biosimulation products, familiarity with our products by the future generations of pharmacometricians and clinical pharmacologists will be diminished, which could ultimately result in a reduction in demand for our products.

As customers increase their utilization of our products and services, we may be subject to additional pricing pressures.

One of our strategic goals is to increase the breadth and utilization of products and services we provide to our existing customers, such as increasing the number of user licenses for our software products, selling licenses for new software products and expanding the number and scope of services we provide to individual customers. As the total annual expenditure from a particular customer increases, we may experience pricing pressure, often from the customer's procurement department, in the form of requests for discounts or rebates, price freezes and less favorable payment terms. This could have an adverse impact on our profitability.

Risks Related to Our Business

Our continued revenue growth depends on our ability to successfully enter new markets, increase our customer base and expand our relationship and the products and services we provide to our existing customers.

Our products and services are used primarily by modeling and simulation specialists in pharmaceutical, biotechnology, and government research or regulatory organizations. We have relationships with many large companies in the biopharmaceutical sector, and part of our growth strategy entails deriving more revenues from these existing customers by expanding their use of our existing and new products and services. Our ability to increase revenues with existing customers may be limited without significant investment in marketing our existing products and services or developing new products, which could be time-consuming and costly and may not be successful. We are also focused on increasing the number of emerging or smaller biotechnology customers that we serve. These small companies are increasingly responsible for much of the discovery and development of new molecules and treatments, and their share of the total industry research and development discovery and development dollars is rapidly growing. Attracting these smaller customers may require us to expend additional resources on targeted marketing, as they may not be as familiar with our company or products. And although these small biotechnology companies tend to use third parties such as Certara for many of their development activities, these smaller companies also tend to be less financially secure. If their products are not successful or they have difficulty raising sufficient investment capital, they may not be able to timely or fully pay for our services, or they may terminate or decrease the scope of projects for which they use our products and services, which could adversely impact our revenues.

Our strategy also includes expanding into new markets, new geographies, and new areas within our existing markets, either organically or by acquiring other companies in these markets. For example, we recently acquired several QSP models in the field of neurodegenerative diseases and are currently creating a consortium of customers to further develop these models. If our strategies are not executed successfully, or we cannot integrate acquired models into our platform, our products and services may not achieve market acceptance or penetration in targeted new departments within our existing customers or new customers. We cannot guarantee that we will be able to identify new biosimulation or regulatory and market access technologies of interest to our customers, or develop or acquire them in a timely fashion. Even if we are able to identify and develop new technologies and biosimulation tools of interest, we may not be able to negotiate license agreements on acceptable terms, or at all. Some of our products, such as our QSP models, require significant time and investment to develop to a point where they can achieve market acceptance, and we may not be

able to develop them at a rate that matches market demand. We may also face more significant pricing pressure as we expand geographically and our customer profile evolves. For example, smaller biotechnology companies, or companies based in countries that have less developed economies, may not be able to afford our products and services at our customary rates. If we are unable to develop or acquire new services and products and/or create demand for those newly developed services and products, accelerate the development of products where there is a market demand, or maintain or increase our historic pricing levels, our future business, results of operations, financial condition and cash flows could be adversely affected.

Our business may be subject to risks arising from natural disasters and epidemic diseases, such as the recent COVID-19 pandemic.

We may be subject to risks related to natural disasters and public health crises, such as the global pandemic associated with COVID-19. Since its initial outbreak in late 2019, SARS-CoV-2, and the resulting disease COVID-19, has rapidly spread throughout the world. During the pandemic, our employees, contractors, suppliers and other partners have been and may continue to be hindered or prevented from conducting customary business activities. Most countries and public health organizations have recommended or mandated restrictions on non-essential travel or entry into certain jurisdictions, which has, among other things, impacted our ability to meet face-to-face with our customers.

The COVID-19 pandemic has also had a significant and sustained negative impact on the global economy and a negative impact on many of our customers. Many of our customers have experienced or may in the future be adversely impacted by supply chain interruptions, disruptions to pipeline development and clinical trials, decreased product demand (including due to reduced elective healthcare consumption and as a result of increased unemployment), costs associated with the COVID-19 pandemic and interruptions or delays in regulatory approvals due to the impact of the COVID-19 pandemic on the operations of certain regulatory authorities. We may also see a reduction in total users of our software due to layoffs resulting from the COVID-19 pandemic in the biopharmaceutical industry. These and other adverse impacts on our customers and economic conditions related to the COVID-19 pandemic may cause our customers to significantly scale back their operations or research and development spending and limit the use of third parties, which could have a material adverse effect on our business.

We have undertaken several actions to mitigate and/or limit the spread of COVID-19 amongst our employees, including restricting employee travel, closing our offices in compliance with local guidelines and, when reopening offices, implementing a number of safety measures, such as increasing sanitation, mandating social distancing or use of personal protective equipment, and limiting the number of employees at each location. Furthermore, even if we follow what we believe to be best practices, there can be no assurance that our measures will prevent the transmission of SARS-CoV-2 between employees. Any incidents of actual or perceived transmission may expose us to liability claims, adversely impact employee productivity and morale, and result in negative publicity and reputational harm.

Travel restrictions and the cancellation of industry conferences have significantly limited face-to-face interactions with existing and potential customers, which have traditionally been an effective avenue for developing new business. If our scientists and consultants are not able to effectively communicate and interact with our existing and potential customers remotely, a prolonged period of limited direct contact with customers could translate into reduced bookings and negatively impact our revenue generation.

The continued spread of COVID-19 could also adversely impact our business, financial condition or results of operations as a result of increased costs, negative impacts to our healthy workforce, or a sustained economic downturn. The extent to which the COVID-19 pandemic may impact our business in the future is highly uncertain and cannot be predicted. In addition, a recession or a prolonged period of depressed economic activity related to COVID-19 and measures taken to mitigate its spread could have a material adverse effect on our business, financial condition and results of operations.

In addition to the current COVID-19 pandemic, our business could be negatively impacted by other natural disasters, such as new disease epidemics, significant weather events, the outbreak of war, the escalation of hostilities and acts of terrorism or other “acts of God.” The COVID-19 pandemic and such other events may also exacerbate a number of the other risks discussed in this section, any of which could have a material effect on us. We are a global company with offices in many countries. Disruptions in the infrastructure, either on a local or global scale, caused by these types of events could adversely affect our ability to serve our customers.

Although we have disaster recovery plans, carry business interruption insurance policies and typically have provisions in our contracts that protect us in certain *force majeure* type events, our coverage might not be adequate to compensate us for all losses that may occur.

Delays or defects in the release of new or enhanced software or other biosimulation tools may result in increased cost to us, delayed market acceptance of our products, diminished demand for our products, delayed or lost revenue, and liability.

Market acceptance of our products depends upon the continuous, effective and reliable operation of our software and other biosimulation tools and models. New or enhanced products or services can require long development and testing periods, which may result in delays in scheduled introduction. Our software solutions and biosimulation tools and models are inherently complex and may contain defects or errors. The risk of errors is particularly significant when a new product is first introduced or when new versions or enhancements of existing software solutions are released. Although we extensively test and conduct quality control on each new or enhanced biosimulation product before it is released to the market, there can be no assurance that significant errors will not be found in existing or future releases. As a result, in the months following the introduction of certain releases, we may need to devote significant resources to correct these errors. There can be no assurance, however, that all of these errors can be corrected. Many of our customers also require that new versions of our software be internally validated before implementing it, which can result in implementation delays or the decision to skip smaller updates altogether. Any errors, defects, disruptions or other performance problems with our products could hurt our reputation and may damage our customers' businesses. Any delays in the release schedule for new or enhanced products or services may delay market acceptance of these products or services and may result in delays in new customer orders for these new or enhanced products or services or the loss of customer orders, which may have a material adverse effect on our business, financial condition and results of operations.

To the extent that defects or errors cause our software or other biosimulation tools to malfunction and our customers' use of our products is interrupted, or the data derived from the use of our products is incorrect or incomplete, our customers may delay or withhold payment to us, cancel their agreements with us or elect not to renew, make service credit claims, warranty claims or other claims against us, and we could lose future sales. The occurrence of any of these events could result in diminishing demand for our software, a reduction of our revenues, an increase in collection cycles for accounts receivable, require us to increase our warranty provisions or incur the expense of litigation or substantial liability.

If our existing customers do not renew their software licenses, do not buy additional solutions from us or renew at lower prices, our business and operating results will suffer.

We expect to continue to derive a significant portion of our software revenues from the renewal of existing license agreements. As a result, maintaining the renewal rate of our existing customers and selling additional software solutions to them is critical to our future operating results. Factors that may affect the renewal rate for our customers and our ability to sell additional solutions to them include:

- the price, performance and functionality of our software solutions;
- the availability, price, performance and functionality of competing products;
- the effectiveness of our professional services;
- our ability to develop complementary software solutions, applications and services;
- the stability, performance and security of our technological infrastructure; and
- the business environment of our customers.

We deliver our software through either (i) a product license that permits our customers to install the software solution directly onto their own in-house hardware and use it for a specified term, or (ii) a subscription that allows our customers to access the cloud-based software solution for a specified term. Our customers have no obligation to renew their product licenses or subscriptions for our software solutions after the license term expires, which are typically between one and three years, and some of our contracts may be terminated or reduced in scope either immediately or upon notice. In addition, our customers may negotiate terms less advantageous to us upon renewal, which may reduce our revenues from these customers.

Our customers depend on our support organization to resolve technical issues relating to our solutions, as our software requires expert usage to fully exploit its capabilities. Any failure to offer high-quality technical support, or a market perception that we do not offer high-quality support, could adversely affect our renewal rates and our ability to sell our additional solutions to existing or to sell to prospective customers. Factors that are not within our control may also contribute to a reduction in our software revenues. For instance, our customers may reduce the number of their employees who are engaged in research and who would have use of our software, which would result in a corresponding reduction in the number of user licenses needed for some of our solutions and thus a lower aggregate renewal fee. The loss, reduction in scope or delay of a large contract, or the loss or delay of multiple contracts, could materially adversely affect our business.

Our future operating results also depend, in part, on our ability to sell new software solutions and licenses to our existing customers. For example, the willingness of existing customers to license our software will depend on our ability to scale and adapt our existing software solutions to meet the performance and other requirements of our customers, which we may not do successfully. If our customers fail to renew their agreements, renew their agreements upon less favorable terms or at lower fee levels or fail to purchase new software solutions and licenses from us, our revenues may decline and our future revenues may be constrained. Furthermore, our sales process is dependent on the reputation of our solutions and business and on positive recommendations from our existing customers. Any dissatisfaction from existing customers may adversely impact our ability to sell our solutions to new customers.

Our customers may delay or terminate contracts, or reduce the scope of work, for reasons beyond our control, or we may underprice or overrun cost estimates with our fixed-fee contracts, potentially resulting in financial losses.

Many of our technology-enabled service contracts may be terminated by the customer at its discretion immediately or after a short notice period without penalty. Customers terminate, delay or reduce the scope of these types of contracts for a variety of reasons, including but not limited to:

- lack of available funding or financing;
- mergers or acquisitions involving the customer;
- a change in customer priorities;
- delay or termination of a specific product candidate development program; and
- the customer decides to shift business to a competitor or to use internal resources.

As a result, contract terminations, delays and reductions in scope occur regularly in the normal course of our business. However, the delay, loss or reduction in scope of a large contract or multiple smaller contracts could result in under-utilization of our personnel, a decline in revenue and profitability and adjustments to our bookings, any or all of which could have a material adverse effect on our business, results of operations, financial condition and/or cash flows.

Many of our contracts with customers also provide for services on a fixed-price or fee-for-service with a cap basis. Accordingly, we bear the financial risk if we initially underprice our contracts or otherwise overrun our cost estimates. In these situations, we attempt to revise the scope of activity from the contract specifications and negotiate contract modifications shifting the additional cost to the customer, but are not always successful. If we fail to adequately price our contracts or if we experience significant cost overruns (including direct and indirect costs such as pass-through costs), or if we are delayed in, or fail to, execute contract modifications with customers increasing the scope of activity, our results of operations could be materially adversely affected. From time to time, we have had to commit unanticipated resources to complete projects, resulting in lower margins and profitability on those projects. We might experience similar situations in the future, which could have a material adverse impact on our results of operations and cash flows.

We depend on key personnel and may not be able to retain these employees or recruit additional qualified personnel, which could harm our business.

Our success depends to a significant extent on the continued services of our senior management and other key contributors throughout our business. As of November 9, 2020, approximately 300 of our employees held PhDs, PharmDs, or MDs. It is challenging to attract and retain critical and qualified employees because of the specialized scientific nature of our business and significant competition for qualified personnel in the biopharmaceutical industry. Many of our scientists also play a significant role in marketing and selling our

products and services to new and existing customers. If any of our senior scientists or members of senior management team, such as our CEO, CFO or division presidents, do not continue in their present positions, our operations could be disrupted. Compensation for our employees makes up our most significant fixed cost. Unexpected revenue shortfalls in the future may make it difficult for us to retain all of our employees. The loss of any key employee, or our inability to continue to recruit, retain and motivate key personnel, replace departed personnel in a timely fashion, or train our scientists to develop new business, may adversely impact our ability to compete effectively and grow our business and negatively affect our ability to meet our short and long-term financial and operational objectives.

We have government customers and have received government grants, which subject us to risks including early termination, audits, investigations, sanctions, or penalties.

We derive limited revenue from contracts with U.S. government, including the FDA and the Center for Disease Control and Prevention within the Department of Health and Human Services. We have also accepted limited grant funds from the U.S. government, whereby we are reimbursed for certain expenses incurred, subject to our compliance with the specific requirements of the applicable grant, including rigorous documentation requirements. We may enter into further contracts with the U.S. or foreign governments in the future, or accept additional grant funds. These subjects us to statutes and regulations applicable to companies doing business with the government. These types of contracts customarily contain provisions that give the government substantial rights and remedies, many of which are not typically found in commercial contracts and which are unfavorable to contractors, including provisions that allow the government to unilaterally terminate or modify our federal government contracts, in whole or in part, at the government's convenience or in the government's best interest, including if funds become unavailable to the applicable government agency. Under general principles of government contracting law, if the government terminates a contract for convenience, the terminated company may generally recover only its incurred or committed costs and settlement expenses and profit on work completed prior to the termination. If the government terminates a contract for default, the defaulting company may be liable for any extra costs incurred by the government in procuring undelivered items from another source.

In addition, government contracts and grants normally contain additional requirements that may increase our costs of doing business, reduce our profits, and expose us to liability for failure to comply with these terms and conditions. These requirements include, for example:

- compliance with complex regulations for procurement, formation, administration, and performance of government contracts under the Federal Acquisition Regulations, agency-specific regulations supplemental to the Federal Acquisition Regulations, and regulations specific to the administration of grants by the U.S. government;
- specialized disclosure and accounting requirements unique to government contracts and grants;
- mandatory financial and compliance audits that may result in potential liability for price or cost adjustments, recoupment of government funds after such funds have been spent, civil and criminal penalties, or administrative sanctions such as suspension or debarment from doing business with the U.S. government;
- public disclosures of certain contract, grant, and company information; and
- mandatory socioeconomic compliance requirements, including labor requirements, non-discrimination and affirmative action programs and environmental compliance requirements.

Government contracts and grants are also generally subject to greater scrutiny by the government, which can unilaterally initiate reviews, audits and investigations regarding our compliance with government contract and grant requirements. In addition, if we fail to comply with government contract laws, regulations and contract or grant requirements, our contracts and grants may be subject to termination or suspension, and we may be subject to financial and/or other liability under our contracts or under the Federal Civil False Claims Act. The False Claims Act's "whistleblower" provisions allow private individuals, including present and former employees, to sue on behalf of the U.S. government. The False Claims Act statute provides for treble damages and other penalties and, if our operations are found to be in violation of the False Claims Act, we could face other adverse action, including suspension or prohibition from doing business with the United States government. Any penalties, damages, fines, suspension, or damages could adversely affect our ability to operate our business and our financial results.

The U.S. government's determination to award a future contract or contract option may be challenged by an interested party, and, if that challenge is successful, that future contract or option may be terminated.

The laws and regulations governing the procurement of goods and services by the United States government provide procedures by which other bidders and interested parties may challenge the award of a government contract at the U.S. Government Accountability Office ("GAO") or in federal court. If we are awarded a government contract, such challenges or protests could be filed even if there are not any valid legal grounds on which to base the protest. If any such protests are filed, the government agency may decide to suspend our performance under the contract while such protests are being considered by the GAO or the applicable federal court, thus potentially delaying delivery of payment. In addition, we could be forced to expend significant funds to defend any potential award. If a protest is successful, the government may be ordered to terminate any one or more of our contracts and reselect bids. The government agencies with which we have contracts could even be directed to award a potential contract to one of the other bidders.

Our recent growth rates may not be sustainable or indicative of future growth.

We have experienced significant growth in recent years. Revenue increased from $163.7 million for 2018 to $208.5 million for 2019 and from $154.7 million for the nine months ended September 30, 2019 to $178.9 million for the nine months ended September 30, 2020. Our historical rate of growth may not be sustainable or indicative of our future rate of growth. We believe that our continued growth in revenue, as well as our ability to improve or maintain margins and profitability, will depend upon, among other factors, our ability to address the challenges, risks and difficulties described elsewhere in this "Risk Factors" section and the extent to which our various product offerings grow and contribute to our results of operations. We cannot provide assurance that we will be able to successfully manage any such challenges or risks to our future growth. In addition, our customer base may not continue to grow or may decline due to a variety of possible risks, including increased competition, changes in the regulatory landscape and the maturation of our business. Any of these factors could cause our revenue growth to decline and may adversely affect our margins and profitability. Failure to continue our revenue growth or improve margins would have a material adverse effect on our business, financial condition and results of operations. You should not rely on our historical rate of revenue growth as an indication of our future performance.

We may acquire other companies or technologies, which could divert our management's attention, result in additional dilution to our stockholders, and otherwise disrupt our operations and adversely affect our operating results.

We may in the future seek to acquire or invest in businesses, solutions or technologies that we believe could complement or expand our solutions, enhance our technical capabilities or otherwise offer growth opportunities. The pursuit of potential acquisitions may divert the attention of management and cause us to incur various expenses in identifying, investigating and pursuing suitable acquisitions, whether or not they are consummated.

If we acquire additional businesses, we may not be able to integrate the acquired personnel, operations and technologies successfully, effectively manage the combined business following the acquisition or preserve the operational synergies between our business units that we underwrite at the time of the acquisition. We cannot assure that following any acquisition we would achieve the expected synergies to justify the transaction, due to a number of factors, including:

- inability to integrate or benefit from acquired technologies or services in a profitable manner;
- unanticipated costs or liabilities associated with the acquisition;
- incurrence of acquisition-related costs;
- difficulty integrating the accounting systems, operations and personnel of the acquired business;
- difficulties and additional expenses associated with supporting legacy products and hosting infrastructure of the acquired business;
- difficulty converting the customers of the acquired business onto our solutions and contract terms, including disparities in the revenues, licensing, support or professional services model of the acquired company;
- diversion of management's attention from other business concerns;
- adverse effects to our existing business relationships with business partners and customers as a result of the acquisition;

- the potential loss of key employees;
- use of resources that are needed in other parts of our business; and
- use of substantial portions of our available cash to consummate the acquisition.

In addition, a significant portion of the purchase price of companies we acquire may be allocated to acquired goodwill and other intangible assets, which must be assessed for impairment at least annually. In the future, if our acquisitions do not yield expected returns, we may be required to take charges to our operating results based on this impairment assessment process, which could adversely affect our results of operations.

Acquisitions could also result in dilutive issuances of equity securities or the incurrence of debt, which could adversely affect our operating results. In addition, if an acquired business fails to meet our expectations, our operating results, business and financial position may suffer.

Our estimated addressable market is subject to inherent challenges and uncertainties. If we have overestimated the size of our addressable market or the various markets in which we operate, our future growth opportunities may be limited.

Our TAM is based on publicly available third-party market research and internal estimates regarding the size of our markets, and is subject to significant uncertainty and is based on assumptions that may not prove to be accurate. We base the TAM for our business off our current core markets, biosimulation, regulatory science, and market access. These estimates, as well as the estimates and forecasts in this prospectus relating to the size and expected growth of the markets in which we operate, may change or prove to be inaccurate. While we believe the information on which we base our TAM is generally reliable, such information is inherently imprecise. In addition, our expectations, assumptions and estimates of future opportunities are necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described herein. If third-party or internally generated data prove to be inaccurate or we make errors in our assumptions based on that data, our future growth opportunities may be affected. If our TAM, or the size of any of the various markets in which we operate, proves to be inaccurate, our future growth opportunities may be limited and there could be a material adverse effect on our prospects, business, financial condition and results of operations.

Our software and service sales cycle can vary and be long and unpredictable.

The timing of sales of our software solutions or technology-enabled services is difficult to forecast because of the length and unpredictability of our sales cycle. We sell our solutions primarily to biopharmaceutical companies, and our sales cycles can be as long as nine to twelve months or longer. Furthermore, the length of time that potential customers devote to their testing and evaluation, contract negotiation, and budgeting processes varies significantly, depending on the size of the organization and the nature of their needs. Accordingly, we might devote substantial time and effort to a particular unsuccessful sales effort, and as a result, we could lose other sales opportunities or incur expenses that are not offset by an increase in revenue, which could have a material adverse effect on our business, financial condition and results of operations.

We are subject to risks associated with the operation of a global business.

We derive a significant portion of our total revenue from our operations in international markets. During the year ended December 31, 2019 and the nine months ended September 30, 2020, 27% and 25%, respectively, of our revenues were transacted in foreign currencies, the majority of which included the British pound sterling, the euro and Japanese yen. Our global business may be affected by local economic conditions, including inflation, recession and currency exchange rate fluctuations. Changes in the value of the U.S. dollar relative to other currencies could result in material foreign currency exchange rate fluctuations and, as a result, our net earnings could be materially adversely affected. In addition, political and economic changes, including international conflicts and terrorist acts, throughout the world may interfere with our or our customers' activities in particular locations and result in a material adverse effect on our business, financial condition and operating results. Potential trade restrictions, exchange controls, adverse tax consequences and legal restrictions may affect our revenue from customers located outside the United States and the repatriation of funds into the United States. Also, we could be subject to unexpected changes in regulatory requirements, the difficulties of compliance with a wide variety of foreign laws and regulations, potentially negative consequences from changes in or interpretations of U.S. and foreign tax laws, import and export licensing requirements and longer accounts receivable cycles in certain foreign countries. Foreign currency exchange

rate hedges, transactions, re-measurements, or translations could also materially impact our financial results. These risks, individually or in the aggregate, could have an adverse effect on our results of operations and financial condition.

We are subject to the FCPA and the Bribery Act and similar anti-corruption laws and regulations in other countries. Violations of these laws and regulations could harm our reputation and business, or materially adversely affect our business, results of operations, financial condition and/or cash flows.

We operate in numerous countries around the world and are subject to the FCPA, the Bribery Act and similar anti-bribery laws in the countries in which we operate. Our business involves sales to government and state-owned agencies and brings us and others acting on our behalf, into contact with government officials around the world. The FCPA and the Bribery Act prohibit us and our officers, directors, employees and third parties acting on our behalf, including agents, from corruptly offering, promising, authorizing or providing anything of value to a "foreign official" for the purposes of influencing official decisions or obtaining or retaining business or otherwise obtaining favorable treatment. The FCPA further requires us to make and keep books, records and accounts that accurately reflect transactions and dispositions of assets and to maintain a system of adequate internal accounting controls. The Bribery Act also prohibits "commercial" bribery and accepting bribes.

Although our officers, directors, employees, distributors, and agents are required to comply with these laws, we cannot be sure that our internal policies and procedures will always protect us from liability for violations of these laws committed by persons associated with us, including our employees or third parties acting on our behalf. Violations of anti-corruption laws, or even allegations of such violations, could disrupt our business and result in a material adverse effect on our reputation, business, results of operations, financial condition and/or cash flows. For example, violations may result in criminal or civil penalties, disgorgement of profits, related stockholder lawsuits, debarment from government contracting and other remedial measures.

Our failure to comply with trade compliance and economic sanctions laws and regulations of the United States and applicable international jurisdictions could materially adversely affect our reputation and results of operations

We must operate our business in compliance with applicable economic and trade sanctions laws and regulations, such as those administered and enforced by the U.S. Department of Treasury's Office of Foreign Assets Control, the U.S. Department of State, the U.S. Department of Commerce, the United Nations Security Council and other relevant sanctions authorities. Our global operations expose us to the risk of violating, or being accused of violating, economic and trade sanctions laws and regulations. Our failure to comply with these laws and regulations may expose us to reputational harm as well as significant penalties, including criminal fines, imprisonment, civil fines, disgorgement of profits, injunctions and debarment from government contracts, as well as other remedial measures. Investigations of alleged violations can be expensive and disruptive. Despite our compliance efforts and activities we cannot assure compliance by our employees or representatives for which we may be held responsible, and any such violation could materially adversely affect our reputation, business, financial condition and results of operations.

Current and future litigation against us, which may arise in the ordinary course of our business, could be costly and time consuming to defend.

We are subject to claims that arise in the ordinary course of business, such as claims brought by our customers in connection with commercial disputes, employment claims made by our current or former employees, or claims brought by third-parties for failure to adequately protect their personal data. Third parties may in the future assert intellectual property rights to technologies that are important to our business and demand back royalties or demand that we license their technology. Litigation may result in substantial costs and may divert management's attention and resources, which may seriously harm our business, overall financial condition and operating results. Insurance may not cover such claims, may not be sufficient for one or more of such claims and may not continue to be available on terms acceptable to us. A claim brought against us that is uninsured or underinsured could result in unanticipated costs, negatively affecting our business, financial condition and results of operations.

Our insurance coverage may not be sufficient to avoid material impact on our financial position resulting from claims or liabilities against us, and we may not be able to obtain insurance coverage in the future.

We maintain insurance coverage for protection against many risks of liability, including professional errors and omissions, breach of fiduciary duty, and cybersecurity risks. The extent of our insurance coverage is under

continuous review and is modified as we deem it necessary. Despite this insurance, it is possible that claims or liabilities against us may have not be fully insured, or our insurance carriers may contest coverage, which could have a material adverse impact on our financial position or results of operations. In addition, we may not be able to obtain any insurance coverage, or adequate insurance coverage, when our existing insurance coverage expires.

If we fail to perform our services in accordance with contractual requirements, regulatory standards and ethical considerations, we could be liable for significant costs or penalties and our reputation could be harmed.

The services we provide to biopharmaceutical companies and other customers are complex and subject to contractual requirements, regulatory standards and ethical considerations. For example, some of our services must adhere to regulatory requirements of the FDA governing our activities relating to preclinical studies and clinical trials, including Good Laboratory Practices and Good Clinical Practices. Additionally, we are subject to compliance with FDA's regulations set forth in part 11 of title 21 of the Code of Federal Regulations, which relates to the creation, modification, maintenance, storage, retrieval, or transmittal of electronic records submitted to the FDA. We may be subject to inspection by regulatory authorities in connection with our customers' marketing applications and other regulatory submissions. If we fail to perform our services in accordance with regulatory requirements, regulatory authorities may take action against us or our customers for failure to comply with applicable regulations governing the development and testing of therapeutic products. Regulatory authorities may also or disqualify certain data or analyses from consideration in connection with applications for regulatory approvals, which would result in our customers not being able to rely on our services in connection with their regulatory submissions and may subject our customers to additional or repeat clinical trials and delays in the development and regulatory approval process. Mistakes in providing services to our customers, such as dosing models, could affect medical decisions for patients in clinical trials and create liability for personal injury. Such actions may include sanctions, such as warning or untitled letters, injunctions or failure of such regulatory authorities to grant marketing approval of products, delay, suspension or withdrawal of approvals, license revocation, loss of accreditation, product seizures or recalls, operational restrictions, civil or criminal penalties or prosecutions, damages or fines. Customers may also bring claims against us for breach of our contractual obligations or errors in the outcomes of our products or services, may terminate their contracts with us and/or may choose not to award further work to us. Any such action could have a material adverse effect on our reputation, business, financial condition and results of operations.

We derive a significant percentage of our revenues from a concentrated group of customers and the loss of more than one of our major customers could materially and adversely affect our business, results of operations and/or financial condition.

Our ten largest customers accounted for 28% and 29% of revenues for the year ended December 31, 2019 and the nine months ended September 30, 2020, respectively. The loss of any of our major customers could have a material adverse effect on our results of operations and financial condition. We may not be able to maintain our customer relationships, and our customers may delay payment under, or fail to renew, their agreements with us, which could adversely affect our business, results of operations or financial condition. Any reduction in the amount of revenues that we derive from these customers, without an offsetting increase in new sales to other customers, could have a material adverse effect on our operating results. A significant change in the liquidity or financial position of our customers could also have a material adverse effect on the collectability of our accounts receivable, our liquidity, and our future operating results.

Even if this offering is successful, we may need additional funding. If we are unable to raise additional capital on terms acceptable to us or at all or generate cash flows necessary to maintain or expand our operations, we may not be able to compete successfully, which would harm our business, results of operations, and financial condition.

We expect to devote substantial financial resources to our ongoing and planned activities, including the continued investment in our biosimulation software platform. Furthermore, upon the closing of this offering, we expect to incur additional costs associated with operating as a public company.

As of September 30, 2020 we had cash and cash equivalents of $29.9 million. We believe that the net proceeds from this offering, together with our existing cash and cash equivalents will be sufficient to fund our operations and capital expenditure requirements for at least the next 12 months. However, we have based this estimate on assumptions that may prove to be wrong, and our operating plans may change as a result of many factors currently unknown to us. As a result, we could deplete our capital resources sooner than we currently expect.

Our future capital requirements will depend on many factors, including:

- the growth of our revenue;
- the growth of our employee base;
- the timing and launch of new products, for example QSP and QSTS consortia;
- the continued expansion of sales and marketing activities; and
- mergers and acquisitions of technologies or services complementing or extending our biosimulation, regulatory science and market access businesses.

In the event that we require additional financing, we may not be able to raise such financing on terms acceptable to us or at all. In addition, we may seek additional capital due to favorable market conditions or strategic considerations, even if we believe we have sufficient funds for our current or future operating plans. If we are unable to raise additional capital on terms acceptable to us or at all or generate cash flows necessary to maintain or expand our operations and invest in our computational platform, we may not be able to compete successfully, which would harm our business, operations, and financial condition.

Our bookings might not accurately predict our future revenue, and we might not realize all or any part of the anticipated revenue reflected in our backlog.

Our bookings represent anticipated revenue for work not yet completed or performed under a signed contract or purchase order where there is sufficient or reasonable certainty about the customer's ability and intent to fund and commence the software or services. Bookings vary from period to period depending on numerous factors, including sales performance and the overall health of the biopharmaceutical industry, among others. Once work begins, we recognize direct revenue over the life of the contract based on our performance of services under the contract. Contracts may be terminated or delayed by our customers for reasons beyond our control. To the extent projects are delayed, the anticipated timing of our direct revenue could be materially affected.

In the event a customer terminates a contract, we are generally entitled to be paid for services rendered through the termination date and for services provided in winding down the project. However, we are generally not entitled to receive the full amount of direct revenue reflected in our bookings in the event of a contract termination. A number of factors may affect bookings and the direct revenue generated from our bookings, including:

- the size, complexity and duration of solutions;
- changes in the scope of work during the course of a project; and
- the cancellation or delay of a solution.

Our bookings for the year ended December 31, 2019 were $259.5 million compared to bookings of $227.5 million for the year ended December 31, 2018. Our bookings for the nine months ended September 30, 2020 were $204.0 million. Although an increase in bookings will generally result in an increase in future direct revenue to be recognized over time (depending on future contract modifications, contract cancellations and other adjustments), an increase in bookings at a particular point in time does not necessarily correspond to an increase in direct revenues during a particular period. The timing and extent to which bookings will result in direct revenue depends on many factors, including the timing of commencement of work, the rate at which we perform services, scope changes, cancellations, delays, receipt of regulatory approvals and the nature, duration, size, complexity and phase of the studies. In addition, delayed projects remain in bookings until they are canceled. As a result of these factors, our bookings are not necessarily a reliable indicator of future direct revenue and we might not realize all or any part of the direct revenue from the authorizations in bookings as of any point in time.

Risks Related to Intellectual Property, Information Technology and Data Privacy

We rely upon third-party providers of cloud-based infrastructure to host our software solutions. Any disruption in the operations of these third-party providers, limitations on capacity or interference with our use could adversely affect our business, financial condition and results of operations.

We outsource substantially all of the infrastructure relating to our hosted software solutions to third-party hosting services. Customers of our hosted software solutions need to be able to access our software platform at any time, without interruption or degradation of performance, and we provide them with service-level

commitments with respect to uptime. Our hosted software solutions depend on protecting the virtual cloud infrastructure hosted by third-party hosting services by maintaining its configuration, architecture, features and interconnection specifications, as well as the information stored in these virtual data centers, which is transmitted by third-party internet service providers. Any limitation on the capacity of our third-party hosting services could impede our ability to onboard new customers or expand the usage of our existing customers, which could adversely affect our business, financial condition and results of operations. In addition, any incident affecting our third-party hosting services' infrastructure that may be caused by cyber-attacks, natural disasters, fire, flood, severe storm, earthquake, power loss, telecommunications failures, terrorist or other attacks and other similar events beyond our control could negatively affect our cloud-based solutions. Work-from-home and other measures introduced to mitigate the spread of the COVID-19 pandemic have impacted our third-party vendors by increasing operational challenges and risks, including vulnerabilities to cybersecurity and information technology infrastructure threats. A prolonged service disruption affecting our cloud-based solutions for any of the foregoing reasons would negatively impact our ability to serve our customers and could damage our reputation with current and potential customers, expose us to liability, cause us to lose customers or otherwise harm our business. We may also incur significant costs for using alternative equipment or taking other actions in preparation for, or in reaction to, events that damage the third-party hosting services we use.

In the event that our service agreements with our third-party hosting services are terminated, or there is a lapse of service, elimination of services or features that we utilize, interruption of internet service provider connectivity or damage to such facilities, we could experience interruptions in access to our platform as well as significant delays and additional expense in arranging or creating new facilities and services and/or re-architecting our hosted software solutions for deployment on a different cloud infrastructure service provider, which could adversely affect our business, financial condition and results of operations.

If we are not able to reliably meet our data storage and management requirements, or if we experience any failure or interruption in the delivery of our services over the internet, customer satisfaction and our reputation could be harmed and customer contracts may be terminated.

As part of our current business model, the portion of our software that is delivered over the internet as SaaS is increasing, and we store and manage significant data for our customers, resulting in substantial information technology infrastructure and ongoing technological challenges, which we expect to continue to increase over time. If we do not reliably meet these data storage and management requirements, or if we experience any failure or interruption in the delivery of our services over the internet, customer satisfaction and our reputation could be harmed, leading to reduced revenues and increased expenses. Our hosting services are subject to service-level agreements and, in the event that we fail to meet guaranteed service or performance levels, we could be subject to customer credits or termination of these customer contracts. If the cost of meeting these data storage and management requirements increases, our results of operations could be harmed.

Our software solutions utilize third-party open source software, and any failure to comply with the terms of one or more of these open source licenses could adversely affect our business, subject us to litigation and create potential liability.

Some of our software solutions utilize software covered by open source licenses, and we expect to continue to incorporate open source software in our solutions in the future. Open source software is typically freely accessible, usable and modifiable, and is used by our development team in an effort to reduce development costs and speed up the development process. Use of open source software also in some respects entails greater risks than use of third party commercial software, as open source licensors generally do not provide warranties or other contractual protections regarding infringement claims or the quality of the code, including with respect to security vulnerabilities.

Although we have processes intended to fully comply with all license requirements in our software, certain open source software licenses require, among other things, that a licensor that distributes the open source software as a component of the licensor's proprietary software, to provide or offer to provide to the customer-licensee part or all of the source code to the licensor's proprietary software. If the owner of the copyright of the relevant open source software were to allege that we had not complied with the conditions of one or more of these licenses, we could be required to incur significant legal expenses defending against such allegations and could be subject to significant damages, enjoined from the sale of our solutions that contain the open source software and required to comply with onerous conditions or restrictions on these solutions, which

could disrupt the distribution and sale of these solutions. Litigation or other enforcement actions initiated by a copyright owner could have a negative effect on our business, financial condition and results of operations, or require us to devote additional research and development resources to change our solutions. Moreover, we could effectively be required to publicly release the affected portions of our source code, re-engineer all or a portion of our solutions or otherwise be limited in the licensing of our solutions, each of which could reduce or eliminate the value of our solutions. Disclosing our proprietary source code could allow our competitors to create similar products with lower development effort and time and ultimately could result in a loss of sales. Any of these events could create liability for us and damage our reputation, which could have a material adverse effect on our revenue, business, results of operations and financial condition and the market price of our shares.

If our security measures are breached or unauthorized access to customer data is otherwise obtained, our solutions may be perceived as not being secure, customers may reduce the use of or stop using our solutions and we may incur significant liabilities.

The evolution of technology systems introduces ever more complex security risks that are difficult to predict and defend against. An increasing number of companies, including those with significant online operations, have recently disclosed breaches of their security, some of which involved sophisticated tactics and techniques allegedly attributable to criminal enterprises or nation-state actors. While we believe that we have taken appropriate measures to prevent unintended access to the data we hold (including implementing security and privacy controls, training our workforce and implementing new technology) and we continue to improve and enhance our systems in this regard, our efforts may not always be successful. In addition, we do not know whether our current practices will be deemed sufficient under applicable laws or whether new regulatory requirements might make our current practices insufficient.

Our solutions involve the collection, analysis and retention of our customers' proprietary information related to their drug development efforts, including clinical data. Unauthorized access to this information or data, whether by third-party action or employee error, and whether deliberate or unintentional, could result in the loss of information, litigation, indemnity obligations, damage to our reputation and other liability. Our increased reliance on remote access to our information systems due to the COVID-19 pandemic has increased our exposure to potential cybersecurity breaches and the risk of loss or exposure of such information and data. Despite measures designed to prevent, detect, address, and mitigate cybersecurity incidents, such incidents may occur. Additionally, we rely on third-parties and their security procedures for the secure storage, processing, maintenance, and transmission of information that is critical to our operations and such third-parties may also suffer cybersecurity incidents. Depending on their nature and scope, this could potentially result in the misappropriation, destruction, corruption or unavailability of critical data and confidential or proprietary information (our own or that of third parties, including information about our customers and employees) and the disruption of business operations.

If there is a cybersecurity incident and we know or suspect that certain personal information has been accessed, or used inappropriately, we may need to inform the affected individuals and may be subject to significant fines and penalties. Further, under certain regulatory schemes, such as the California Consumer Privacy Act (the "CCPA"), individuals may bring private claims and we may be liable for statutory damages. Further, if the technical and operational solutions we have adopted to maintain data security fail, our existing and potential customers may lose confidence in our ability to maintain the confidentiality of their intellectual property, we may be subject to breach of contract claims by our customers and we may suffer reputational and other harm as a result. Our insurance may not be adequate to cover losses associated with such events, and in any case, such insurance may not cover all of the types of costs, expenses and losses we could incur to respond to and remediate a security breach. Defending against investigations, claims or litigation based on any security breach or incident, regardless of their merit, will be costly and may cause reputation harm. The successful assertion of one or more large claims against us that exceed available insurance coverage, denial of coverage as to any specific claim, or any change or cessation in our insurance policies and coverages, including premium increases or the imposition of large deductible requirements, could have a material adverse effect on our reputation, business, financial condition and results of operations.

We are subject to numerous privacy and data security laws and related contractual requirements and our failure to comply with those obligations could cause us significant harm.

In the normal course of our business, we collect, process, use and disclose information about individuals, including protected health information and other patient data, as well as information relating to health

professionals and our employees. The collection, processing, use, disclosure, disposal and protection of such information is highly regulated both in the United States and other jurisdictions, including but not limited to, under HIPAA, as amended by HITECH; U.S. state privacy, security and breach notification and healthcare information laws; the European Union's GDPR; and other European privacy laws as well as privacy laws being adopted in other regions around the world. These laws and regulations are complex and their interpretation is rapidly evolving, making implementation and enforcement, and thus compliance requirements, ambiguous, uncertain and potentially inconsistent. In addition, our collection, processing, use, disclosure, and protection of information is subject to related contractual requirements. Compliance with such laws and related contractual requirements may require changes to our collection, use, transfer, disclosure, or other processing of information about individuals, and may thereby increase compliance costs. Failure to comply with such laws and/or related contractual obligations could result in regulatory enforcement or claims against us for breach of contract, or may lead third parties to terminate their contracts with us and/or choose not to work with us in the future. Should this occur, there could be a material adverse effect on our reputation, business, financial condition, and results of operations.

These regulations often govern the use, handling and disclosure of information about individuals, including medical information and require the use of standard contracts, privacy and security standards and other administrative simplification provisions. In relation to HIPAA, we do not consider our service offerings to generally cause us to be subject as a covered entity; however, in certain circumstances, we are subject to HIPAA as a business associate and may enter into business associate agreements.

Additionally, the Federal Trade Commission (the "FTC") and many state attorneys general are interpreting existing federal and state consumer protection laws to impose evolving standards for the online collection, use, dissemination and security of information about individuals, including health-related information. Courts may also adopt the standards for fair information practices promulgated by the FTC, which concern consumer notice, choice, security and access. Consumer protection laws require us to publish statements that describe how we handle information about individuals and choices individuals may have about the way we handle their information. If such information that we publish is considered untrue, we may be subject to government claims of unfair or deceptive trade practices, which could lead to significant liabilities and consequences. Furthermore, according to the FTC violating consumers' privacy rights or failing to take appropriate steps to keep information about consumers secure may constitute unfair acts or practices in or affecting commerce in violation of Section 5(a) of the FTC Act.

In addition, certain states have adopted robust privacy and security laws and regulations. Such laws and regulations will be subject to interpretation by various courts and other governmental authorities, thus creating potentially complex compliance issues for us and our future customers and strategic partners. For example, the CCPA, which took effect in 2020, imposes obligations and restrictions on businesses regarding their collection, use, and sharing of personal information and provides new and enhanced data privacy rights to California residents, such as affording them the right to access and delete their personal information and to opt out of certain sharing of personal information. Protected health information that is subject to HIPAA is excluded from the CCPA, however, information we hold about individuals which is not subject to HIPAA would be subject to the CCPA. It is unclear how HIPAA and the other exceptions may be applied under the CCPA. The CCPA may increase our compliance costs and potential liability. Many similar privacy laws have been proposed at the federal level and in other states.

The GDPR became enforceable on May 25, 2018. The GDPR regulates our processing of personal data, and imposes stringent requirements. The GDPR includes sanctions for violations up to the greater of €20 million or 4.0% of worldwide gross annual revenue and applies to services providers such as us. In addition, from the beginning of 2021 (when the transitional period following Brexit expires), we will have to comply with the GDPR and also the UK GDPR, with each regime having the ability to fine up to the greater of €20 million (£17 million) or 4% of global turnover. The relationship between the United Kingdom and the European Union in relation to certain aspects of data protection law remains unclear, for example how data transfers between EU member states and the United Kingdom will be treated and the role of the Information Commissioner's Office following the end of the transitional period. These changes will lead to additional costs and increase our overall risk exposure.

Recent legal developments in Europe have created complexity and uncertainty regarding transfers of personal data from the EEA to the United States, e.g. on July 16, 2020, the Court of Justice of the European Union

("CJEU") invalidated the EU-US Privacy Shield Framework ("Privacy Shield") under which personal data could be transferred from the EEA to U.S. entities who had self-certified under the Privacy Shield scheme. While the CJEU upheld the adequacy of the standard contractual clauses (a standard form of contract approved by the European Commission as an adequate personal data transfer mechanism, and potential alternative to the Privacy Shield), it made clear that reliance on them alone may not necessarily be sufficient in all circumstances; this has created uncertainty. We have previously relied on our own Privacy Shield certification and our relevant customers' and third parties' Privacy Shield certification(s) for the purposes of transferring personal data from the EEA to the United States in compliance with the GDPR's data export conditions. We also currently rely on the standard contractual clauses to transfer personal data outside the EEA, including to the United States.

We believe we maintain adequate processes and systems to ensure our and our customers' compliance with the requirements of the GDPR, but it is possible that we could fail to comply or that we could incur liability due to the acts or omissions of our customers. Further, these recent developments will require us to review and amend the legal mechanisms by which we make and/or receive personal data transfers to/ in the United States. In the event we are not able to secure indemnification or the indemnification and any insurance coverage is inadequate to cover our losses, we could suffer significant financial, operational, reputational and other harm and our business, results of operations, financial condition and/or cash flows could be materially adversely affected. Further, as supervisory authorities issue further guidance on personal data export mechanisms, including circumstances where the standard contractual clauses cannot be used, and/or start taking enforcement action, we could suffer additional costs, complaints and/or regulatory investigations or fines, and/or if we are otherwise unable to transfer personal data between and among countries and regions in which we operate, it could affect the manner in which we provide our services, the geographical location or segregation of our relevant systems and operations, and could adversely affect our financial results.

The United States, the European Union, and other jurisdictions where we operate continue to issue new, and enhance existing, privacy and data security protection regulations related to the collection, use, disclosure, disposal and protection of information about individuals, including medical information. Privacy and data security laws are rapidly evolving both in the United States and internationally, and the future interpretation of those laws is somewhat uncertain. For example, we do not know how E.U. regulators will interpret or enforce many aspects of the GDPR and some regulators may do so in an inconsistent manner. In the United States, privacy and data security is an area of emphasis for some but not all state regulators, and new legislation has been and likely will continue to be introduced at the state and/or federal level. For example, there is a new act on the ballot in California, the California Privacy Rights Act, which may go into effect in 2023. Additional legislation or regulation might, among other things, require us to implement new security measures and processes or bring within the legislation or regulation de-identified health or other information about individuals, each of which may require substantial expenditures or limit our ability to offer some of our services.

If we fail to comply with certain healthcare laws, including fraud and abuse laws, we could face substantial penalties and our business, results of operations, financial condition and prospects could be adversely affected.

Even though we do not order healthcare services or bill directly to Medicare, Medicaid or other third party payors, as a result of contractual, statutory or regulatory requirements, we may be subject to healthcare fraud and abuse laws of both the federal government and the states in which we conduct our business. Because of the breadth of these laws and the narrowness of available statutory and regulatory exceptions, it is possible that some of our business activities could be subject to challenge under one or more of such laws. If we or our operations are found to be in violation of any of the laws described above or any other governmental regulations that apply to us, we may be subject to penalties, including civil and criminal penalties, damages, fines, imprisonment and the curtailment or restructuring of our operations, any of which could materially adversely affect our ability to operate our business and our financial results.

We may be unable to adequately enforce or defend our ownership and use of our intellectual property and other proprietary rights.

Our success is dependent upon our intellectual property and other proprietary rights. We rely upon a combination of trademark, trade secret, copyright, patent and unfair competition laws, as well as contractual provisions, to protect our intellectual property and other proprietary rights. In addition, we attempt to protect our intellectual property and proprietary information by enforcing cyber and physical security measures and

requiring our employees and certain of our consultants to enter into confidentiality, non-competition and assignment-of-inventions agreements. The steps we take to protect these rights may not be adequate to prevent misappropriation of our technology by third parties or may not be adequate under the laws of some foreign countries, which may not protect our intellectual property rights to the same extent as do the laws of the United States. Our attempts to protect our intellectual property may be challenged by others or invalidated through administrative process or litigation, and agreement terms that address non-competition are difficult to enforce in many jurisdictions and may not be enforceable in any particular case. In addition, there remains the possibility that others will "reverse engineer" our software products in order to introduce competing products, or that others will develop competing technology independently. If we resort to legal proceedings to enforce our intellectual property rights or to determine the validity and scope of the intellectual property or other proprietary rights of others, the proceedings could be burdensome and expensive, even if we were to prevail. The failure to adequately protect our intellectual property and other proprietary rights may have a material adverse effect on our business, results of operations or financial condition.

Third parties may initiate legal proceedings alleging that we are infringing, misappropriating or otherwise violating their intellectual property rights, the outcome of which would be uncertain and could have a material adverse effect on the success of our business.

Our commercial success depends upon our ability to develop, market and sell our products and services, allowing our customers to use our proprietary technologies without infringing, misappropriating or otherwise violating the intellectual property and proprietary rights of third parties. There is considerable patent and other intellectual property litigation in the software, pharmaceutical and biotechnology industries. We may become party to, or be threatened with, adversarial proceedings or litigation regarding intellectual property rights with respect to our technology and product candidates.

The legal threshold for initiating litigation or contested proceedings is low, so that even lawsuits or proceedings with a low probability of success might be initiated and require significant resources to defend. Litigation and contested proceedings can also be expensive and time-consuming, and our adversaries in these proceedings may have the ability to dedicate substantially greater resources to prosecuting these legal actions than we can. The risks of being involved in such litigation and proceedings may increase as we gain the greater visibility associated with being a public company. Third parties may assert infringement claims against us based on existing patents or patents that may be granted in the future, regardless of merit. We may not be aware of all such intellectual property rights potentially relating to our technology, or we may incorrectly conclude that third-party intellectual property is invalid or that our activities do not infringe such intellectual property. Thus, we do not know with certainty that our technology does not and will not infringe, misappropriate or otherwise violate any third party's intellectual property.

Third parties may assert that we are employing their proprietary technology without authorization. Because patent applications can take many years to issue, there may be currently pending patent applications which may later result in issued patents that the product candidates that we may identify may infringe. In addition, third parties may obtain patents in the future and claim that use of our technologies infringes upon these patents. Moreover, as noted above, there may be existing patents that we are not aware of or that we have incorrectly concluded are invalid or not infringed by our activities.

Parties making claims against us may obtain injunctive or other equitable relief, which could effectively block our ability to further develop and commercialize the product candidates that we may identify. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from our business. In the event of a successful claim of infringement against us, we may have to pay substantial damages (including treble damages and attorneys' fees for willful infringement), pay royalties, redesign our infringing products, be forced to indemnify our customers or collaborators or obtain one or more licenses from third parties, which may be impossible or require substantial time and monetary expenditure.

We may choose to take a license or, if we are found to infringe, misappropriate or otherwise violate a third party's intellectual property rights, we could also be required to obtain a license from such third party to continue developing and marketing our technology. However, we may not be able to obtain any required license on commercially reasonable terms or at all. Even if we were able to obtain a license, it could be non-exclusive, thereby giving our competitors and other third parties access to the same technologies licensed to us and

could require us to make substantial licensing and royalty payments. We could be forced, including by court order, to cease developing and commercializing the infringing technology or product. A finding of infringement could prevent us from commercializing any product candidates or force us to cease some of our business operations, which could materially harm our business. In addition, we may be forced to redesign a product. Claims that we have misappropriated the confidential information or trade secrets of third parties could have a similar material adverse effect on our reputation, business, financial condition and results of operations.

Risks Related to Our Indebtedness

Our indebtedness could materially adversely affect our financial condition and our ability to operate our business, react to changes in the economy or industry or pay our debts and meet our obligations under our debt and could divert our cash flow from operations to debt payments.

We have a significant amount of indebtedness. As of September 30, 2020, we had $80.0 million of outstanding borrowings under our Loan Agreement and $304.9 million in total borrowings under our Credit Agreement. Although we expect to use a substantial portion of the proceeds from this offering to repay indebtedness under our Loan Agreement and the term loan under our Credit Agreement, we will continue to have a significant amount of indebtedness. See "Use of Proceeds." In addition, as of September 30, 2020, we had a $20.0 million revolving credit facility under our Credit Agreement under which we had $19.9 million of availability after giving effect to outstanding letters of credit. See "Management's Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources — Credit Facilities." In addition, subject to restrictions in the agreements governing our Credit Facilities, we may incur additional debt.

Our debt could have important consequences to you, including the following:

- it may be difficult for us to satisfy our obligations, including debt service requirements under our outstanding debt, resulting in possible defaults on and acceleration of such indebtedness;
- our ability to obtain additional financing for working capital, capital expenditures, debt service requirements or other general corporate purposes may be impaired;
- a portion of cash flow from operations may be dedicated to the payment of principal and interest on our debt, therefore reducing our ability to use our cash flow to fund our operations, capital expenditures, future business opportunities, acquisitions and other purposes;
- we may be more vulnerable to economic downturns and adverse industry conditions and our flexibility to plan for, or react to, changes in our business or industry may be more limited;
- our ability to capitalize on business opportunities and to react to competitive pressures, as compared to our competitors, may be compromised due to our level of debt; and
- our ability to borrow additional funds or to refinance debt may be limited.

Furthermore, all of our debt under our Credit Agreement bears interest at variable rates. If these rates were to increase significantly, whether because of an increase in market interest rates or a decrease in our creditworthiness, our ability to borrow additional funds may be reduced and the risks related to our debt would intensify.

Servicing our debt requires a significant amount of cash. For the years ended December 31, 2018 and December 31, 2019 and the nine months ended September 30, 2020, we used cash of $34.4 million, $34.6 million and $44.4 million, respectively, to service our debt. Our ability to generate sufficient cash depends on numerous factors beyond our control, and we may be unable to generate sufficient cash flow to service our debt obligations.

Our business may not generate sufficient cash flow from operating activities to service our debt obligations. Our ability to make payments on and to refinance our debt and to fund planned capital expenditures depends on our ability to generate cash in the future. To some extent, this is subject to general economic, financial, competitive, legislative, regulatory and other factors that are beyond our control.

If we are unable to generate sufficient cash flow from operations to service our debt and meet our other commitments, we may need to refinance all or a portion of our debt, sell material assets or operations, delay capital expenditures or raise additional debt or equity capital. We may not be able to effect any of these actions on a timely basis, on commercially reasonable terms or at all, and these actions may not be sufficient to

meet our capital requirements. In addition, the terms of our existing or future debt agreements may restrict us from pursuing any of these alternatives.

Restrictive covenants in the agreements governing our Credit Facilities may restrict our ability to pursue our business strategies, and failure to comply with any of these restrictions could result in acceleration of our debt.

The operating and financial restrictions and covenants in one or more of the agreements governing our Credit Facilities may materially adversely affect our ability to finance future operations or capital needs or to engage in other business activities. Such agreements limit our ability, among other things, to:

- incur additional indebtedness and guarantee indebtedness;
- pay dividends on or make distributions in respect of our common stock or make other restricted payments;
- make certain acquisitions, investments, loans and advances;
- transfer or sell certain assets;
- create liens on certain assets;
- consolidate, merge, sell or otherwise dispose of all or substantially all of our assets;
- make certain payments in respect of certain junior debt obligations;
- create negative pledges;
- enter into certain transactions with our affiliates; and
- designate our subsidiaries as unrestricted subsidiaries.

In addition, the restrictive covenants in our Credit Agreement require us to maintain a specified first lien leverage ratio when a certain percentage of our revolving credit facility commitments are borrowed and outstanding as of the end of each fiscal quarter. In certain circumstances, our ability to meet this financial covenant may be affected by events beyond our control.

A breach of any of these covenants could result in a default under one or more of our Credit Facilities. Upon the occurrence of an event of default under our Credit Facilities, the lenders could elect to declare all amounts outstanding under our Credit Facilities to be immediately due and payable and terminate any commitments to extend further credit. If we were unable to repay those amounts, the lenders under our Credit Agreement could proceed against the collateral granted to them to secure that indebtedness. We have pledged substantially all of our assets as collateral to secure our Credit Agreement. In the event of an acceleration of our debt upon a default, we may not have or be able to obtain sufficient funds to make any accelerated payments.

Furthermore, the terms of any future indebtedness we may incur could have further additional restrictive covenants. We may not be able to maintain compliance with these covenants in the future, and in the event that we are not able to maintain compliance, we cannot assure you that we will be able to obtain waivers from the lenders or amend the covenants.

We and our subsidiaries may still be able to incur substantially more debt. This could further exacerbate the risks associated with our leverage.

We and our subsidiaries may be able to incur substantial additional debt in the future. Although the agreements governing our Credit Agreement contain restrictions on the incurrence of additional debt, these restrictions are subject to a number of qualifications and exceptions, and the debt incurred in compliance with these restrictions could be substantial. Additionally, we may successfully obtain waivers of these restrictions. If we incur additional debt above the levels currently in effect, the risks associated with our leverage, including those described above, would increase. Our Credit Agreement includes a revolving credit facility in an aggregate principal amount of $20.0 million, with a sub-commitment for issuance of letters of credit of $10.0 million, under which we had $19.9 million of availability as of September 30, 2020, after giving effect to outstanding letters of credit.

Risks Related to our Financial Statements and Results

Impairment of goodwill or other intangible assets may adversely impact future results of operations.

We have intangible assets, including goodwill and other finite-lived and indefinite-lived intangibles, on our balance sheet due to our acquisitions of businesses. The initial identification and valuation of these intangible

assets and the determination of the estimated useful lives at the time of acquisition involve use of management judgments and estimates. These estimates are based on, among other factors, input from accredited valuation consultants, reviews of projected future income cash flows and statutory regulations. The use of alternative estimates and assumptions might have increased or decreased the estimated fair value of our goodwill and other intangible assets that could potentially result in a different impact to our results of operations. If the future growth and operating results of our business are not as strong as anticipated and/or our market capitalization declines, this could impact the assumptions used in calculating the fair value of goodwill or other indefinite-lived intangibles. To the extent goodwill or other indefinite-lived intangibles are impaired, their carrying value will be written down to its implied fair value and a charge will be made to our income from continuing operations. Such an impairment charge could materially and adversely affect our operating results. As of the years ended December 31, 2018 and 2019, and the nine months ended September 30, 2020, the carrying amount of goodwill and other intangibles was $973.9, $943.0 and $919.8 million, respectively, on our consolidated balance sheet.

Our ability to use our NOLs and R&D tax credit carryforwards to offset future taxable income may be subject to certain limitations.

As of December 31, 2019, we had federal and state NOLs of approximately $5.5 million and $2.9 million, respectively, which are available to reduce future taxable income and expire between 2024 and 2036 and 2028 and 2038, respectively. As of December 31, 2019, we had federal and state R&D tax credit carryforwards of approximately $2.2 million and $0.8 million, respectively, to offset future income taxes, which expire between 2020 and 2039. We also had foreign tax credits of approximately $8.5 million, which will start to expire in 2025. These carryforwards that may be utilized in a future period may be subject to limitations based upon changes in the ownership of our stock in a future period. Additionally, we carried forward foreign NOLs of approximately $18.6 million which expire starting in 2023 and Canadian investment tax credits of approximately $1.8 million which expire between 2030 and 2036. Our carryforwards are subject to review and possible adjustment by the appropriate taxing authorities.

In addition, in general, under Section 382 of the Internal Revenue Code of 1986, as amended (the “Code”), and corresponding provisions of state law, a corporation that undergoes an “ownership change,” generally defined as a greater than 50 percentage point change (by value) in its equity ownership by certain stockholders over a three year period, is subject to limitations on its ability to utilize its pre-change NOLs, R&D tax credit carryforwards and disallowed interest expense carryforwards to offset future taxable income. We have performed an analysis through August 15, 2017 and determined that an ownership change as of that date occurred. We may experience further ownership changes in the future as a result of this offering and/or subsequent changes in our stock ownership (which may be outside our control). As a result, if, and to the extent that, we earn net taxable income, our ability to use our pre-change NOLs, R&D tax credit carryforwards and disallowed interest expense carryforwards to offset such taxable income may be subject to limitations.

If our estimates or judgments relating to our critical accounting policies prove to be incorrect or financial reporting standards or interpretations change, our results of operations could be adversely affected.

The preparation of financial statements in conformity with generally accepted accounting principles in GAAP requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. We base our estimates on historical experience, known trends and events, and various other factors that we believe to be reasonable under the circumstances, as provided in “Management’s Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Policies and Significant Judgments and Estimates.” The results of these estimates form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Significant assumptions and estimates used in preparing our consolidated financial statements include the estimated variable consideration included in the transaction price in our contracts with customers, equity-based compensation, and valuation of our equity investments in early-stage biotechnology companies. Our results of operations may be adversely affected if our assumptions change or if actual circumstances differ from those in our assumptions, which could cause our results of operations to fall below the expectations of securities analysts and investors, resulting in a decline in the trading price of our common stock.

Additionally, we regularly monitor our compliance with applicable financial reporting standards and review new pronouncements and drafts thereof that are relevant to us. As a result of new standards, changes to existing

standards and changes in their interpretation, we might be required to change our accounting policies, alter our operational policies, and implement new or enhance existing systems so that they reflect new or amended financial reporting standards, or we may be required to restate our published financial statements. Such changes to existing standards or changes in their interpretation may have an adverse effect on our reputation, business, financial position, and profit.

Changes in accounting standards issued by the Financial Accounting Standards Board (the "FASB"), or other standard-setting bodies may adversely affect trends and comparability of our financial results.

We are required to prepare our financial statements in accordance with GAAP, which is periodically revised and/or expanded. From time to time, we are required to adopt new or revised accounting standards issued by recognized authoritative bodies, including the FASB and the SEC. It is possible that future accounting standards we are required to adopt may require additional changes to the current accounting treatment that we apply to our financial statements and may result in significant changes to our results, disclosures and supporting reporting systems. Such changes could result in a material adverse impact on our results of operations and financial condition.

For example, effective January 1, 2019, we were required to adopt ASC 606, which outlines a single comprehensive model for entities to use in accounting for revenue from contracts with customers. Under ASC 606, third-party pass-through costs and reimbursed costs are included in our measurement of progress. This change in revenue recognition requires significant estimates of project costs that will need to be updated and adjusted on a regular basis. These updates and adjustments are likely to result in variability in our revenue recognition from period to period that may cause unexpected variability in our operating results. Additionally, effective January 1, 2022, we were required to adopt ASC Topic 842 ("ASC 842"), which required us to recognize certain operating leases in our consolidated balance sheet. See Note 2 to our audited consolidated financial statements included elsewhere in this prospectus for more information regarding ASC 606 and ASC 842.

Risks Related to this Offering and Ownership of Our Common Stock

No market currently exists for our common stock, and an active, liquid trading market for our common stock may not develop, which may cause our common stock to trade at a discount from the initial offering price and make it difficult for you to sell the common stock you purchase.

Prior to this offering, there has not been a public market for our common stock. We cannot predict the extent to which investor interest in us will lead to the development of a trading market on the Nasdaq or otherwise or how active and liquid that market may become. If an active and liquid trading market does not develop or continue, you may have difficulty selling any shares of our common stock that you purchase. The initial public offering price for the shares has been determined by negotiations between us, the selling stockholders and the underwriters and may not be indicative of prices that will prevail in the open market following this offering. The market price of our common stock may decline below the initial offering price, and you may not be able to sell your shares of our common stock at or above the price you paid in this offering, or at all.

We are an "emerging growth company" and the reduced disclosure requirements applicable to emerging growth companies may make our common stock less attractive to investors.

We are an "emerging growth company," as defined in the JOBS Act. For so long as we remain an emerging growth company, we are permitted by SEC rules and plan to rely on exemptions from certain disclosure requirements that are applicable to other SEC-registered public companies that are not emerging growth companies. These exemptions include not being required to comply with the auditor attestation requirements of Section 404 of the SOX, not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements, reduced disclosure obligations regarding executive compensation and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. As a result, the information we provide stockholders will be different than the information that is available with respect to other public companies. In this prospectus, we have not included all of the executive compensation related information that would be required if we were not an emerging growth company. We cannot predict whether investors will find our common stock less attractive if we rely on these exemptions.

If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile.

In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an emerging growth company to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to avail ourselves of this exemption from new or revised accounting standards and, therefore, we will not be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies. As a result, our financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates.

You will incur immediate dilution in the net tangible book value of the shares you purchase in this offering.

The initial public offering price of our common stock is higher than the net tangible book value per share of outstanding common stock prior to completion of this offering. Based on our net tangible book value as of September 30, 2020, upon the issuance and sale of shares of common stock by us at an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the front cover of this prospectus, if you purchase our common stock in this offering, you will suffer immediate dilution of approximately $ per share in net tangible book value. Dilution is the amount by which the offering price paid by purchasers of our common stock in this offering will exceed the pro forma net tangible book value per share of our common stock upon completion of this offering. If the underwriters exercise their option to purchase additional shares, you will experience future dilution. A total of and shares of common stock have been reserved for future issuance under the 2020 Incentive Plan and 2020 Employee Stock Purchase Plan, respectively. You may experience additional dilution upon future equity issuances or the exercise of stock options to purchase common stock granted to our directors, officers and employees under our current and future stock incentive plans, including the 2020 Incentive Plan. See “Dilution.”

Our stock price may change significantly following this offering, and you may not be able to resell shares of our common stock at or above the price you paid or at all, and you could lose all or part of your investment as a result.

The trading price of our common stock is likely to be volatile. The stock market has experienced extreme volatility. This volatility often has been unrelated or disproportionate to the operating performance of particular companies. We and the underwriters have negotiated to determine the initial public offering price. You may not be able to resell your shares at or above the initial public offering price due to a number of factors such as those listed in other portions of this “Risk Factors” section and the following:

- results of operations that vary from the expectations of securities analysts and investors;
- results of operations that vary from those of our competitors;
- changes in expectations as to our future financial performance, including financial estimates and investment recommendations by securities analysts and investors;
- declines in the market prices of stocks generally;
- strategic actions by us or our competitors;
- announcements by us or our competitors of significant contracts, new products, acquisitions, joint marketing relationships, joint ventures, other strategic relationships or capital commitments;
- changes in general economic or market conditions or trends in our industry or markets;
- changes in business or regulatory conditions;
- additions or departures of key management personnel;
- future sales of our common stock or other securities by us or our existing stockholders, or the perception of such future sales;
- investor perceptions of the investment opportunity associated with our common stock relative to other investment alternatives;
- the public’s response to press releases or other public announcements by us or third parties, including our filings with the SEC;

- announcements relating to litigation;
- guidance, if any, that we provide to the public, any changes in this guidance or our failure to meet this guidance;
- the development and sustainability of an active trading market for our stock;
- changes in accounting principles; and
- other events or factors, including those resulting from natural disasters, war, acts of terrorism or responses to these events.

These broad market and industry fluctuations may materially adversely affect the market price of our common stock, regardless of our actual operating performance. In addition, price volatility may be greater if the public float and trading volume of our common stock are low.

In the past, following periods of market volatility, stockholders have instituted securities class action litigation. If we were involved in securities litigation, it could have a substantial cost and divert resources and the attention of executive management from our business regardless of the outcome of such litigation.

Our quarterly operating results fluctuate and may fall short of prior periods, our projections or the expectations of securities analysts or investors, which could materially adversely affect our stock price.

Our operating results have fluctuated from quarter to quarter at points in the past, and they may do so in the future. Therefore, results of any one fiscal quarter are not a reliable indication of results to be expected for any other fiscal quarter or for any year. If we fail to increase our results over prior periods, to achieve our projected results or to meet the expectations of securities analysts or investors, our stock price may decline, and the decrease in the stock price may be disproportionate to the shortfall in our financial performance. Results may be affected by various factors, including those described in these risk factors.

We are a holding company with no operations and rely on our operating subsidiaries to provide us with funds necessary to meet our financial obligations.

We are a holding company with no material direct operations. Our principal assets are the shares of common stock of Certara Holdco, Inc. (“Certara Holdco”) that we hold indirectly through our subsidiaries. Certara Holdco, together with its subsidiaries, owns substantially all of our operating assets. As a result, we are dependent on loans, dividends and other payments from our subsidiaries to generate the funds necessary to meet our financial obligations. Our subsidiaries are legally distinct from us and may be prohibited or restricted from paying dividends or otherwise making funds available to us, including restrictions under the covenants of the agreements governing our Credit Facilities. If we are unable to obtain funds from our subsidiaries, we may be unable to meet our financial obligations.

We currently do not intend to declare dividends on our common stock in the foreseeable future and, as a result, your returns on your investment may depend solely on the appreciation of our common stock.

We currently do not expect to declare any dividends on our common stock in the foreseeable future. Instead, we anticipate that all of our earnings in the foreseeable future will be used to provide working capital, to support our operations and to finance the growth and development of our business. Any determination to declare or pay dividends in the future will be at the discretion of our board of directors, subject to applicable laws and dependent upon a number of factors, including our earnings, capital requirements and overall financial conditions. In addition, our ability to pay dividends on our common stock is currently limited by the covenants of our Credit Facilities and may be further restricted by the terms of any future debt or preferred securities. Accordingly, your only opportunity to achieve a return on your investment in our company may be if the market price of our common stock appreciates and you sell your shares at a profit. The market price for our common stock may never exceed, and may fall below, the price that you pay for such common stock.

If securities analysts do not publish research or reports about our business or if they downgrade our stock or our sector, our stock price and trading volume could decline.

The trading market for our common stock will rely in part on the research and reports that industry or financial analysts publish about us or our business or industry. We do not control these analysts. Furthermore, if one or more of the analysts who do cover us were to downgrade our stock or our industry, or the stock of any of our competitors, or publish inaccurate or unfavorable research about our business or industry, the price

of our stock could decline. If one or more of these analysts ceases coverage of us or fails to publish reports on us regularly, we could lose visibility in the market, which in turn could cause our stock price or trading volume to decline.

Future sales, or the perception of future sales, by us or our existing stockholders in the public market following this offering could cause the market price for our common stock to decline.

After this offering, the sale of shares of our common stock in the public market, or the perception that such sales could occur, could harm the prevailing market price of shares of our common stock. These sales, or the possibility that these sales may occur, also might make it more difficult for us to sell equity securities in the future at a time and at a price that we deem appropriate.

Upon consummation of this offering, we will have a total of shares of common stock outstanding. All shares sold in this offering will be freely tradable without restriction or further registration under the Securities Act, except for any shares held by our affiliates, as that term is defined under Rule 144 of the Securities Act ("Rule 144"), including our directors, executive officers and other affiliates (including EQT and Arsenal), which may be sold only in compliance with the limitations described in "Shares Eligible for Future Sale," and any shares purchased in our directed share program which are subject to the lock-up agreements described in "Underwriting."

The shares held by EQT, Arsenal and certain of our directors, officers and employees immediately following the consummation of this offering will represent approximately % of our total outstanding shares of common stock following this offering (which do not include any shares that may be purchased by these holders through our directed share program), based on the number of shares outstanding as of September 30, 2020. Such shares will be "restricted securities" within the meaning of Rule 144 and subject to certain restrictions on resale following the consummation of this offering. Restricted securities may be sold in the public market only if they are registered under the Securities Act or are sold pursuant to an exemption from registration such as Rule 144, as described in "Shares Eligible for Future Sale."

In connection with this offering, we, our directors and executive officers, and holders of substantially all of our common stock prior to this offering have each agreed with the underwriters, subject to certain exceptions, not to dispose of or hedge any of our or their common stock or securities convertible into or exchangeable for shares of common stock during the period from the date of this prospectus continuing through the date 180 days after the date of this prospectus, except with the prior written consent of certain representatives of the underwriters. See "Underwriting" for a description of these lock-up agreements.

Upon the expiration of the contractual lock-up agreements pertaining to this offering, up to an additional shares will be eligible for sale in the public market, of which are held by directors, executive officers and other affiliates and will be subject to volume, manner of sale and other limitations under Rule 144. Following completion of this offering, shares covered by registration rights would represent approximately % of our outstanding common stock (or %, if the underwriters exercise in full their option to purchase additional shares). Registration of any of these outstanding shares of common stock would result in such shares becoming freely tradable without compliance with Rule 144 upon effectiveness of the registration statement. See "Shares Eligible for Future Sale."

As restrictions on resale end or if these stockholders exercise their registration rights, the market price of our shares of common stock could drop significantly if the holders of these shares sell them or are perceived by the market as intending to sell them. These factors could also make it more difficult for us to raise additional funds through future offerings of our shares of common stock or other securities.

In addition, the shares of our common stock reserved for future issuance under the 2020 Incentive Plan or our 2020 Employee Stock Purchase Plan will become eligible for sale in the public market once those shares are issued, subject to provisions relating to various vesting agreements, lock-up agreements and Rule 144, as applicable. A total of and shares of common stock have been reserved for future issuance under the 2020 Incentive Plan and our 2020 Employee Stock Purchase Plan, respectively.

In the future, we may also issue our securities in connection with investments or acquisitions. The amount of shares of our common stock issued in connection with an investment or acquisition could constitute a

material portion of our then-outstanding shares of our common stock. Any issuance of additional securities in connection with investments or acquisitions may result in additional dilution to you.

Provisions in our organizational documents could delay or prevent a change of control.

Certain provisions of our amended and restated certificate of incorporation, amended and restated bylaws and stockholders agreement may have the effect of delaying or preventing a merger, acquisition, tender offer, takeover attempt or other change of control transaction that a stockholder might consider to be in its best interest, including attempts that might result in a premium over the market price of our common stock.

These provisions provide for, among other things:

- the division of our board of directors into three classes, as nearly equal in size as possible, with directors in each class serving three-year terms and with terms of the directors of only one class expiring in any given year;
- that at any time when EQT and certain of its affiliates beneficially own, in the aggregate, less than 40% in voting power of the stock of our company entitled to vote generally in the election of directors, directors may only be removed for cause, and only by the affirmative vote of the holders of at least two-thirds in voting power of all the then-outstanding shares of stock entitled to vote thereon, voting together as a single class;
- the ability of our board of directors to issue one or more series of preferred stock with voting or other rights or preferences that could have the effect of impeding the success of an attempt to acquire us or otherwise effect a change of control;
- advance notice for nominations of directors by stockholders and for stockholders to include matters to be considered at stockholder meetings;
- the right of EQT and certain of its affiliates to nominate to our board of directors a number of nominees equal to (i) the total number of directors comprising our board of directors at such time, multiplied by (ii) the percentage of our outstanding common stock held from time to time by EQT and such affiliates and the obligation of certain of our other pre-IPO stockholders to support such nominees;
- that special stockholder meetings may be called only by or at the direction of our board of directors or the chairman of our board of directors; *provided, however*, that at any time when EQT and certain of its affiliates beneficially own, in the aggregate, at least 40% in voting power of our stock entitled to vote generally in the election of directors, EQT may request a special stockholder meeting be held, which provision may have the effect of deferring, delaying or discouraging hostile takeovers, or changes in control or management of our Company; and
- that certain provisions of our amended and restated certificate of incorporation and amended and restated bylaws pertaining to amendments, our board of directors, limitation of director liability, stockholder consents, annual and special stockholder meetings, competition and corporate opportunities and business combinations, may be amended only by the affirmative vote of the holders of at least two-thirds in voting power of all the then-outstanding shares of our stock entitled to vote thereon, voting together as a single class, if EQT and certain of its affiliates beneficially own, in the aggregate, less than 40% in voting power of our stock entitled to vote generally in the election of directors, which limitation may have the effect of deferring, delaying or discouraging hostile takeovers, or changes in control or management of our Company.

These provisions could make it more difficult for a third party to acquire us, even if the third party's offer may be considered beneficial by many of our stockholders. As a result, our stockholders may be limited in their ability to obtain a premium for their shares. See "Description of Capital Stock."

We are controlled by EQT, whose interests may be different than the interests of other holders of our common stock.

Upon the completion of this offering, EQT will own approximately % of our outstanding common stock, or approximately % if the underwriters exercise in full their option to purchase additional shares, and will have the ability to nominate a majority of the members of our board of directors. As a result, EQT will be able to control actions to be taken by us, including future issuances of our common stock or other securities, the payment of dividends, if any, on our common stock, amendments to our organizational documents and the

approval of significant corporate transactions, including mergers, sales of substantially all of our assets, distributions of our assets, the incurrence of indebtedness and any incurrence of liens on our assets.

The interests of EQT may be materially different than the interests of our other stakeholders. In addition, EQT may have an interest in pursuing acquisitions, divestitures and other transactions that, in their judgment, could enhance their investment, even though such transactions might involve risks to you. For example, EQT may cause us to take actions or pursue strategies that could impact our ability to make payments under our Credit Facilities or cause a change of control. In addition, to the extent permitted by agreements governing our Credit Facilities, EQT may cause us to pay dividends rather than make capital expenditures or repay debt. EQT is in the business of making investments in companies and may from time to time acquire and hold interests in businesses that compete directly or indirectly with us. Our amended and restated certificate of incorporation will provide that none of EQT, any of their respective affiliates or any director who is not employed by us (including any non-employee director who serves as one of our officers in both his director and officer capacities) or his or her affiliates will have any duty to refrain from engaging, directly or indirectly, in the same business activities or similar business activities or lines of business in which we operate. EQT also may pursue acquisition opportunities that may be complementary to our business, and, as a result, those acquisition opportunities may not be available to us.

So long as EQT continues to own a significant amount of our outstanding common stock, even if such amount is less than 50%, they will continue to be able to strongly influence or effectively control our decisions and, so long as EQT continues to own shares of our outstanding common stock, EQT will have the ability to nominate individuals to our board of directors pursuant to a stockholders agreement to be entered into in connection with this offering. See "Certain Relationships and Related Party Transactions — Stockholders Agreement." In addition, EQT will be able to determine the outcome of all matters requiring stockholder approval and will be able to cause or prevent a change of control of our company or a change in the composition of our board of directors and could preclude any unsolicited acquisition of our company. The concentration of ownership could deprive you of an opportunity to receive a premium for your shares of common stock as part of a sale of our company and ultimately might affect the market price of our common stock.

We will be a "controlled company" within the meaning of the Nasdaq rules and the rules of the SEC. As a result, we will qualify for exemptions from certain corporate governance requirements that provide protection to stockholders of other companies.

After completion of this offering, EQT will continue to own a majority of our outstanding common stock. As a result, we will be a "controlled company" within the meaning of the corporate governance standards of the Nasdaq. Under these rules, a company of which more than 50% of the voting power is held by an individual, group or another company is a "controlled company" and may elect not to comply with certain corporate governance requirements, including:

- the requirement that a majority of our board of directors consist of "independent directors" as defined under the rules of the Nasdaq;
- the requirement that we have a compensation committee that is composed entirely of directors who meet the Nasdaq independence standards for compensation committee members with a written charter addressing the committee's purpose and responsibilities; and
- the requirement that our director nominations be made, or recommended to our full board of directors, by our independent directors or by a nominations committee that consists entirely of independent directors and that we adopt a written charter or board resolution addressing the nominations process.

Following this offering, we do not intend to utilize these exemptions. However, if we utilize any of these exemptions in the future, you will not have the same protections afforded to stockholders of companies that are subject to all of the corporate governance requirements of the Nasdaq.

Failure to comply with requirements to design, implement and maintain effective internal controls could have a material adverse effect on our business and stock price.

As a privately-held company, we were not required to evaluate our internal control over financial reporting in a manner that meets the standards of publicly traded companies required by Section 404(a) the SOX ("Section 404"). As a public company, we will have significant requirements for enhanced financial reporting and internal controls. The process of designing and implementing effective internal controls is a continuous

effort that requires us to anticipate and react to changes in our business and the economic and regulatory environments and to expend significant resources to maintain a system of internal controls that is adequate to satisfy our reporting obligations as a public company. If we are unable to establish or maintain appropriate internal financial reporting controls and procedures, it could cause us to fail to meet our reporting obligations on a timely basis, result in material misstatements in our consolidated financial statements and harm our results of operations. In addition, we will be required, pursuant to Section 404, to furnish a report by management on, among other things, the effectiveness of our internal control over financial reporting in the second annual report following the completion of this offering. This assessment will need to include disclosure of any material weaknesses identified by our management in our internal control over financial reporting. The rules governing the standards that must be met for our management to assess our internal control over financial reporting are complex and require significant documentation, testing and possible remediation. Testing internal controls may divert our management's attention from other matters that are important to our business. Our independent registered public accounting firm may be required to issue an attestation report on effectiveness of our internal controls following the completion of this offering. However, while we remain an emerging growth company, we will not be required to include an attestation report on internal control over financial reporting issued by our independent registered public accounting firm.

In connection with the implementation of the necessary procedures and practices related to internal control over financial reporting, we may identify deficiencies that we may not be able to remediate in time to meet the deadline imposed by the SOX for compliance with the requirements of Section 404. In addition, we may encounter problems or delays in completing the remediation of any deficiencies identified by our independent registered public accounting firm in connection with the issuance of their attestation report.

Our testing, or the subsequent testing by our independent registered public accounting firm, may reveal deficiencies in our internal controls over financial reporting that are deemed to be material weaknesses. A material weakness in internal controls could result in our failure to detect a material misstatement of our annual or quarterly consolidated financial statements or disclosures. We may not be able to conclude on an ongoing basis that we have effective internal controls over financial reporting in accordance with Section 404. If we are unable to conclude that we have effective internal controls over financial reporting, investors could lose confidence in our reported financial information, which could have a material adverse effect on the trading price of our common stock.

Our amended and restated bylaws will provide, subject to limited exceptions, that the Court of Chancery of the State of Delaware and, to the extent enforceable, the federal district courts of the United States of America will be the sole and exclusive forums for certain stockholder litigation matters, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our amended and restated bylaws will provide, subject to limited exceptions, that unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall, to the fullest extent permitted by law, be the sole and exclusive forum for any (i) derivative action or proceeding brought on behalf of our company, (ii) action asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of our company to the Company or our stockholders, (iii) action asserting a claim against the Company or any director, officer or other employee of the Company arising pursuant to any provision of the DGCL, or our amended and restated certificate of incorporation or our amended and restated bylaws or as to which the DGCL confers jurisdiction on the Court of Chancery of the State of Delaware or (iv) action asserting a claim against the Company or any director, officer or other employee of the Company governed by the internal affairs doctrine. These provisions shall not apply to suits brought to enforce a duty or liability created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction. Unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States of America shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act, subject to and contingent upon a final adjudication in the State of Delaware of the enforceability of such exclusive forum provision. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock shall be deemed to have notice of and consented to the forum provisions in our amended and restated bylaws.

These choice of forum provisions may limit a stockholder's ability to bring a claim in a different judicial forum, including one that it may find favorable or convenient for disputes with us or any of our directors, officers or other employees which may discourage lawsuits with respect to such claims. Alternatively, if a court were

to find the choice of forum provisions that will be contained in our amended and restated bylaws to be inapplicable or unenforceable with respect to one or more of the specified types of actions or proceedings, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business, operating results and financial condition.

Our board of directors will be authorized to issue and designate shares of our preferred stock in additional series without stockholder approval.

Our amended and restated certificate of incorporation will authorize our board of directors, without the approval of our stockholders, to issue shares of our preferred stock, subject to limitations prescribed by applicable law, rules and regulations and the provisions of our amended and restated certificate of incorporation, as shares of preferred stock in series, to establish from time to time the number of shares to be included in each such series and to fix the designation, powers, preferences and rights of the shares of each such series and the qualifications, limitations or restrictions thereof. The powers, preferences and rights of these additional series of preferred stock may be senior to or on parity with our common stock, which may reduce its value.

We will incur increased costs as a result of operating as a publicly traded company, and our management will be required to devote substantial time to new compliance initiatives.

As a publicly traded company, and particularly after we are no longer an emerging growth company, we will incur additional legal, accounting, and other expenses that we did not previously incur. Although we are currently unable to estimate these costs with any degree of certainty, they may be material in amount. In addition, the SOX, the Dodd-Frank Wall Street Reform and Consumer Protection Act, and the rules of the SEC, and the stock exchange on which our common shares are listed, have imposed various requirements on public companies. Our management and other personnel will need to devote a substantial amount of time to these compliance initiatives as well as investor relations. Moreover, these rules and regulations will increase our legal and financial compliance costs and will make some activities more time-consuming and costly. For example, we expect these rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance, and we may be required to incur additional costs to maintain the same or similar coverage.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Statements made in this prospectus that are not statements of historical fact, including statements about our beliefs and expectations, are forward-looking statements, and should be evaluated as such. Forward-looking statements include information concerning possible or assumed future results of operations, including descriptions of our business plan and strategies. These statements often include words such as “anticipate,” “expect,” “suggest,” “plan,” “believe,” “intend,” “project,” “forecast,” “estimates,” “targets,” “projections,” “should,” “could,” “would,” “may,” “might,” “will,” and other similar expressions. These forward-looking statements are contained throughout this prospectus, including the sections entitled “Prospectus Summary,” “Risk Factors,” “Capitalization,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Business.”

We base these forward-looking statements or projections on our current expectations, plans and assumptions, which we have made in light of our experience in the industry, as well as our perceptions of historical trends, current conditions, expected future developments and other factors we believe are appropriate under the circumstances and at this time. As you read and consider this prospectus, you should understand that these statements are not guarantees of performance or results. The forward-looking statements and projections contained herein are subject to and involve risks, uncertainties and assumptions, and therefore you should not place undue reliance on these forward-looking statements or projections. Although we believe that these forward-looking statements and projections are based on reasonable assumptions at the time they are made, you should be aware that many factors could affect our actual financial results, and therefore actual results might differ materially from those expressed in the forward-looking statements and projections. Factors that might materially affect such forward-looking statements and projections include:

- our ability to compete within our market;
- any deceleration in, or resistance to, the acceptance of model-informed biopharmaceutical discovery;
- changes or delays in government regulation relating to the biopharmaceutical industry;
- increasing competition, regulation and other cost pressures within the pharmaceutical and biotechnology industries;
- trends in R&D spending, the use of third parties by biopharmaceutical companies and a shift toward more R&D occurring at smaller biotechnology companies;
- consolidation within the biopharmaceutical industry;
- reduction in the use of our products by academic institutions;
- pricing pressures due to increased customer utilization of our products;
- our ability to successfully enter new markets, increase our customer base and expand our relationships with existing customers;
- the occurrence of natural disasters and epidemic diseases, such as the recent COVID-19 pandemic;
- any delays or defects in our release of new or enhanced software or other biosimulation tools;
- failure of our existing customers to renew their software licenses or any delays or terminations of contracts or reductions in scope of work by our existing customers;
- our ability to accurately estimate costs associated with our fixed-fee contracts;
- our ability to retain key personnel or recruit additional qualified personnel;
- risks related to our contracts with government customers, including the ability of third parties to challenge our receipt of such contracts;
- our ability to sustain recent growth rates;
- any future acquisitions and our ability to successfully integrate such acquisitions;
- the accuracy of our addressable market estimates;
- the length and unpredictability of our software and service sales cycles;
- our ability to successfully operate a global business;

- our ability to comply with applicable anti-corruption, trade compliance and economic sanctions laws and regulations;
- risks related to litigation against us;
- the adequacy of our insurance coverage and our ability to obtain adequate insurance coverage in the future;
- our ability to perform our services in accordance with contractual requirements, regulatory standards and ethical considerations;
- the loss of more than one of our major customers;
- our future capital needs;
- the ability or inability of our bookings to accurately predict our future revenue and our ability to realize the anticipated revenue reflected in our backlog;
- any disruption in the operations of the third-party providers who host our software solutions or any limitations on their capacity or interference with our use;
- our ability to reliably meet our data storage and management requirements, or the experience of any failures or interruptions in the delivery of our services over the internet;
- our ability to comply with the terms of any licenses governing our use of third-party open source software utilized in our software solutions;
- any breach of our security measures or unauthorized access to customer data;
- our ability to comply with applicable privacy and data security laws;
- our ability to adequately enforce or defend our ownership and use of our intellectual property and other proprietary rights;
- any allegations that we are infringing, misappropriating or otherwise violating a third party's intellectual property rights;
- our ability to meet the obligations under our current or future indebtedness as they become due and have sufficient capital to operate our business and react to changes in the economy or industry;
- any limitations on our ability to pursue our business strategies due to restrictions under our current or future indebtedness or inability to comply with any restrictions under such indebtedness;
- any impairment of goodwill or other intangible assets;
- our ability to use our NOLs and R&D tax credit carryforwards to offset future taxable income;
- the accuracy of our estimates and judgments relating to our critical accounting policies and any changes in financial reporting standards or interpretations;
- actions by our controlling stockholders;
- any inability to design, implement, and maintain effective internal controls when required by law;
- the costs and management time associated with operating as a publicly traded company; and
- the other factors discussed under "Risk Factors."

The preceding list is not intended to be an exhaustive list of all of our forward-looking statements. The forward-looking statements are based on our beliefs, assumptions and expectations of future performance, taking into account the information currently available to us. These statements are only predictions based upon our current expectations and projections about future events. There are important factors that could cause our actual results, level of activity, performance or achievements to differ materially from the results, level of activity, performance or achievements expressed or implied by the forward-looking statements. Other sections of this prospectus may include additional factors that could adversely impact our business and financial performance. Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time and it is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. Before investing in our common stock, investors should be aware that the occurrence of the events described under the caption "Risk Factors" and elsewhere in this prospectus could have a material adverse effect on our business, results of operations and future financial performance.

You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance and events and circumstances reflected in the forward-looking statements will be achieved or occur. Except as required by law, we undertake no obligation to update publicly any forward-looking statements for any reason after the date of this prospectus to conform these statements to actual results or to changes in our expectations.

USE OF PROCEEDS

We estimate that we will receive net proceeds of approximately $ million from the sale of shares of our common stock in this offering, based on an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the front cover of this prospectus, and after deducting the underwriting discounts and commissions and estimated offering expenses.

We will not receive any proceeds from the sale of shares of our common stock by the selling stockholders.

We intend to use the net proceeds received by us from this offering to repay outstanding indebtedness under the Loan Agreement, a portion of our term loan under our Credit Agreement and the remainder for general corporate purposes. To the extent we raise more proceeds in this offering than currently estimated, the amount of cash on hand used would be reduced, and to the extent the proceeds exceed the amount required to repay outstanding indebtedness under the Loan Agreement and a portion of our term loan under our Credit Agreement, we will use such excess proceeds for general corporate purposes, which may include, among other things, further repayment of indebtedness. To the extent we raise less proceeds in this offering than currently estimated, the amount of cash on hand used to repay the aforementioned indebtedness would be increased. See "Management's Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources — Indebtedness" for additional information.

As of September 30, 2020, we had $80.0 million principal amount outstanding under the Loan Agreement, $304.9 million of outstanding borrowings on the first lien term loan under our Credit Agreement, $0.0 million of outstanding borrowings under the revolving credit facility under our Credit Agreement and outstanding letters of credit of $0.1 million under the Credit Agreement. The Loan Agreement matures on August 14, 2025 and bears interest at a rate per annum equal to 8.25%. The Credit Agreement matures on August 14, 2024, with respect to the term loan thereunder, and August 15, 2022, with respect to the revolving credit facility thereunder. Borrowings under the Credit Agreement currently bear interest at a rate per annum equal to either (a) the Eurocurrency rate, with a floor of 0.00%, as adjusted for the reserve percentage required under regulations issued by the Federal Reserve Board for determining maximum reserve requirements with respect to Eurocurrency funding, plus an applicable margin rate of 3.50% for the term loan and between 4.00% and 3.50% for revolving credit loans, depending on the applicable first lien leverage ratio or (b) an alternate base rate ("ABR"), with a floor of 1.00%, plus an applicable margin rate of 2.50% for the term loan or between 3.00% and 2.50% for revolving credit loans, depending on the applicable first lien leverage ratio. The ABR is determined as the greatest of (a) the prime rate, (b) the federal funds effective rate, plus 0.50% or (c) the Eurocurrency rate plus 1.00%. See "Management's Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources — Indebtedness" for additional information regarding our Credit Facilities. Certain of the underwriters and/or certain of their affiliates are lenders under our Credit Agreement and, as a result, will receive a portion of the net proceeds from this offering.

A $1.00 increase (decrease) in the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the front cover of this prospectus, would increase (decrease) the net proceeds to us from this offering by $ million, assuming the number of shares offered by us, as set forth on the front cover of this prospectus, remains the same and after deducting the assumed underwriting discounts and commissions and estimated offering expenses payable by us. An increase (decrease) of 100,000 shares from the expected number of shares to be sold by us in this offering, assuming no change in the assumed initial public offering price per share, which is the midpoint of the price range set forth on the front cover of this prospectus, would increase (decrease) our net proceeds from this offering by $ million.

DIVIDEND POLICY

We currently do not expect to declare any dividends on our common stock in the foreseeable future. Instead, we anticipate that all of our earnings in the foreseeable future will be used to provide working capital, to support our operations, to finance the growth and development of our business and to reduce our net debt. Any determination to declare dividends in the future will be at the discretion of our board of directors, subject to applicable laws, and will be dependent on a number of factors, including our earnings, capital requirements and overall financial condition. In addition, because we are a holding company, our ability to pay dividends on our common stock may be limited by restrictions on our ability to obtain sufficient funds through dividends from subsidiaries, including restrictions under the covenants of the agreements governing our Credit Facilities, and may be further restricted by the terms of any future debt or preferred securities. See “Management’s Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources — Indebtedness” for more information about our Credit Facilities.

CAPITALIZATION

The following table sets forth our cash and cash equivalents and capitalization as of September 30, 2020:

- on an actual basis; and
- on an as adjusted basis, giving effect to (i) the sale by us of shares of our common stock in this offering at an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the front cover of this prospectus, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us and (ii) the application of the net proceeds received by us from this offering to repay outstanding indebtedness under the Loan Agreement and a portion of our term loan under our Credit Agreement, as described in "Use of Proceeds."

You should read this table together with "Selected Consolidated Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and the related notes appearing elsewhere in this prospectus.

	AS OF SEPTEMBER 30, 2020	
	ACTUAL	AS ADJUSTED
	(IN THOUSANDS)	
Cash and cash equivalents	$ 29,937	$
Long term debt, including current portion of long-term debt:		
Credit Agreements:		
Term loans	384,888	
Revolving credit facility	—	
Debt issuance costs	(5,698)	
Total debt	379,190	
Stockholders' Equity:		
Common stock, $0.01 par value, voting common stock; 1,000 shares authorized, actual, 100 shares issued and outstanding, actual, shares authorized, as adjusted, shares issued and outstanding, as adjusted		
Additional paid-in capital	511,943	
Accumulated deficit	(7,891)	
Accumulated other comprehensive loss	(6,514)	
Total stockholders' equity	497,538	
Total capitalization	$876,728	

A $1.00 increase or decrease in the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the front cover of this prospectus, would increase or decrease, as applicable, on a pro forma as adjusted basis, cash and cash equivalents, additional paid-in capital, total stockholders' equity and total capitalization by $ million, assuming the number of shares offered by us, as set forth on the front cover of this prospectus, remains the same and after deducting assumed underwriting discounts and commissions and estimated offering expenses payable by us and the application of the net proceeds thereof as described in "Use of Proceeds." An increase or decrease of 100,000 shares in the number of shares sold in this offering by us would increase or decrease, as applicable, on a pro forma as adjusted basis, cash and cash equivalents, additional paid-in capital, total stockholders' equity and total capitalization by $ million, assuming an initial public offering price of $ per share, which is the midpoint of the price range set forth on the front cover of this prospectus, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us and the application of the net proceeds thereof as described in "Use of Proceeds."

The number of shares of our common stock to be outstanding immediately after this offering is based on shares outstanding as of September 30, 2020 (after giving effect to the for 1 forward stock split to be effected upon the filing of our amended and restated certificate of incorporation in connection with this offering) and:

- assumes the issuance of shares of common stock to be issued to the Former Unit Holders in connection with the closing of this offering (which amount of shares is based upon an assumed initial public offering price of $ per share which is the midpoint of the range set forth on the cover page of this prospectus; and
- does not reflect shares of common stock available for future issuance under the 2020 Incentive Plan or shares of common stock available for future issuance under our 2020 Employee Stock Purchase Plan.

A $1.00 increase in the assumed initial public offering price referred to above shall modify the forward stock-split ratio and the number of shares to be received by the Former Unit Holders resulting in an increase to the number of shares of common stock to be outstanding immediately after this offering by shares and an increase of shares to be received by the Former Unit Holders.

A $1.00 decrease in the assumed initial public offering price referred to above shall modify the forward stock-split ratio and the number of shares to be received by the Former Unit Holders resulting in a decrease to the number of shares of common stock to be outstanding immediately after this offering by shares and a decrease of shares to be received by the Former Unit Holders.

DILUTION

If you invest in our common stock in this offering, your ownership interest in us will be diluted to the extent of the difference between the initial public offering price per share of our common stock and the net tangible book value per share of our common stock as adjusted to give effect to this offering. Dilution results from the fact that the per share offering price of the common stock is substantially in excess of the book value per share attributable to the shares of common stock held by existing stockholders.

Our net tangible book value as of September 30, 2020 was approximately $ million or $ per share. We calculate net tangible book value per share by taking the amount of our total tangible assets, reduced by the amount of our total liabilities, and then dividing that amount by the total number of shares of common stock outstanding.

After giving effect to our sale of the shares in this offering at an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the front cover of this prospectus, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us and after giving effect to the application of the net proceeds from this offering as described under "Use of Proceeds," our net tangible book value (deficit) as adjusted to give effect to this offering on September 30, 2020 would have been $ million, or $ per share. This amount represents an immediate increase in net tangible book value of $ per share to existing stockholders and an immediate dilution in net tangible book value of $ per share to new investors purchasing shares in this offering at the initial public offering price.

The following table illustrates this dilution on a per share basis:

Initial public offering price per share		$
Net tangible book value per share as of September 30, 2020 before giving effect to this offering	$	
Increase in net tangible book value per share attributable to new investors purchasing shares in this offering		
Net tangible book value (deficit) per share as adjusted to give effect to this offering		
Dilution per share to new investors in this offering		$

Dilution is determined by subtracting net tangible book value per share of common stock as adjusted to give effect to this offering, from the initial public offering price per share of common stock.

The following table summarizes, on a pro forma basis as of September 30, 2020, after giving effect to the adoption and filing of our amended and restated certificate of incorporation prior to the completion of this offering, the differences between the number of shares purchased from us, the total consideration paid to us, and the average price per share paid by existing stockholders and by new investors. As the table shows, new investors purchasing shares in this offering will pay an average price per share substantially higher than our existing stockholders paid. The table below is based on shares of common stock outstanding immediately after the consummation of this offering and does not give effect to shares of common stock reserved for future issuance under the 2020 Incentive Plan and our 2020 Employee Stock Purchase Plan. A total of shares of common stock have been reserved for future issuance under the 2020 Incentive Plan. The table below is based on an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the front cover of this prospectus, for shares purchased in this offering and excludes underwriting discounts and commissions and estimated offering expenses payable by us:

	SHARES PURCHASED		TOTAL CONSIDERATION[1]		AVERAGE PRICE PER SHARE
	NUMBER	PERCENT	AMOUNT	PERCENT	
			(IN MILLIONS)		
Existing stockholders			$		$
New investors					
Total		100.0%	$	100.0%	

(1) Assumes no exercise by the underwriters of their option to purchase up to additional shares of common stock from us.

Sales of shares of our common stock by the selling stockholders in this offering will reduce the number of shares of common stock held by existing stockholders to , or approximately % of the total shares of common stock outstanding after the completion of this offering, and will increase the number of shares held by investors purchasing shares in this offering to , or approximately % of the total shares of common stock outstanding after the completion of this offering.

If the underwriters were to fully exercise the underwriters' option to purchase additional shares of our common stock, the percentage of shares of our common stock held by existing stockholders would be % of the aggregate number of shares of common stock outstanding after this offering after giving effect to sales by the selling stockholders, and the percentage of shares of our common stock held by new investors would be % of the aggregate number of shares of common stock outstanding after this offering after giving effect to sales by the selling stockholders.

Assuming the number of shares offered by us, as set forth on the front cover of this prospectus, remains the same, excluding assumed underwriting discounts and estimated commissions and offering expenses payable by us, a $1.00 increase or decrease in the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the front cover of this prospectus, would increase or decrease total consideration paid by new investors and total consideration paid by all stockholders by approximately $ million.

SELECTED CONSOLIDATED FINANCIAL DATA

The following table sets forth the selected consolidated financial data of the Company and its consolidated subsidiaries for the periods and dates indicated.

The balance sheet data as of September 30, 2020 and the statements of operations and comprehensive income (loss) and cash flow data for the nine months ended September 30, 2020 and 2019 have been derived from our unaudited condensed consolidated financial statements included elsewhere in this prospectus. The balance sheet data as of December 31, 2019 and 2018 and the statements of operations and comprehensive income (loss) and cash flow data for the years ended December 31, 2019 and 2018 have been derived from our audited consolidated financial statements included elsewhere in this prospectus.

The selected consolidated financial data set forth below should be read in conjunction with "Risk Factors," "Capitalization," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our unaudited condensed consolidated financial statements and audited consolidated financial statements included elsewhere in this prospectus.

	NINE MONTHS ENDED SEPTEMBER 30,		YEAR ENDED DECEMBER 31,	
	2020	2019	2019	2018
	(in thousands)			
Statement of operations data and comprehensive income (loss):				
Revenues:				
Software	$ 55,925	$ 51,453	$ 68,341	$ 46,849
Services	122,964	103,201	140,170	116,870
Total revenues	178,889	154,654	208,511	163,719
Cost of revenues:				
Software	9,806	8,786	12,544	11,223
Services	56,054	49,031	67,226	59,820
Total cost of revenues	65,860	57,817	79,770	71,043
Operating expenses:				
Sales and marketing	8,773	7,946	10,732	9,416
Research and development	9,139	8,651	11,633	10,478
General and administrative	36,125	35,630	47,926	43,393
Intangible asset amortization	28,056	26,908	36,241	31,625
Depreciation and amortization expense	1,836	2,140	2,596	2,416
Total operating expenses	83,929	81,275	109,128	97,328
Income (loss) from operations	29,100	15,562	19,613	(4,652)
Other expenses:				
Interest expenses	(19,810)	(21,011)	(28,004)	(27,802)
Miscellaneous, net	456	(163)	(760)	(107)
Total other expenses	(19,354)	(21,174)	(28,764)	(27,909)
Income (loss) before income taxes	9,746	(5,612)	(9,151)	(32,561)
Provision for (benefit from) income taxes	4,696	(2,701)	(225)	697
Net income (loss)	5,050	(2,911)	(8,926)	(33,258)
Other comprehensive (loss):				
Foreign currency translation adjustment	513	(3,383)	433	(16,721)
Change in fair value of interest rate swap, net of tax	(1,530)	(4,441)	(4,283)	1,079
Total other comprehensive loss	(1,017)	(7,824)	(3,850)	(15,642)
Comprehensive income (loss)	$ 4,033	$ (10,735)	$ (12,776)	$ (48,900)

	NINE MONTHS ENDED SEPTEMBER 30,		YEAR ENDED DECEMBER 31,	
	2020	2019	2019	2018
Per share data:				
Income (loss) per share attributable to common stockholders:				
Basic	$ 50,500	$ (29,110)	$ (89,260)	$ (332,580)
Diluted	50,500	(29,110)	(89,260)	(332,580)
Weighted average common shares outstanding:				
Basic	100	100	100	100
Diluted	100	100	100	100

	NINE MONTHS ENDED SEPTEMBER 30,		YEAR ENDED DECEMBER 31,	
	2020	2019	2019	2018
	(in thousands)			
Cash flow data:				
Net cash provided by (used in):				
Operating activities	$ 32,129	$ 15,783	$ 38,025	$ 11,592
Investing activities	(7,209)	(6,866)	(9,517)	(73,905)
Financing activities	(24,103)	(7,640)	(8,489)	57,296
Cash paid for interest	21,077	21,407	26,428	25,713
Cash paid for income taxes, net	6,675	3,149	4,109	3,165

	AS OF SEPTEMBER 30,	AS OF DECEMBER 31,	
	2020	2019	2018
	(in thousands)		
Balance sheet data:			
Cash and cash equivalents	$ 29,937	$ 29,256	$ 11,684
Accounts receivable, net of allowance for doubtful accounts	48,830	49,642	46,493
Property and equipment, net	4,355	4,623	5,401
Goodwill	515,587	514,996	514,274
Intangible assets, net of accumulated amortization	404,255	427,998	459,623
Total assets	1,020,380	1,037,069	1,051,493
Total liabilities	522,842	545,021	558,724
Total stockholders' equity	497,538	492,048	492,769

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion summarizes the significant factors affecting the operating results, financial condition, liquidity, and cash flows of our Company as of and for the periods presented below. The following discussion and analysis should be read in conjunction with "Selected Consolidated Financial Data," the condensed consolidated financial statements and the related notes thereto and the consolidated financial statements and the related notes thereto all included elsewhere in this prospectus. The statements in this discussion regarding industry outlook, our expectations regarding our future performance, liquidity, and capital resources, and all other non-historical statements in this discussion are forward-looking statements and are based on the beliefs of our management, as well as assumptions made by, and information currently available to, our management. Actual results could differ materially from those discussed in or implied by forward-looking statements as a result of various factors, including those discussed below and elsewhere in this prospectus, particularly in the sections entitled "Special Note Regarding Forward-Looking Statements" and "Risk Factors."

Executive Overview

We accelerate medicines to patients using biosimulation software and technology to transform traditional drug discovery and development. Biosimulation is a powerful technology used to conduct virtual trials using virtual patients to predict how drugs behave in different individuals. Biopharmaceutical companies use our proprietary biosimulation software throughout drug discovery and development to inform critical decisions that not only save significant time and money but also advance drug safety and efficacy, improving millions of lives each year.

As a global leader in biosimulation based on 2019 revenue, we provide an integrated, end-to-end platform used by more than 1,600 biopharmaceutical companies and academic institutions across 60 countries, including all of the top 35 biopharmaceutical companies by R&D spend in 2019. Since 2014, customers who use our biosimulation software and technology-enabled services have received over 90% of all new drug approvals by the FDA. Moreover, 17 global regulatory authorities license our biosimulation software to independently analyze, verify, and review regulatory submissions, including the FDA, Europe's EMA, Health Canada, Japan's PMDA, and China's NMPA. Demand for our offerings continues to expand rapidly.

We build our biosimulation technology on first principles of biology, chemistry, and pharmacology with proprietary mathematical algorithms that model how medicines and diseases behave in the body. For over two decades, we have honed and validated our biosimulation technology with an abundance of data from scientific literature, lab research, and preclinical and clinical studies. In turn, our customers use biosimulation to conduct virtual trials to answer critical questions, such as: What will be the human response to a drug based on preclinical data? How will other drugs interfere with this new drug? What is a safe and efficacious dose for children, the elderly, or patients with pre-existing conditions? Virtual trials may be used to optimize dosing on populations that are otherwise difficult to study for ethical or logistical reasons, such as infants, pregnant women, the elderly, and cancer patients.

Biosimulation results need to be incorporated into regulatory documents for compelling submissions. Accordingly, we provide regulatory science solutions and integrate them with biosimulation so that our customers can navigate the complex and evolving regulatory landscape and maximize their chances of approval. Our differentiated regulatory services are powered by submissions management software and natural language processing for scalability and speed, allowing us to deliver more than 200 regulatory submissions over the past four years. Our team of more than 200 regulatory professionals has extensive experience applying industry guidelines and global regulatory requirements.

The final hurdle to delivering medicines to patients is market access, defined as strategies, processes, and activities to ensure that therapies are available to patients at the right price. We believe that biosimulation and market access will continue to be increasingly intertwined as health systems and countries move toward outcomes-based pricing. We have recently expanded into technology-enabled market access solutions, which help our customers understand the real-world impact of therapies and dosing regimens earlier in the process and

effectively communicate this to payors and health authorities. Our solutions are underpinned by technologies such as Bayesian statistical software and SaaS-based value communication tools.

With continued innovation in and adoption of our biosimulation software and technology-enabled services, we believe more biopharmaceutical companies worldwide will leverage more of our end-to-end platform to reduce cost, accelerate speed to market, and ensure safety and efficacy of medicines for all patients.

Key Factors Affecting Our Performance

We believe that the growth of and future success of our business depends on many factors. While each of these factors presents significant opportunities for our business, they also pose important challenges that we must successfully address to sustain our growth and improve results of operations.

Customer Retention and Expansion

Our future operating results depend, in part, on our ability to successfully enter new markets, increase our customer base, and retain and expand our relationships with existing customers. We monitor two key performance indicators to evaluate retention and expansion: new bookings and renewal rates.

- ***Bookings:*** Our new bookings represent a signed contract or purchase order where there is sufficient or reasonable certainty about the customer's ability and intent to fund and commence the software and/or services. Bookings vary from period to period depending on numerous factors, including the overall health of the biopharmaceutical industry, regulatory developments, industry consolidation, and sales performance. Bookings have varied and will continue to vary significantly from quarter to quarter and from year to year. See "Risk Factors — Risks Related to Our Business — Our bookings might not accurately predict our future revenue, and we might not realize all or any part of the anticipated revenue reflected in our backlog."
- ***Renewal Rates:*** Our renewal rates measure the percentage of software customers who renew their licenses or subscriptions at the end of the license or subscription periods. The renewal rate is based on revenues and excludes the effect of price increases or expansions.

The table below summarizes our quarterly bookings and renewal rate trends:

	2018 Q1	2018 Q2	2018 Q3	2018 Q4	2018 FULL YEAR	2019 Q1	2019 Q2	2019 Q3	2019 Q4	2019 FULL YEAR	2020 Q1	2020 Q2	2020 Q3	YTD 2019	YTD 2020
Bookings	53.4	45.3	46.0	82.9	227.5	66.6	74.7	48.5	69.6	259.5	61.0	70.1	72.9	189.9	204.0
Renewal Rate	93%	94%	96%	92%	94%	93%	89%(1)	95%	95%	93%	92%	96%	84%(2)	92%	91%

(1) Due to late renewals by several large biosimulation software customers.

(2) Due to the completion of a large contract for a regulatory submission software.

Investments in Growth

We have invested and intend to continue to invest in expanding the breadth and depth of our solutions, including through acquisitions and international expansion. We expect to continue to invest (i) in scientific talent to expand our ability to deliver solutions across the drug development spectrum; (ii) in sales and marketing to promote our solutions to new and existing customers and in existing and expanded geographies; (iii) in research and development to support existing solutions and innovate new technology; and (iv) in other operational and administrative functions to support our expected growth. We expect that our headcount will increase over time and also expect our total operating expenses will continue to increase over time, albeit, at a rate lower than revenue growth.

Our Operating Environment

The acceptance of model-informed biopharmaceutical discovery and development by regulatory authorities affects the demand for our products and services. Support for the use of biosimulation in discovery and development from regulatory bodies, such as the FDA and EMA, has been critical to its rapid adoption by the

biopharmaceutical industry. There has been a steady increase in the recognition by regulatory and academic institutions of the role that modeling and simulation can play in the biopharmaceutical development and approval process, as demonstrated by new regulations and guidance documents describing and encouraging the use of modeling and simulation in the biopharmaceutical discovery, development, testing, and approval process, which has directly led to an increase in the demand for our services. Changes in government or regulatory policy, or a reversal in the trend toward increasing the acceptance of and reliance upon *in silico* data in the drug approval process, could decrease the demand for our products and services or lead regulatory authorities to cease use of, or to recommend against the use of, our products and services.

Governmental agencies throughout the world, but particularly in the United States where the majority of our customers are based, strictly regulate the biopharmaceutical development process. Our business involves helping biopharmaceutical companies strategically and tactically navigate the regulatory approval process. New or amended regulations are expected to result in higher regulatory standards and often additional revenues for companies that service these industries. However, some changes in regulations, such as a relaxation in regulatory requirements or the introduction of streamlined or expedited approval procedures, or an increase in regulatory requirements that we have difficulty satisfying or that make our regulatory strategy services less competitive, could eliminate or substantially reduce the demand for our regulatory services.

Competition

The market for our biosimulation products and related services for the biopharmaceutical industry is competitive and highly fragmented. In biosimulation software, we compete with other scientific software providers, technology companies, in-house development by biopharmaceutical companies, and certain open source solutions. In the technology-enabled services market, we compete with specialized companies, in-house teams at biopharmaceutical companies, and academic and government institutions. In some standard biosimulation services, and in regulatory and market access, we also compete with contract research organizations. Some of our competitors and potential competitors have longer operating histories in certain segments of our industry than we do and could have greater financial, technical, marketing, R&D, and other resources. Some of our competitors offer products and services directed at more specific markets than those we target, enabling these competitors to focus a greater proportion of their efforts and resources on those specific markets. Some competing products are developed and made available at lower cost by government organizations and academic institutions, and these entities may be able to devote substantial resources to product development. Some clinical research organizations or technology companies may decide to enter into or expand their offerings in the biosimulation area, whether through acquisition or internal development. We also face competition from open source software initiatives, in which developers provide software and intellectual property free of charge, such as R and PK-Sim software. In addition, some of our customers spend significant internal resources in order to develop their own solutions.

Impact of COVID-19

The continued spread of COVID-19 may adversely impact our business, financial condition or results of operations as a result of increased costs, negative impacts to our healthy workforce or a sustained economic downturn. The extent to which the COVID-19 pandemic may impact our business in the future is highly uncertain and cannot be predicted. In addition, a recession or a prolonged period of depressed economic activity related to COVID-19 and measures taken to mitigate its spread could have a material adverse effect on our business, financial condition and results of operations. As of September 30, 2020, there have been no material adverse impacts on the Company's financial condition, results of operations or cash flows.

Non-GAAP Measures

Management uses various financial metrics, including total revenues, income from operations, net income, and certain metrics that are not required by, or presented in accordance with, GAAP, such as Adjusted EBITDA, to measure and assess the performance of our business, to evaluate the effectiveness of our business strategies, to make budgeting decisions, to make certain compensation decisions, and to compare our performance against that of other peer companies using similar measures. We believe that presentation of the GAAP and the non-GAAP metrics in this prospectus will aid investors in understanding our business.

Management measures operating performance based on Adjusted EBITDA defined for a particular period as net income (loss) excluding interest expense, provision (benefit) for income taxes, depreciation and amortization expense, intangible asset amortization, equity-based compensation expense, acquisition and integration expense, and other items not indicative of our ongoing operating performance.

We believe Adjusted EBITDA is helpful to investors, analysts, and other interested parties because it can assist in providing a more consistent and comparable overview of our operations across our historical periods. In addition, this measure is frequently used by analysts, investors, and other interested parties to evaluate and assess performance.

Adjusted EBITDA is a non-GAAP measure and is presented for supplemental purposes only and should not be considered as an alternative or substitute to financial information presented in accordance with GAAP. Adjusted EBITDA has certain limitations in that it does not include the impact of certain expenses that are reflected in our consolidated statement of operations that are necessary to run our business. Other companies, including other companies in our industry, may not use this measure and may calculate it differently than as presented on this prospectus, limiting the usefulness as a comparative measure. See footnote (1) under "Prospectus Summary — Summary Consolidated Financial Data" for more information about our non-GAAP measures and a reconciliation of Adjusted EBITDA to net income (loss), the nearest measure calculated in accordance with GAAP.

Components of Results of Operations

Revenues

Our business generates revenue from the sales of software products and delivery of consulting services.

- ***Software***. Our software business generates revenues from software licenses, software subscriptions and software maintenance as follows:
  - *Software licenses*: We recognize revenue for software license fees upfront, upon delivery of the software license.
  - *Software subscription*: Subscription revenue consists of subscription fees to provide our customers access to and related support for our cloud-based solutions. We recognize subscription fees ratably over the term of the subscription, usually one to three years. Any subscription revenue paid upfront that is not recognized in the current period is included in deferred revenue in our consolidated balance sheet until earned.
  - *Software maintenance*: Software maintenance revenue includes fees for providing updates and technical support for software offerings. Software maintenance revenue is recognized ratably over the contract term, usually one year.
- ***Services***. Our services business generates revenues primarily from technology-enabled services and professional services, which include software implementation services. Our service arrangements are time and materials, fixed fee, or prepaid. Revenues are recognized over the time services are performed for time and materials, and over time by estimating progress to completion for fixed fee and prepaid services.

Cost of Revenues

- ***Software***. Cost of revenues for software products includes employee-related expenses for employees directly involved in the delivery of our software products (comprised of salaries and benefits), distributor fees, and amortization of capitalized software. We intend to continue to invest additional resources in our software offerings to increase our delivery capacity. We may add or expand computing infrastructure capacity in the future, migrate to new computing infrastructure service providers, and make additional investments in the availability and security of our solutions.
- ***Services***. Costs of revenues for our services consists primarily of employee-related expenses associated with providing these services, including salaries, benefits, equity-based compensation, the costs of third-party subcontractors, travel costs, and allocated overhead. The costs of providing consulting services is significantly higher as a percentage of the related revenues than for our software products directly due to direct labor and third-party subcontractors' costs.

Operating Expenses

- ***Sales and Marketing***. Sales and marketing expense consists primarily of employee-related expenses, sales commissions, brand development, advertising, travel-related expenses and industry conferences and events. We plan to continue to invest in sales and marketing to increase penetration of our existing client base and expand to new clients.
- ***Research and Development***. Research and development expense accounts for a significant portion of our operating expenses. We recognize expenses as incurred. Research and development expenses consist primarily of employee-related expenses, third-party consulting, allocated software costs and tax credits. We plan to continue to invest in our R&D efforts to enhance and scale our software product offerings by development of new features and increased functionality.
- ***General and Administrative***. General and administrative expense consists of personnel-related expenses associated with our executive, legal, finance, human resources, information technology, and other administrative functions, including salaries, benefits, bonuses, and equity-based compensation. General and administrative expense also includes professional fees for external legal, accounting and other consulting services, allocated overhead costs, and other general operating expenses.

  We expect to increase the size of our general and administrative staff to support the anticipated growth of our business. Following the completion of this offering, we expect to incur additional expenses as a result of operating as a public company, including costs to comply with the rules and regulations applicable to companies listed on a U.S. securities exchange and costs related to compliance and reporting obligations pursuant to the rules and regulations of the SEC. In addition, as a public company, we expect to incur increased expenses such as insurance and professional services. As a result, we expect the dollar amount of our general and administrative expense to increase for the foreseeable future. Excluding public company expenses, we expect general and administrative expense to grow at a rate lower than revenues.
- ***Intangible Asset Amortization***. Intangible asset amortization consists primarily of amortization expense related to intangible assets recorded in connection with acquisitions and amortization of capitalize software development costs.
- ***Depreciation and Amortization Expense***. Depreciation and amortization expense consists of depreciation of property and equipment and amortization of leasehold improvements.

Other Expenses

- ***Interest Expense***. Interest expense consists primarily of interest expense associated with the Credit Facilities, including amortization of debt issuance costs and discounts. We expect interest expense to decline as a result of lower outstanding indebtedness going forward.
- ***Miscellaneous***. Miscellaneous expense consists of miscellaneous non-operating expenses primarily comprised of foreign exchange transaction gains and losses.
- ***Provision for (Benefit from) Income Taxes***. Provision for (benefit from) income taxes consists of U.S. federal and state income taxes and income taxes in certain foreign jurisdictions in which we conduct business. We expect income tax expense to increase over time as the Company continues to grow net income.

Acquisitions

BaseCase Acquisition

On January 25, 2018, we acquired 100% of the equity of BaseCase, a SaaS company in the life sciences industry. The purchase price of $25.3 million was funded through proceeds of $25.0 million received from an additional tranche of term debt and cash on hand. See Note 5, “Business Combinations,” of the consolidated financial statements included elsewhere in this prospectus.

Analytica Laser Acquisition

On April 3, 2018, we acquired 100% of the equity of Analytica Laser, a provider of real-world evidence and health economics outcomes research, value and access consultancy, cost and comparative effectiveness modeling, and collection and analysis of real-world data for use in market and payor communications. The purchase price of $40.0 million was funded through proceeds of $40.0 million received from an additional

tranche of term debt and cash on hand. See Note 5, “Business Combinations,” of the consolidated financial statements included elsewhere in this prospectus.

Impacts of the Initial Public Offering

Impact of Debt Extinguishment

Assuming the net proceeds after expenses to us of $ million in connection with the sale of common stock in this offering, based on an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover of this prospectus, together with cash on hand, are used to repay outstanding indebtedness under the Loan Agreement and a portion of our term loans under our Credit Agreement, as described in “Use of Proceeds,” we expect to incur debt extinguishment costs of $ million related to the write-off of debt issuance and debt modification costs and $ million related to the write-off of unamortized debt discounts. We also expect interest expense to be lower in future periods based on the reduction in debt.

Public Company Expenses

Following our initial public offering, we will incur significant expenses on an ongoing basis that we did not incur as a private company. Those costs include additional director and officer liability insurance expenses, as well as third-party and internal resources related to accounting, auditing, SOX compliance, legal, and investor and public relations expenses. These costs will generally be general and administrative expenses.

Equity-Based Compensation Expense

Following our initial public offering, unvested performance-vesting Class B Units (or the restricted shares of common stock for which they will be exchanged in connection with this offering) will be eligible to vest as and when the Initial EQT Sponsors (as defined in the 2017 Incentive Plan) sell shares of our common stock if the Initial EQT Sponsors realize certain multiples of invested capital in connection with such sales. See Note 12, “Equity-based Compensation”, to our audited consolidated financial statements included elsewhere in this prospectus for additional information on our unit-based compensation plan.

As of the time of this offering, we have determined that the vesting criteria of the performance-vesting Class B Units (or the restricted shares of common stock for which they will be exchanged in connection with this offering) is not probable and, accordingly, have not recognized any expense related to those awards. Unamortized compensation expense of $10.3 million in respect of the performance-vesting awards as of September 30, 2020 will be amortized over the remaining requisite service period if and when we determine that vesting is probable. Upon completion of the offering, we expect that $3.4 million of the unamortized compensation expense will be recognized related to the performance-based Class B Units that are expected to vest. In connection with this offering, we expect to implement a new long-term equity incentive plan during 2020 to align our equity compensation program with public company plans and practices. See “Executive Compensation — Stock Incentive Plans — 2020 Incentive Plan” for additional details.

Results of Operations

We have included the results of operations of acquired companies in our consolidated results of operations from the date of their respective acquisitions, which impacts the comparability of our results of operations when comparing results for the nine months ended September 30, 2020 to the nine months ended September 30, 2019 and the year ended December 31, 2019 to the year ended December 31, 2018.

Nine Months Ended September 30, 2020 Versus Nine Months Ended September 30, 2019

The following table summarizes our unaudited statements of operations data for the nine months ended September 30, 2019 and 2020:

	NINE MONTHS ENDED SEPTEMBER 30,		CHANGE	
	2020	2019	$	%
	(dollars in thousands)			
Statement of operations data:				
Revenues:				
Software	$ 55,925	$ 51,453	$ 4,472	9%
Services	122,964	103,201	19,763	19%
Total revenues	178,889	154,654	24,235	16%
Cost of revenues:				
Software	9,806	8,786	1,020	12%
Services	56,054	49,031	7,023	14%
Total cost of revenues	65,860	57,817	8,043	14%
Operating expenses:				
Sales and marketing	8,773	7,946	827	10%
Research and development	9,139	8,651	488	6%
General and administrative	36,125	35,630	495	1%
Intangible asset amortization	28,056	26,908	1,148	4%
Depreciation and amortization expense	1,836	2,140	(304)	(14)%
Total operating expenses	83,929	81,275	2,654	3%
Income from operations	29,100	15,562	13,538	87%
Other expenses:				
Interest expense	(19,810)	(21,011)	(1,201)	6%
Miscellaneous, net	456	(163)	619	nm
Total other expenses	(19,354)	(21,174)	1,820	(9)%
Income (loss) before income taxes	9,746	(5,612)	15,358	nm
Provision for (benefit from) income taxes	4,696	(2,701)	7,397	nm
Net income (loss)	$ 5,050	$ (2,911)	7,961	nm

Note: "nm" means not meaningful.

Revenues

	NINE MONTHS ENDED SEPTEMBER 30,		CHANGE	
	2020	2019	$	%
	(dollars in thousands)			
Software	$ 55,925	$ 51,453	$ 4,472	9%
Services	122,964	103,201	19,763	19%
Total revenues	$ 178,889	$ 154,654	$24,235	16%

Revenues increased $24.2 million, or 16%, to $178.9 million for the nine months ended September 30, 2020 as compared to the same period in 2019. The increase in revenues was a direct result of growth in our services and software product offerings, primarily related to strong renewal rates and client expansions in software, as well as growth in our technology-enabled services, primarily in biosimulation and regulatory writing product lines, partially offset by a decline in our professional services offerings.

Software revenue increased by $4.4 million, or 9%, to $55.9 million for the nine months ended September 30, 2020 as compared to the same period in 2019, driven primarily by growth in sales of our software licenses of 14%, or $3.5 million, as well as growth in our subscriptions products of 6%, or $1.4 million, partially offset by a 13% decline, or $0.5 million in software maintenance.

Services revenue increased by $19.8 million, or 19%, to $123.0 million for the nine months ended September 30, 2020 as compared to the same period in 2019, driven by growth in our technology-enabled services, primarily in biosimulation and regulatory writing offerings, of 21%, or $20.7 million, partially offset by a decrease in our professional service products of 21%, or $0.9 million.

Cost of Revenues

	NINE MONTHS ENDED SEPTEMBER 30,		CHANGE	
	2020	2019	$	%
	(dollars in thousands)			
Software	$ 9,806	$ 8,786	$ 1,020	12%
Services	56,054	49,031	7,023	14%
Total cost of revenues	$ 65,860	$ 57,817	$ 8,043	14%

Cost of revenues increased by $8.0 million to $65.9 million for the nine months ended September 30, 2020 as compared to the same period in 2019. This increase was primarily due to the growth in revenue driving increases in employee-related costs, consulting costs, distributor fees, bonus expense and software capitalization, partially offset by decreases in travel and entertainment and software expenses.

Sales and Marketing Expense

	NINE MONTHS ENDED SEPTEMBER 30,		CHANGE	
	2020	2019	$	%
	(dollars in thousands)			
Sales and marketing	$ 8,773	$ 7,946	$ 827	10%
% of total revenues	5%	5%		

Sales and marketing expenses increased by $0.8 million, or 10%, to $8.8 million for the nine months ended September 30, 2020 as compared to the same period in 2019. Sales and marketing expenses increased primarily due to increases in sales commissions, employee-related costs and website costs, partially offset by decreases in travel and entertainment, consulting expenses, trade shows and advertising costs.

Research and Development Expense

	NINE MONTHS ENDED SEPTEMBER 30,		CHANGE	
	2020	2019	$	%
	(dollars in thousands)			
Research and development	$ 9,139	$ 8,651	$ 488	6%
% of total revenues	5%	6%		

Research and development expenses increased by $0.5 million, or 6%, to $9.1 million for the nine months ended September 30, 2020 as compared to the same period in 2019. The increase in R&D expenses was primarily due to increases in employee-related, consulting, and software costs, partially offset by higher software capitalization and tax credits and decreases in travel and entertainment costs.

General and Administrative Expense

	NINE MONTHS ENDED SEPTEMBER 30,		CHANGE	
	2020	2019	$	%
	(dollars in thousands)			
General and administrative	$ 36,125	$ 35,630	$ 495	1%
% of total revenues	20%	23%		

General and administrative expenses increased by $0.5 million, or 1%, to $36.1 million for the nine months ended September 30, 2020 as compared to the same period in 2019. The increase in general and administrative expenses was primarily due to increases in equity-based compensation, bonus expense, initial public offering costs, software expenses, facilities costs and accounting and tax fees. The increases were partially offset by decreases in severance, integration, reorganization, legal, consulting and travel and entertainment costs.

Intangible Asset Amortization Expense

	NINE MONTHS ENDED SEPTEMBER 30,		CHANGE	
	2020	2019	$	%
	(dollars in thousands)			
Intangible asset amortization	$ 28,056	$ 26,908	$ 1,148	4%
% of total revenues	16%	17%		

Intangible asset amortization expense increased by $1.1 million, or 4%, to $28.1 million for the nine months ended September 30, 2020 as compared to the same period in 2019. The increase in intangible asset amortization expense is a direct result of increased capitalized software development costs.

Depreciation and Amortization Expense

	NINE MONTHS ENDED SEPTEMBER 30,		CHANGE	
	2020	2019	$	%
	(dollars in thousands)			
Depreciation and amortization	$ 1,836	$ 2,140	$(304)	(14)%
% of total revenues	1%	1%		

Depreciation and amortization expense decreased by $0.3 million, or 14%, to $1.8 million for the nine months ended September 30, 2020 as compared to the same period in 2019. The decrease in depreciation and amortization expense is directly due to lower capital expenditure investments period over period.

Interest Expense

	NINE MONTHS ENDED SEPTEMBER 30,		CHANGE	
	2020	2019	$	%
	(dollars in thousands)			
Interest expense	$ 19,810	$ 21,011	$(1,201)	(6)%
% of total revenues	11%	14%		

Interest expense decreased by $1.2 million, or 6%, to $19.8 million for the nine months ended September 30, 2020 as compared to the same period in 2019. The decrease in interest expense was directly due to lower interest rates on our variable rate debt and lower outstanding principal amounts on our credit facilities.

Miscellaneous, net

	NINE MONTHS ENDED SEPTEMBER 30,		CHANGE	
	2020	2019	$	%
	(dollars in thousands)			
Miscellaneous, net	$ 456	$ (163)	$ 619	nm
% of total revenues	0%	0%		

Miscellaneous income was $0.5 million for the nine months ended September 30, 2020 as compared to miscellaneous expenses of $0.2 million for the same period in 2019. The change was primarily due to foreign currency exchange rate fluctuations.

Provision for (Benefit from) Income Taxes

	NINE MONTHS ENDED SEPTEMBER 30,		CHANGE	
	2020	2019	$	%
	(dollars in thousands)			
Provision for (benefit from) income taxes	$ 4,696	$ (2,701)	$ 7,397	nm
Effective tax rate	48%	48%		

Our income tax expense was $4.7 million, resulting in an effective income tax rate of 48% for the nine months ended September 30, 2020 as compared to an income tax benefit of $2.7 million, or an effective income tax rate of 48%, for the same period in 2019. Our income tax expense (benefit) for the nine months ended September 30, 2020 and 2019 was primarily due to the tax effects of U.S. pre-tax income, the effects of tax elections made for U.K. earnings, and the impact of tax law and tax rate changes in certain jurisdictions. The effective income tax rate remained consistent between periods and is susceptible to changes in the mix of domestic and international earnings.

Net Income (Loss)

	NINE MONTHS ENDED SEPTEMBER 30,		CHANGE	
	2020	2019	$	%
	(dollars in thousands)			
Net income (loss)	$ 5,050	$ (2,911)	$ 7,961	nm

Net income was $5.1 million for the nine months ended September 30, 2020 as compared to a net loss of $2.9 million for the same period in 2019. The change was primarily due to an increase in operating income as well as a decrease in other expenses, partially offset by an increase in tax expense, each as described above.

Year Ended December 31, 2019 Versus Year Ended December 31, 2018

The following table summarizes our audited statements of operations data for the years ended December 31, 2018 and 2019:

	YEAR ENDED DECEMBER 31,		CHANGE	
	2019	2018	$	%
	(in thousands)			
Statement of operations data:				
Revenues:				
Software	$ 68,341	$ 46,849	$21,492	46%
Services	140,170	116,870	23,300	20%
Total revenues	208,511	163,719	44,792	27%
Cost of revenues:				
Software	12,544	11,223	1,321	12%
Services	67,226	59,820	7,406	12%
Total cost of revenues	79,770	71,043	8,727	12%
Operating expenses:				
Sales and marketing	10,732	9,416	1,316	14%
Research and development	11,633	10,478	1,155	11%
General and administrative	47,926	43,393	4,533	10%
Intangible asset amortization	36,241	31,625	4,616	15%
Depreciation and amortization expense	2,596	2,416	180	7%
Total operating expenses	109,128	97,328	11,800	12%
Income (loss) from operations	19,613	(4,652)	24,265	nm
Other expenses:				
Interest expense	(28,004)	(27,802)	(202)	1%
Miscellaneous, net	(760)	(107)	(653)	610%
Total other expenses	(28,764)	(27,909)	(855)	3%
Loss from operations before income taxes	(9,151)	(32,561)	23,410	(72)%
(Benefit from) provision for income taxes	(225)	697	(922)	nm
Net loss	(8,926)	(33,258)	24,332	(73)%

Revenues

	YEAR ENDED DECEMBER 31,		CHANGE	
	2019	2018	$	%
	(dollars in thousands)			
Software	$ 68,341	$ 46,849	$21,492	46%
Services	140,170	116,870	23,300	20%
Total revenues	$ 208,511	$ 163,719	$44,792	27%

Revenues increased by $44.8 million, or 27%, to $208.5 million for the year ended December 31, 2019 as compared to the same period in 2018. The increase in revenues was a direct result of growth in our services and software product offerings, strong renewal rates and client expansions in software, as well as growth in our technology-enabled services, primarily in biosimulation, market access, and regulatory writing offerings.

Software revenue increased by $21.5 million, or 46%, to $68.3 million for the year ended December 31, 2019 as compared to the same period in 2018, driven primarily by an increase in sales of our software licenses of 16%, or $4.6 million, as well as an increase in subscriptions revenue of 8%, or $2.3 million, and software

maintenance revenue of 8%, or $0.3 million. In addition to organic growth, we incurred a reduction in 2018 software licenses and software subscriptions of $8.3 million and $6.1 million respectively, as compared to $0 and $0.3 million in 2019, relating to purchase accounting fair value adjustments of deferred revenue.

Services revenue increased by $23.3 million, or 20%, to $140.2 million for the year ended December 31, 2019 as compared to the same period in 2018, primarily driven by both organic and acquisition growth in our technology-enabled services (primarily in our biosimulation and regulatory offerings) and professional services offerings of 21% and 10%, respectively.

Cost of Revenues

	YEAR ENDED DECEMBER 31,		CHANGE	
	2019	2018	$	%
	(dollars in thousands)			
Software	$ 12,544	$ 11,223	$1,321	12%
Services	67,226	59,820	7,406	12%
Total cost of revenues	$ 79,770	$ 71,043	$8,727	12%

Cost of revenues increased by $8.7 million, or 12%, to $79.8 million for the year ended December 31, 2019 as compared to 2018. The increase in cost of revenues was primarily due to increases in employee-related costs, consulting costs, distributor fees, and software expenses, partially offset by a decrease in amortization of software development costs and integration costs.

Sales and Marketing Expense

	YEAR ENDED DECEMBER 31,		CHANGE	
	2019	2018	$	%
	(dollars in thousands)			
Sales and marketing	$ 10,732	$ 9,416	$1,316	14%
% of total revenues	5%	6%		

Sales and marketing increased by $1.3 million, or 14%, to $10.7 million for the year ended December 31, 2019 as compared to 2018. Sales and marketing increased primarily due to due to increases in employee-related costs, sales commissions, consulting expenses, and travel and entertainment costs, partially offset by a decrease in other marketing costs.

Research and Development Expense

	YEAR ENDED DECEMBER 31,		CHANGE	
	2019	2018	$	%
	(dollars in thousands)			
Research and development	$ 11,633	$ 10,478	$1,155	11%
% of total revenues	6%	6%		

Research and development expenses increased by $1.2 million, or 11%, to $11.6 million for the year ended December 31, 2019 as compared to 2018. The increase in R&D expenses was primarily due to increases in employee-related, consulting, and software costs, partially offset by higher capitalization of software development costs, tax credits, and a decrease in startup costs.

General and Administrative Expense

	YEAR ENDED DECEMBER 31,		CHANGE	
	2019	2018	$	%
	(dollars in thousands)			
General and administrative	$ 47,926	$ 43,393	$4,533	10%
% of total revenues	23%	27%		

General and administrative expenses increased by $4.5 million, or 10%, to $47.9 million for the year ended December 31, 2019 as compared to 2018. The increase in general and administrative expenses was primarily due to increases in employee-related costs, facilities costs, software expenses, accounting fees, and severance, integration, restructuring, and reorganization costs, partially offset by decreases in travel and entertainment costs and acquisition-related synergies.

Intangible Asset Amortization Expense

	YEAR ENDED DECEMBER 31,		CHANGE	
	2019	2018	$	%
	(dollars in thousands)			
Intangibles asset amortization	$ 36,241	$ 31,625	$4,616	15%
% of total revenues	17%	19%		

Intangible asset amortization expense increased by $4.6 million, or 15%, to $36.2 million for the year ended December 31, 2019 as compared to 2018. The increase in intangible asset amortization was a direct result of increases in capitalized software development costs and increases in acquired intangible assets.

Depreciation and Amortization Expense

	YEAR ENDED DECEMBER 31,		CHANGE	
	2019	2018	$	%
	(dollars in thousands)			
Depreciation and amortization	$ 2,596	$ 2,416	$180	7%
% of total revenues	1%	1%		

Depreciation and amortization expense of $2.6 million was relatively flat for the year ended December 31, 2019 as compared to 2018.

Interest Expense

	YEAR ENDED DECEMBER 31,		CHANGE	
	2019	2018	$	%
	(dollars in thousands)			
Interest expense	$ 28,004	$ 27,802	$202	1%
% of total revenues	13%	17%		

Interest expense increased by $0.2 million, or 1%, to $28.0 million for the year ended December 31, 2019 as compared to 2018. The increase in interest expense was primarily due to the full year effect of interest on acquisition-related borrowings.

Miscellaneous, net

	YEAR ENDED DECEMBER 31,		CHANGE	
	2019	2018	$	%
	(dollars in thousands)			
Miscellaneous, net	$ 760	$ 107	$653	610%
% of total revenues	0%	0%		

Miscellaneous expenses increased by $0.7 million, or 610%, to $0.8 million for the year ended December 31, 2019 as compared to 2018. The increase in miscellaneous expenses was primarily due to unfavorable foreign exchange rates compared to the U.S. dollar, particularly with the pound sterling.

(Benefit from) Provision for Income Taxes

	YEAR ENDED DECEMBER 31,		CHANGE	
	2019	2018	$	%
	(dollars in thousands)			
(Benefit from) provision for income taxes	$ (225)	$ 697	$922	nm
Effective income tax rate	2.5%	(2.1%)		

Our income tax benefit was $0.2 million, resulting in an effective income tax rate of 2.5%, for the year ended December 31, 2019, as compared to an income tax expense of $0.7 million, or an effective income tax rate of (2.1%), in 2018. Our income tax benefit for the year ended December 31, 2019 was primarily due to the tax effects of the U.S. pre-tax loss and the impact of tax rate changes in certain jurisdictions.

Net Loss

	YEAR ENDED DECEMBER 31,		CHANGE	
	2019	2018	$	%
	(dollars in thousands)			
Net loss	$ (8,926)	$ (33,258)	$24,332	(73)%

Net loss decreased by $24.5 million, or 73%, to $8.9 million for the year ended December 31, 2019 as compared to the same period in 2018. The decrease was primarily due to an increase in operating income and positive change in taxes, partially offset by increase in other expenses, each as described above.

Liquidity and Capital Resources

We assess our liquidity in terms of our ability to generate adequate amounts of cash to meet current and future needs. Our expected primary uses on a short-term and long-term basis are for repayment of debt, interest payments, working capital, capital expenditures, geographic or service offering expansion, acquisitions, investments, and other general corporate purposes. We have historically funded our operations primarily through cash generated from operations. We have historically used long-term debt and cash on hand to fund acquisitions. We hold our cash balances in the United States and numerous locations in the rest of the world.

As of September 30, 2020, we had cash and cash equivalents $29.9 million, of which $17.4 million represents cash and cash equivalents held outside of the United States.

Cash Flows

The following table presents a summary of our cash flows for the periods shown:

	NINE MONTHS ENDED SEPTEMBER 30,		YEAR ENDED DECEMBER 31,	
	2020	2019	2019	2018
	(in thousands)			
Net cash provided by operating activities	$ 32,129	$ 15,783	$ 38,025	$ 11,592
Net cash used in investing activities	(7,209)	(6,866)	(9,517)	(73,905)
Net cash (used in) provided by financing activities	(24,103)	(7,640)	(8,489)	57,296
Effect due to foreign exchange rate changes on cash, cash equivalents, and restricted cash	1,170	1,546	(2,444)	(1,337)
Net increase (decrease) in cash, cash equivalents and restricted cash	$ 1,987	$ 2,823	$ 17,575	$ (6,354)
Cash paid for interest	$ 21,077	21,407	26,428	25,713
Cash paid for income taxes	$ 6,675	3,149	4,109	3,165

Operating Activities

During the year ended December 31, 2019, operating activities provided approximately $38.0 million of cash and cash equivalents, primarily resulting from a net loss of $8.9 million, offset by $38.2 million of non-cash operating expenses inclusive of depreciation and amortization, amortization of debt issuance costs, equity-based compensation costs, and deferred income taxes. Changes in our operating assets and liabilities provided cash and cash equivalents of approximately $8.7 million.

During the year ended December 31, 2018, operating activities provided approximately $11.6 million of cash and cash equivalents, primarily resulting from a net loss of $33.3 million, offset by $36.4 million of non-cash operating expenses inclusive of depreciation and amortization, amortization of debt issuance cost, equity-based compensation costs, deferred income taxes, and a $0.1 million non-cash loss on retirement of assets. Changes in our operating assets and liabilities provided cash and cash equivalents of approximately $8.3 million.

During the nine months ended September 30, 2020, operating activities provided approximately $32.1 million of cash and cash equivalents, primarily resulting from net income of $5.1 million, plus $36.3 million of non-cash operating expenses inclusive of depreciation and amortization, amortization of debt issuance cost, provision for doubtful accounts, loss on retirement of assets, equity-based compensation costs and deferred income taxes. Changes in our operating assets and liabilities used cash and cash equivalents of approximately $9.3 million.

During the nine months ended September 30, 2019, operating activities provided approximately $15.8 million of cash and cash equivalents, primarily resulting from a net loss of $2.9 million, offset by $26.7 million of non-cash operating expenses inclusive of depreciation and amortization, amortization of debt issuance cost, loss on retirement of assets, equity-based compensation costs and deferred income taxes. Changes in our operating assets and liabilities used cash and cash equivalents of approximately $8.0 million.

Investing Activities

During the year ended December 31, 2019, investing activities used approximately $9.5 million of cash, primarily for investing in capital expenditures and capitalized software development to support our growth.

During the year ended December 31, 2018, investing activities used approximately $73.9 million of cash, primarily for business acquisitions of $62.4 million, and investing in capital expenditures and capitalized software development to support our growth.

During the nine months ended September 30, 2020, investing activities used approximately $7.2 million of cash, primarily for investing in capitalized software development, capital expenditures and business acquisition to support our growth.

During the nine months ended September 30, 2019, investing activities used approximately $6.9 million of cash, primarily for investing in capitalized software development and capital expenditures to support our growth.

Financing Activities

During the year ended December 31, 2019, financing activities used approximately $8.5 million of cash, primarily attributable to payments on long-term debt, capital lease obligations, and our revolving credit facility, and unit repurchases, partially offset by proceeds from capital contributions.

During the year ended December 31, 2018, financing activities provided approximately $57.3 million of cash, consisting of proceeds from borrowings on long-term debt and our revolving credit facility, and capital contributions, partially offset by payments on contingent consideration obligations, long-term debt, capital lease obligations, and our revolving credit facility, units repurchases, and debt issuance costs.

During the nine months ended September 30, 2020, financing activities used approximately $24.1 million of cash, primarily attributable to payments on long-term debt and capital lease obligations and units repurchases partially offset by proceeds from capital contribution and borrowings from affiliates.

During the nine months ended September 30, 2019, financing activities used approximately $7.6 million of cash, primarily due to units repurchases and payments on long-term debt and capital lease obligations and our revolving credit facility, partially offset by proceeds from capital contribution.

Funding Requirements

We believe that our existing cash and cash equivalents will be sufficient to fund our operations and capital expenditure requirements for the foreseeable future. Our future capital requirements will depend on many factors, including funding for potential acquisitions, investments, and other growth and strategic opportunities that might require use of existing cash, borrowings under our revolving credit facility, or additional long-term financing. We may also use existing cash and cash flows from operations to pay down long-term debt from time to time.

While we believe we have sufficient liquidity to fund our operations for the foreseeable future, our sources of liquidity could be affected by factors described under “Risk Factors” elsewhere in this prospectus.

Indebtedness

Credit Facilities

Loan Agreement

We are party to a Loan Agreement providing for a $100.0 million senior unsecured term loan. The Loan Agreement matures on August 14, 2025.

Borrowings under the Loan Agreement bear interest at a rate per annum equal to 8.25%, payable on each January 15th and July 15th and on the final maturity date. There is no scheduled amortization under the Loan Agreement.

We may voluntarily repay outstanding loans under the Loan Agreement at any time without premium or penalty.

The Loan Agreement contains certain customary representations and warranties. In addition, the lender under the Loan Agreement will be permitted to accelerate the loan upon the occurrence of certain events of default, subject to certain grace periods and exceptions, which include, among others, payment defaults, breaches of representations and warranties, the making of certain dividends (other than certain specified exceptions), certain events of bankruptcy and insolvency, and any change of control.

As of September 30, 2020, we had $80.0 million of outstanding borrowings under the Loan Agreement.

Credit Agreement

Certain of our wholly owned indirect subsidiaries, Certara Holdco, Inc. and Certara USA, Inc. (collectively, the “Borrowers”), are party to a Credit Agreement that provides for a $250.0 million senior secured term loan

and commitments under a revolving credit facility in an aggregate principal amount of $20.0 million, with a sub-commitment for issuance of letters of credit of $10.0 million. The Credit Agreement matures on August 14, 2024, with respect to the term loan thereunder, and August 14, 2022, with respect to the revolving credit facility thereunder.

In January 2018, the Borrowers amended the Credit Agreement to borrow incremental term loans in the amount of $25.0 million to be used for general corporate purposes. Additionally, in April 2018, the Borrowers amended the Credit Agreement to (i) borrow incremental term loans in the amount of $40.0 million to be used for general corporate purposes and (ii) provide a reduction of 50 basis points in the margin under the term loan. The terms of such incremental term loans were the same as the terms of the Borrowers' existing term loans, including in respect of maturity, and are considered an increase in the aggregate principal amount of the existing term loans outstanding under the Credit Agreement and are part of the existing term loan.

Borrowings under the Credit Agreement currently bear interest at a rate per annum equal to either (i) the Eurocurrency rate, with a floor of 0.00%, as adjusted for the reserve percentage required under regulations issued by the Federal Reserve Board for determining maximum reserve requirements with respect to Eurocurrency funding, plus an applicable margin rate of 3.50% for the term loan and between 4.00% and 3.50% for revolving credit loans, depending on the applicable first lien leverage ratio, (ii) an ABR, with a floor of 1.00%, plus an applicable margin rate of 2.50% for the term loan or between 3.00% and 2.50% for revolving credit loans, depending on the applicable first lien leverage ratio. The ABR is determined as the greatest of (a) the prime rate, (b) the federal funds effective rate, plus 0.50% and (iii) the Eurocurrency rate plus 1.00%.

Additionally, we are obligated to pay under the revolving credit facility (i) a commitment fee of between 0.50% and 0.25% per annum of the unused amount of the revolving credit facility, depending on the applicable first lien leverage ratio, (ii) customary letter of credit issuance and participation fees, and (iii) other customary fees and expenses of the letter of credit issuers.

The Credit Agreement provides that the Borrowers may request increased commitments and additional term loans or additional term or revolving facilities under the Credit Agreement, in each case, subject to certain conditions and in an aggregate principal amount not to exceed the sum of (a) the greater of (i) $50.0 million and (ii) 100% of Consolidated Adjusted EBITDA (as defined in the Credit Agreement) for the most recently completed four fiscal quarter period for which internal financial statements have been delivered (or are required to be delivered) prior to the date of any such incurrence, plus (b) an additional amount, subject to compliance on a pro forma basis with (i) a consolidated first lien leverage ratio of no greater than 5.00 to 1.00 for incremental first lien debt or (ii) if incurred in connection with a permitted acquisition, the first lien leverage ratio immediately prior to such acquisition, plus (c) certain other amounts as specified in the Credit Agreement. The Credit Agreement also provides for the incurrence of junior secured and unsecured debt, subject to certain conditions and ratios specified in the Credit Agreement.

The term loan under the Credit Agreement amortizes at a rate of approximately 1.00% per annum, paid in quarterly installments approximately equal to the product of (a) 0.25% times (b) the aggregate principal amount of the initial term loan outstanding immediately after the borrowing of the initial term loan on the closing date and each incremental term loan outstanding immediately after the borrowing thereof on the applicable closing date (with respect to each term loan repayment date prior to the term loan maturity date, as such product may be reduced by, and after giving pro forma effect to, any voluntary and mandatory prepayments as described in the Credit Agreement).

The Credit Agreement requires the Borrowers to prepay, subject to certain exceptions, outstanding term loans thereunder with:

- 50% (which percentage will be reduced to 25% and 0% based upon the achievement and maintenance of first lien leverage ratios equal to or less than 4.50 to 1.00 and 4.00 to 1.00, respectively) of the Borrowers' annual excess cash flow;
- 100% (which percentage will be reduced to 50% and 0% based upon the achievement and maintenance of first lien leverage ratios equal to or less than 4.50 to 1.00 and 4.00 to 1.00, respectively) of net cash proceeds of certain non-ordinary course asset sales or other dispositions of property, in excess of certain amounts specified in the Credit Agreement and subject to customary reinvestment rights; and

- 100% of net cash proceeds of certain issuances of debt obligations of the Borrowers and their restricted subsidiaries, except as permitted under the Credit Agreement.

There is no scheduled amortization under the revolving credit facility. The Borrowers may voluntarily reduce the unutilized portion of the commitment amount and repay outstanding loans under the Credit Agreement at any time without premium or penalty.

All obligations under the Credit Agreement are unconditionally guaranteed by our wholly owned indirect subsidiary and the parent of the Borrowers, Certara Intermediate, Inc. ("Holdings"), the Borrowers and certain of the Borrowers' existing and future direct and indirect wholly owned domestic subsidiaries, subject to certain exceptions. All obligations under the Credit Agreement, and the guarantees of those obligations, are secured on a first lien basis, subject to certain exceptions, by substantially all of Holdings' and the Borrowers' assets and the assets of the other guarantors.

The Credit Agreement contains covenants that, among other things, limit the ability of the Borrowers to incur additional debt; create liens against their assets; make acquisitions; pay dividends on their capital stock or redeem, repurchase, or retire their capital stock; make investments, acquisitions, loans, and advances; create negative pledges; merge or consolidate with another entity; transfer or sell assets; and enter into certain transactions with their affiliates.

In addition, the revolving credit facility under the Credit Agreement is subject to a first lien leverage ratio test of 7.50 to 1.00, tested quarterly if, and only if, on the last day of any fiscal quarter, the revolving credit facility and letters of credit (to the extent not cash collateralized or backstopped or, in the aggregate, not in excess of $5.0 million) are outstanding and/or issued, as applicable, in an aggregate principal amount exceeding 35% of the total amount of the revolving credit facility commitments thereunder.

The Credit Agreement also contains certain customary representations and warranties, affirmative covenants and reporting obligations. In addition, the lenders under the Credit Agreement will be permitted to accelerate the loans and terminate commitments thereunder or exercise other specified remedies available to secured creditors upon the occurrence of certain events of default, subject to certain grace periods and exceptions, which include, among others, payment defaults, breaches of representations and warranties, covenant defaults, cross-defaults to certain material indebtedness, certain events of bankruptcy and insolvency, certain pension plan related events, material judgments, and any change of control.

As of September 30, 2020, we had $304.9 million of outstanding borrowings on the term loan, and $19.9 million of availability under the revolving credit facility, and outstanding letters of credit of $0.1 million under the Credit Agreement.

As of September 30, 2020, we and the Borrowers were in compliance with the covenants of each of the Credit Facilities.

Contractual Obligations and Commercial Commitments

We enter into long-term contractual obligations and commitments in the normal course of business, including operating leases.

The following table summarizes our contractual obligations as of December 31, 2019:

	TOTAL	LESS THAN 1 YEAR	1 TO 3 YEARS	3 TO 5 YEARS	MORE THAN 5 YEARS
			(in thousands)		
Lease obligations:[1]					
Operating leases	$ 25,770	$ 6,286	$ 12,597	$ 4,546	$ 2,341
Capital leases	56	56	—	—	—
Principal payments of long-term debt[2]	408,170	4,209	9,459	394,502	—
Interest on long-term debt[3]	123,935	25,380	74,886	23,669	—
Total	$557,931	$ 35,931	$ 96,942	$ 422,717	$ 2,341

(1) Includes the initial lease term and optional renewal terms that are included in the lease term of our headquarters and other office leases.

(2) Not reflected in this table is the expected repayment of our outstanding indebtedness under the Loan Agreement and of a portion of our term loans under our Credit Agreement as detailed in "Use of Proceeds."

(3) Represents the expected cash payments for interest on our long-term debt based on the amounts outstanding as of the end of each period and the interest rates applicable on such debt as of December 31, 2019.

As of September 30, 2020, contractual obligations for lease obligations increased by $0.5 million from December 31, 2019, due to additional IT equipment financed, partially offset by payments on such financing. As of September 30, 2020, contractual obligations for principal payments of long-term debt and interest on debt decreased by $23.3 million and $47.6 million, respectively, from December 31, 2019. The decrease in principal payments of long-term debt is due to scheduled payments on term loans plus a $20.0 million prepayment on the Loan Agreement. The decrease in interest on debt is due to lower outstanding debt balances and lower interest rates.

Income Taxes

We recorded income tax expense of $4.7 million for the nine months ended September 30, 2020 and income tax benefit of $2.7 million for the nine months ended September 30, 2019.

As of December 31, 2019, we had federal and state NOLs of approximately $5.5 million and $2.9 million, respectively, which are available to reduce future taxable income and expire between 2024 and 2036 and 2028 and 2038, respectively. We had federal and state R&D tax credit carryforwards of approximately $2.2 million and $0.8 million, respectively, to offset future income taxes, which expire between 2020 and 2039. We also had foreign tax credits of approximately $8.5 million, which will start to expire in 2025. These carryforwards that may be utilized in a future period may be subject to limitations based upon changes in the ownership of our stock in a future period. Additionally, we carried forward foreign NOLs of approximately $18.6 million which expire starting in 2023 and Canadian investment tax credits of approximately $1.8 million which expire between 2030 and 2036. Our carryforwards are subject to review and possible adjustment by the appropriate taxing authorities.

As required by Accounting Standards Codification ("ASC") Topic 740, Income Taxes, our management has evaluated the positive and negative evidence bearing upon the realizability of our deferred tax assets, which are composed principally of NOL carryforwards, R&D credit carryforwards, interest expense limitation carryforward, and foreign tax credit carryforwards. Management has determined that it is more likely than not that we will not realize the benefits of foreign tax credit carryforwards, certain R&D credit carryforwards, a portion of the interest expense limitation carryforward, and a portion of federal NOL carryforwards in the United States. At the foreign subsidiaries, management has determined that it is more likely than not that we will not realize the benefits of NOL carryforwards and investment tax credits. As a result, a valuation allowance of $20.5 million was established at December 31, 2019. As of September 30, 2020, the valuation allowance remained unchanged from December 31, 2019, with the exception of a release of $2.8 million related to the interest expense limitation carryforward due to changes implemented by the Coronavirus Aid, Relief, and Economic Security Act ("CARES Act").

Off-Balance Sheet Arrangements

During the periods presented, we did not have, and currently we do not have, any off-balance sheet arrangements, as defined under the rules and regulations of the SEC.

Critical Accounting Policies and Estimates

Our management's discussion and analysis of our financial condition and results of operations are based on our consolidated financial statements, which have been prepared in accordance with GAAP. The preparation of these consolidated financial statements requires us to make judgments and estimates that affect the reported amounts of assets, liabilities, revenues, and expenses and the disclosure of contingent assets and liabilities in our consolidated financial statements. We base our estimates on historical experience, known trends and events, and various other factors that we believe to be reasonable under the circumstances, the results of which

form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. On an ongoing basis, we evaluate our judgments and estimates in light of changes in circumstances, facts, and experience. The effects of material revisions in estimates, if any, are reflected in the consolidated financial statements prospectively from the date of change in estimates.

While our significant accounting policies are described in more detail in the notes to our consolidated financial statements appearing elsewhere in this prospectus, we believe the following accounting policies used in the preparation of our consolidated financial statements require the most significant judgments and estimates.

Revenues

Our revenue is primarily derived from the sale of software products and delivery of consulting services.

On January 1, 2019, we adopted ASC 606, Revenue from Contracts with Customers, on a modified retrospective basis. Prior to January 1, 2019 size we applied ASC 605, Revenues Recognition, and Recognized Revenue, when the following criteria have been met: (1) persuasive evidence of an arrangement exists; (2) delivery has occurred or services have been rendered; (3) the price is fixed and determinable; and (4) collectability is reasonably assured.

Under ASC 606, we recognize revenue when control of the promised good or service is transferred to the customer in an amount that reflects the consideration for which we are expected to be entitled in exchange for those services.

Software Licenses and Support

License revenue includes perpetual license fees and term license fees, which provide customers with the same functionality and differ mainly in the duration over which the customer benefits from the use of software. Both revenues from perpetual license and term license performance obligations are generally recognized up front at the point in time when the software license has been delivered. A source of software license revenue is from term and bundled licenses that are time-based arrangements for one or multiple software products sold together with maintenance and support for the term of the license arrangement. We have determined that post-customer support and the right to unspecified enhancements and upgrades on a “when-and-if-available” basis included with term licenses is an immaterial component of the transaction price and, therefore, recognize these performance obligation components up front with the license when delivered.

Software Services

For contracts that include multiple performance obligations, such as a software license plus software training, implementation, and/or maintenance/support, or in contracts where there are multiple software licenses, the transaction price is allocated to each of the performance obligations on a pro-rata basis based on the relative standalone selling price of each performance obligation. Maintenance services agreements consist of fees for providing software updates and for providing technical support for software products for a specified term. Revenues allocated to maintenance services are recognized ratably over the contract term beginning on the delivery date of each offering. Maintenance contracts generally have a term of one year. Expenses related to maintenance and subscription are recognized as incurred. While transfer of control of the software training and implementation performance obligations are performed over time, the services are typically started and completed within a few days. Due to the quick nature of the performance obligation from start to finish and the immaterial amounts, we recognize any software training or implementation revenue at the completion of the service. Any unrecognized portion of amounts paid in advance for licenses and services is recorded as deferred revenue.

License revenue and post-contract services are combined and reported as software revenue on the consolidated statements of operations and comprehensive income (loss).

Subscription Revenues

Subscription revenue consists of subscription fees for access to, and related support for, our cloud-based solutions. We typically invoice subscription fees in advance in annual installments and recognize subscription revenue ratably over the term of the applicable agreement, usually one to three years, which is initially

deferred and recognized ratably over the life of the contract. Unearned maintenance and subscription revenues are recorded as deferred revenue. Our subscription services arrangements are generally non-cancelable and do not contain refund-type provisions. In rare instances that subscription services arrangements are deemed cancelable, we will adjust the transaction price and period for revenue recognition accordingly to be reflective of the contract term.

Services and Other Revenues

Services primarily represent advisory services, which may be either strategic consulting services, reporting and analysis services, regulatory writing services, or any combination of the three. Strategic consulting services consists of consulting, training, and process redesign that enables customers to identify which uncertainties are greatest and matter most and then to design development programs, trial sequences, and individual trials in such a way that those trials systematically reduce the identified uncertainties, in the most rapid and cost-effective manner possible. Our professional services contracts are time and materials, fixed fee, or prepaid. Services revenues are generally recognized over time as the services are performed. Revenues for fixed price services and prepaid are generally recognized over time applying input methods to estimate progress to completion. Training revenues are recognized as the services are performed over time.

Consortium revenues consist of contractual agreements with customers where the customer receives multiple benefits as part of their contract with the Company, as follows: access to the latest version simulator software, which has at least one new release per year, free access to a preset number of training workshops, a block of consulting hours to be used at the customer's discretion, as well as voting rights at the annual consortium meeting where development priorities for the upcoming year are set. The Company's consortium contracts are generally for three years with an annual termination clause and annual upfront billings. Consortium revenues are recognized over time as the benefits of the consortium arrangement are realized over the course of the contract. Both the training and consulting services performance obligations will utilize an output method to measure the progress at the end of each reporting period. As the simulation license was determined to be a functional license with the right to access, the license revenue is recognized evenly over the contract period.

Revenues Recognition under ASC 606

The adoption of ASC 606 changed the way we recognize revenue related to term and bundled license agreements. Prior to ASC 606, the Company recognized software licenses and support revenue in accordance with ASC 985, Software. Revenues from software license agreements are recognized when all of the following criteria are met as set forth in ASC 985: (1) persuasive evidence of an arrangement exists; (2) delivery has occurred; (3) the fee is fixed or determinable; and (4) collectability is reasonably assured.

A source of software license revenue is from term and bundled licenses that are time-based arrangements for one or multiple software products that are sold together with maintenance and support for the term of the license arrangement. The Company does not have vendor specific objective evidence ("VSOE") to determine fair value of the maintenance and support in term arrangements and, therefore, recognizes revenues from these bundled time-based licenses ratably over the license term, which typically ranges from one to three years.

We allocate revenues from perpetual software arrangements involving multiple elements to each element based on the relative fair values as determined by the VSOE for each element. We limit our assessment of VSOE for each element to the price charged when the same element is sold separately. We analyzed all of the elements included in multiple-element arrangements and determined that the Company has sufficient VSOE to allocate revenues to maintenance and support, deployment, and training. We sell training separately and have established VSOE on this basis. VSOE for maintenance and support is determined based upon the renewal rates in contracts themselves, which is based on a fixed percentage of the current perpetual license list price. Deployment services are charged based on standard hourly rates. Accordingly, assuming all other revenue recognition criteria are met, revenues from perpetual licenses are recognized upon delivery of the software using the residual method in accordance with ASC 985.

Software maintenance agreements provide for technical support and the right to unspecified enhancements and upgrades on a "when-and-if-available" basis. Post-contract support revenues on perpetual agreements are recognized ratably over the term of the support period (generally one year). Deployment, training, and other service revenues are recognized as the related services are provided. Any unrecognized portion of amounts paid in advance for licenses and services is recorded as deferred revenue.

Equity-Based Compensation

We estimated the fair value of the Class B Units granted by the EQT Investor to certain Company employees using the Monte Carlo option pricing model in 2019 and the Black-Scholes option-pricing model in 2018. In order to derive an estimate of each security class of the EQT Investor, we first determined the enterprise value of the EQT Investor. To do this we used the enterprise value of the Company as a proxy because the primary asset of the EQT Investor is its investment in the Company and therefore the total enterprise value was assumed to be the same.

The three valuation methodologies used to determine the enterprise value, each of which was given equal weighting, include the following:

- The Discounted Cash Flow Method (the "DCF Method"), a form of the Income Approach, was used to estimate the enterprise value by discounting the projected future free cash flows using an appropriate discount rate. We performed the DCF Method using a "debt-free" analysis, which entails estimating the free cash flows available to both debt and equity investors. The DCF Method incorporates several variables of observable and unobservable inputs, including, but not limited to, the Company's prospective financial information and assumes outlays for capital expenditures, future terminal values, an effective tax rate assumption and a discount rate based on a number of factors including market interest rates, a weighted average cost of capital analysis based on an assumed capital structure, and includes adjustments for market risk and company specific risk.
- The Guideline Public Company Method (the "GPC Method"), a form of the Market Approach, was used to estimate the enterprise value by multiplying historical and anticipated financial metrics by a multiple that was derived from an analysis of comparable publicly traded companies. The GPC Method estimates enterprise value based on a comparison of our company to comparable public companies in a similar line of business. From the comparable companies, a representative market multiple is determined and subsequently applied to our historical and prospective financial results to estimate the enterprise value.
- The Merger and Acquisition Method, a form of the Market Approach, was used to estimate the enterprise value by multiplying historical financial metrics by a multiple that was derived from an analysis of companies that were the target of a merger or acquisition transaction.

Application of these approaches involves the use of estimates, judgments and assumptions that are highly complex and subjective, including those regarding our future expected revenue, expenses, cash flows, discount rates, market multiples, the selection of comparable public companies and the probability of future events. Changes in any or all of these estimates and assumptions impact our valuations at each valuation date and may have a material impact on the valuation of the EQT Investor's Class A Units and various Class B Units.

We then subtracted the interest-bearing debt from the enterprise value to determine the operating equity value. The operating equity value is then adjusted for cash and cash equivalents to determine the total equity value.

We then allocated the total equity value of the EQT Investor to the Class A Units and the various Class B Units, by utilizing the appropriate option pricing framework. We concluded on the fair value of the Class A Units and the various Class B Units by taking into consideration the relative rights and privileges of the various security classes as well as the following assumptions of the option pricing framework:

Expected Exercise Term. We estimate the expected life of equity awards based upon historical experience and the timing of a potential liquidity event.

Expected Equity Volatility. Since the Company is private and does not trade on any exchange, the selected equity volatility is based on the historical and implied volatility of comparable publicly traded companies over a similar expected term. This is representative of the expected future equity volatility of the Company and of the equity volatility of the EQT Investor since their equity is similar.

Risk-Free Interest Rates. We based the risk-free interest rate on the rate for a U.S. Treasury zero-coupon issue with a term that closely approximates the expected life of the option grant at the date nearest the option grant date.

The concluded fair value of the Class A Units was taken into consideration as the strike price of some of the newly issued Class B Units through an iterative process, in order to determine the fair value of those newly issued Class B Units, since management's intent was to issue those units as at-the-money equity awards.

If any assumptions used in the option-pricing models we use change significantly, equity-based compensation for future awards may differ materially compared with the awards granted previously.

The assumptions underlying these valuations represent management's best estimates, which involve inherent uncertainties and the application of management's judgment. As a result, if factors or expected outcomes change and we use significantly different assumptions or estimates, our equity-based compensation expense could be materially different. Following the completion of this offering, the fair value of our common stock will be determined based on the quoted market price.

Goodwill and Other Intangible Assets

Goodwill is tested for impairment at the reporting unit level, which is one level below or the same as an operating segment. When testing goodwill for impairment, the Company first performs a qualitative assessment to determine whether it is necessary to perform step one of a two-step annual goodwill impairment test for each reporting unit. The Company is required to perform step one only if it concludes that it is more likely than not that a reporting unit's fair value is less than its carrying value. Should this be the case, the first step of the two-step process is to identify whether a potential impairment exists by comparing the estimated fair values of the Company's reporting units with their respective book values, including goodwill. If the estimated fair value of the reporting unit exceeds book value, goodwill is considered not to be impaired, and no additional steps are necessary. If, however, the fair value of the reporting unit is less than book value, then the second step is performed to determine if goodwill is impaired and to measure the amount of impairment loss, if any. The amount of the impairment loss is the excess of the carrying amount of the goodwill over its implied fair value. The estimate of implied fair value of goodwill is primarily based on an estimate of the discounted cash flows expected to result from that reporting unit but may require valuations of certain internally generated and unrecognized intangible assets such as the Company's software, technology, patents, and trademarks. If the carrying amount of goodwill exceeds the implied fair value of that goodwill, an impairment loss is recognized in an amount equal to the excess.

Other identifiable intangible assets with finite lives, such as software products acquired in acquisitions, non-compete agreements, trade names, and customer relationship assets, are amortized over their estimated lives using either a straight-line method or a method based on pattern of expected economic benefit of the asset as follows: acquired software — three to ten years; non-compete agreements — two to five years; trade names — 20 years; customer relationships — 11 to 16 years; and tradenames — 10 to 17 years. The Company evaluates finite intangible assets for impairment whenever events or changes in circumstances indicate that the carrying amount of the asset might not be recoverable. An impairment loss is recognized when estimated undiscounted future cash flows expected to result from the use of the asset are less than its carrying amount.

Software Development Costs

Software development costs are accounted for in accordance with ASC Subtopic 985-20 if the software is to be sold, leased or otherwise marketed, or by ASC Subtopic 350-40 if the software is for internal use. After the technological feasibility of the software has been established (for software to be marketed), or at the beginning of application development (for internal-use software), software development costs, which include primarily salaries and related payroll costs and costs of independent contractors incurred during development, are capitalized. Research and development costs incurred prior to the establishment of technological feasibility (for software to be marketed), or prior to application development (for internal-use software), are expensed as incurred. Software development costs are amortized on a product-by-product basis commencing on the date of general release of the products (for software to be marketed) or the date placed in service (for internal-use software).

JOBS Act Election

We qualify as an "emerging growth company" as defined in the JOBS Act. An emerging growth company may take advantage of reduced reporting requirements that are not otherwise applicable to public companies. These provisions include, but are not limited to:

- being permitted to present only two years of audited financial statements and only two years of related "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our periodic reports and registration statements, including in this prospectus;

- not being required to comply with the auditor attestation requirements on the effectiveness of our internal controls over financial reporting;
- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements (auditor discussion of critical audit matters);
- reduced disclosure obligations regarding executive compensation arrangements in our periodic reports, proxy statements and registration statements, including in this prospectus; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

We may use these provisions until the last day of our fiscal year in which the fifth anniversary of the completion of this offering occurs. However, if certain events occur prior to the end of such five-year period, including if we become a "large accelerated filer," our annual gross revenues exceed $1.07 billion, or we issue more than $1.0 billion of non-convertible debt in any three-year period, we will cease to be an emerging growth company prior to the end of such five-year period.

We have elected to take advantage of certain of the reduced disclosure obligations in the registration statement of which this prospectus is a part and may elect to take advantage of other reduced reporting requirements in future filings. As a result, the information that we provide to our stockholders may be different than the information you receive from other public companies in which you hold stock.

The JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards, until those standards apply to private companies. We have elected to take advantage of the benefits of this extended transition period and, therefore, we will not be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies. Our financial statements may therefore not be comparable to those of companies that comply with such new or revised accounting standards. Until the date that we are no longer an emerging growth company or affirmatively and irrevocably opt out of the exemption provided by Section 7(a)(2)(B) of the Securities Act of 1933, as amended, upon issuance of a new or revised accounting standard that applies to our financial statements and that has a different effective date for public and private companies, we will disclose the date on which we will adopt the recently issued accounting standard.

Recently Adopted and Issued Accounting Standards

We have reviewed all recently issued standards and have determined that, other than as disclosed in Note 2 to our consolidated financial statements appearing elsewhere in this prospectus, such standards will not have a material impact on our consolidated financial statements or do not otherwise apply to our operations.

Quantitative and Qualitative Disclosures About Market Risk

Market risk is broadly defined as potential economic losses due to adverse changes in the fair value of a financial instrument. In the normal course of business, we are exposed to market risks, including foreign currency exchange rate risk and interest rate risk.

Foreign Currency Exchange Rate Risk

We are exposed to foreign currency exchange rate risk by virtue of our international operations. This risk arises because we use different currencies to recognize revenue and pay operating expenses. We derived 27% of our revenue for the year ended December 31, 2019 from operations outside of the United States. Our strategy for managing foreign currency risk relies on efforts to negotiate customer contracts to receive payment in the same currency used to pay expenses. As of December 31, 2019, we had no outstanding foreign currency forward contracts. Foreign currency exchange rate risk is evidenced in our consolidated financial statements through translation risk and transaction and re-measurement risk.

Translation Risk

We are exposed to movements in foreign currencies, predominately in U.S. dollars, pounds sterling, euros, or Japanese yen, with the majority in U.S. dollars. The vast majority of our contracts are entered into by our U.S. and U.K., E.U., and Japanese subsidiaries. Contracts entered into by our U.S. subsidiaries are almost always denominated in U.S. dollars. Contracts entered into by our other subsidiaries are generally denominated in U.S. dollars, pounds sterling, euros, or Japanese yen, with the majority in U.S. dollars. If the U.S. dollar had weakened 10% relative to the pound sterling, the euro, and the Japanese yen in the year ended December 31, 2019, income from operations would have been lower by approximately $1.2 million, based on revenues and costs related to our foreign operations.

Changes in exchange rates between the applicable foreign currency and the U.S. dollar will affect the translation of foreign subsidiaries' financial results into U.S. dollars for purposes of reporting our consolidated financial results. The process by which we translate each foreign subsidiary's financial results to U.S. dollars is as follows:

- we translate statement of operations accounts at the exchange rates on the dates those elements are recognized or the average exchange rates for the relevant monthly period;
- we translate balance sheet asset and liability accounts at the end of period exchange rates; and
- we translate equity accounts at historical exchange rates.

Translation of the balance sheet in this manner affects stockholders' equity through the foreign currency translation adjustment account. This account exists only in the foreign subsidiary's U.S. dollar balance sheet and is necessary to keep the foreign balance sheet, stated in U.S. dollars, in balance.

We report translation adjustments within accumulated other comprehensive loss as a separate component of stockholders' deficit on our consolidated balance sheets. Gains or losses from translating amounts in foreign currencies are recorded in other comprehensive income or other comprehensive loss on our consolidated statements of operations and comprehensive income (loss).

Transaction and Re-measurement Risk

We have currency risk resulting from the passage of time between the recognition of revenue, invoicing of customers under contracts, and the collection of payment. If a contract is denominated in a currency other than the subsidiary's functional currency, we recognize an unbilled services asset at the time of revenue recognition and a receivable at the time of invoicing for the local currency equivalent of the foreign currency invoice amount. Changes in exchange rates from the time we recognize revenue until the time the customer pays will result in our receiving either more or less in local currency than the amount that was originally invoiced. We recognize this difference as a foreign currency transaction gain or loss, as applicable.

We also have currency risk as a result of intercompany loans or other intercompany borrowings throughout our organization when such intercompany debt is denominated in a currency other than the subsidiary's functional currency. Changes in exchange rates from the time a subsidiary records the intercompany debt until the time the subsidiary pays the intercompany debt will result in a foreign currency transaction gain or loss. We record all foreign currency transaction and re-measurement gains and losses as other income (expense), net on the consolidated statement of operations and comprehensive income (loss). We do not have significant operations in countries considered highly inflationary.

Interest Rate Risk

We have borrowings under our Credit Agreement that bear interest at a rate per annum equal to either (a) the Eurocurrency rate, with a floor of 0.0%, as adjusted for the reserve percentage required under regulations issued by the Federal Reserve Board for determining maximum reserve requirements with respect to Eurocurrency funding, plus an applicable margin rate of 3.5% for the term loan and between 4.0% and 3.5% for revolving credit loans, depending on the applicable first lien leverage ratio or (b) an ABR, with a floor of 1.00%, plus an applicable margin rate of 2.5% for the term loan or between 3.0% and 2.5% for revolving credit loans, depending on the applicable first lien leverage ratio.

The ABR is determined as the greatest of (a) the prime rate, (b) the federal funds effective rate, plus 0.5% or (c) the Eurocurrency rate plus 1.0%. As of December 31, 2019, we had $308.2 million of outstanding borrowings on the term loan, no outstanding borrowings under the revolving credit facility and an outstanding letter of credit of $0.1 million under the Credit Agreement.

As of September 30, 2020, we had $304.9 million of outstanding borrowings on the term loans, and $0.0 million of outstanding borrowings under the revolving credit facility, and an outstanding letter of credit of $0.1 million, under the Credit Agreement.

Each quarter-point increase in the Eurocurrency rate would increase interest expense on our current variable rate debt by approximately $0.2 million for the nine months ended September 30, 2020. Our exposure to interest rate risk is minimized by our interest rate swaps. As of September 30, 2020, we recorded the fair value of our interest rate swaps in the amount of $4.2 million as a derivative liability (see Note 2 to our unaudited condensed consolidated financial statements included elsewhere in this prospectus for more information regarding derivative instruments).

Other Risk

Although we perform services for customers located in a number of jurisdictions, we have not experienced any material difficulties in receiving funds remitted from foreign countries. However, new or modified exchange control restrictions could have an adverse effect on our ability to repatriate cash to fund our operations and make principal and interest payments, when necessary.

BUSINESS

Our Company

We accelerate medicines to patients using biosimulation software and technology to transform traditional drug discovery and development.

Biosimulation is a powerful technology used to conduct virtual trials using virtual patients to better understand how drugs behave in different individuals. Biopharmaceutical companies use our proprietary biosimulation software throughout drug discovery and development to inform critical decisions that not only save significant time and money but also advance drug safety and efficacy, improving millions of lives each year.

As a global leader in biosimulation based on 2019 revenue, we provide an integrated, end-to-end platform used by more than 1,600 biopharmaceutical companies and academic institutions across 60 countries, including all of the top 35 biopharmaceutical companies by R&D spend in 2019. Since 2014, customers who use our biosimulation software and technology-enabled services have received over 90% of all new drug approvals by the FDA. Moreover, 17 global regulatory authorities license our biosimulation software to independently analyze, verify, and review regulatory submissions, including the FDA, Europe's EMA, Health Canada, Japan's PMDA, and China's NMPA. Demand for our offerings continues to expand rapidly.

While traditional drug development has led to meaningful therapies, such as vaccines and chemotherapy, many patients still wait for life-saving medicines, which can take more than 10 years and $2 billion to bring to market. In 2019, according to EvaluatePharma, worldwide biopharmaceutical R&D expenditures reached $186 billion, but the return on investment at the world's 12 leading biopharmaceutical companies was below 2%, down from 10% in 2010, according to a report by the Deloitte Center for Health Solutions. Change is necessary to continue delivering remarkable gains in human health at an accelerated pace. We, and many others in the biopharmaceutical industry, believe that biosimulation enables this change.

We build our biosimulation technology on first principles of biology, chemistry, and pharmacology with proprietary mathematical algorithms that model how medicines and diseases behave in the body. For over two decades, we have honed and validated our biosimulation technology with an abundance of data from scientific literature, lab research, and preclinical and clinical studies. In turn, our customers use biosimulation to conduct virtual trials to answer critical questions, such as: What will be the human response to a drug based on preclinical data? How will other drugs interfere with this new drug? What is a safe and efficacious dose for children, the elderly, or patients with pre-existing conditions? Virtual trials may be used to optimize dosing on populations that are otherwise difficult to study for ethical or logistical reasons, such as infants, pregnant women, the elderly, and cancer patients.

The benefits of biosimulation are significant. One of our customers, a top ten global biopharmaceutical company by R&D spend, estimated that they saved more than half a billion dollars over three years using biosimulation to inform key decisions. Biosimulation can reduce the size of and cost of human trials, the most expensive and time-consuming part of drug development, and in some cases, eliminate certain human trials completely. An analysis published on Applied Clinical Trials Online, to which we contributed, estimated that $1 billion was saved in clinical trial costs using biosimulation for a cancer drug due to consistently shorter completion times in the later phase clinical trials. According to such analysis, the Phase III trial for this cancer drug, which generated more than $10 billion in revenue in 2019, was more than a year shorter than the length of trials for two comparable cancer drugs that did not use biosimulation as extensively. Another global biopharmaceutical customer avoided a Phase III trial after submitting our biosimulation analysis to the FDA for their central nervous system (CNS) therapy, which we believe saved $60 million and 24 months. This is a conservative estimate of savings given that the average duration of a Phase III trial is 32 months and the out-of-pocket cost of the clinical phase is $351 million for a CNS drug, according to the Office of Health Economics.

We develop and apply our biosimulation technology throughout drug discovery and development with what we believe to be the largest and best team of scientists with deep expertise in biosimulation. Our scientists are recognized key opinion leaders who are at the forefront of the science and technology underpinning the rapidly emerging biosimulation field. We have collaborated on more than 5,000 customer projects in the past

decade in therapeutic areas ranging from cancer and hematology to diabetes and hundreds of rare diseases. Over the past year, we have worked on more than 24 medicines and vaccines to combat COVID-19.

Biosimulation results need to be incorporated into regulatory documents for compelling submissions. Accordingly, we provide regulatory science solutions and integrate them with biosimulation, so that our customers can navigate the complex and evolving regulatory landscape and maximize their chances of approval. Our differentiated regulatory services are powered by submissions management software and natural language processing for scalability and speed, allowing us to deliver more than 200 regulatory submissions over the past four years. Our team of more than 200 regulatory professionals has extensive experience applying industry guidelines and global regulatory requirements.

The final hurdle to delivering medicines to patients is market access, defined as strategies, processes, and activities to ensure that therapies are available to patients at the right price. We believe that biosimulation and market access will continue to be increasingly intertwined as healthcare systems and countries move toward outcomes-based pricing. We have recently expanded into technology-enabled market access solutions, which help our customers understand the real-world impact of therapies and dosing regimens earlier in the process and effectively communicate this to payors and health authorities. Our solutions are underpinned by technologies such as Bayesian statistical software and SaaS-based value communication tools.

We have a proven track record of steady growth, driven by higher adoption of biosimulation, expansion of our technology portfolio, strategic acquisitions, and cross-selling of biosimulation, regulatory science, and market access solutions across our end-to-end platform:

- From 2018 to 2019, our revenue increased by 27% from $163.7 million to $208.5 million.
- From 2018 to 2019, our net loss decreased by 73%, from $33.3 million to $8.9 million.
- The number of customers with ACV of $100,000 or more in revenue increased from 197 in 2018 to 228 in 2019, and revenue from these customers grew by 20% from 2018 to 2019.
- The number of customers with ACV of $1,000,000 or more in revenue increased from 37 in 2018 to 44 in 2019.
- Of our top 300 customers, 67% purchased two or more of our four major solution areas (Simcyp, Phoenix and other software, biosimulation services, regulatory science & market access services) in 2019, up from 55% in 2018. We believe there is a significant ongoing opportunity to continue cross-selling our integrated suite of solutions to our existing customers.

We believe that biosimulation is at an inflection point, driven by increasing global regulatory adoption and advancements in technology. For example, 33% of new drug applications approved by the FDA used our Simcyp biosimulation software in 2019, an increase from 13% in 2014. We believe we are well-positioned to capture the significant market opportunity ahead of us. Our growth strategy is to build out the depth and breadth of our scalable, end-to-end biopharmaceutical platform to advance all stages of the continuum, from discovery and development to regulatory submission and market access. We continue to innovate and introduce new functionality and uses of biosimulation and technology-enabled solutions. We increasingly integrate the science and data we obtain across this end-to-end platform to inform critical decisions. We further reduce the cost and time of human trials to materially accelerate the speed of development and availability of therapies to patients worldwide. As exciting, new research areas arise, we attract and hire specialized talent and acquire businesses to expand our offerings to address these market opportunities.

With continued innovation in and adoption of our biosimulation software and technology-enabled services, we believe more biopharmaceutical companies worldwide will leverage more of our end-to-end platform to reduce cost, accelerate speed to market, and ensure safety and efficacy of medicines for all patients.

Our Markets

We believe our addressable market within the biopharmaceutical industry is large and rapidly expanding. The current total addressable market for our solutions represents an estimated $10 billion today and is expected to grow at a CAGR of approximately 12 to 15% annually over the next five to seven years. Our total addressable market estimate includes the biosimulation market estimated at $2 billion, which is estimated to grow at

15% CAGR over such period according to Grand View Research; the regulatory science market estimated at $7 billion, which is estimated to grow at 12% CAGR over such period according to Grand View Research; and the market access market estimated at $1 billion, which is estimated to grow at 13% CAGR over such period according to SpendEdge. With increasing adoption of technology across all stages of drug discovery and development, we believe our end-to-end platform and growth strategies position us to further penetrate the rapidly growing technology-enabled biopharmaceutical R&D market of the future.

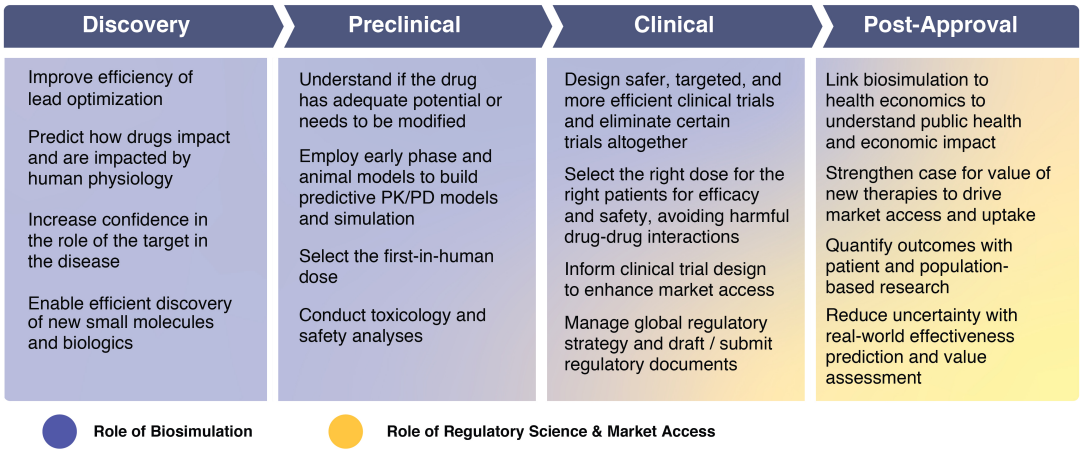
Traditional drug discovery and development is costly and prone to failure. The biopharmaceutical industry was estimated to have spent a total of approximately $186 billion in 2019 on R&D. It takes more than 10 years to bring a drug to market, and the cost has grown significantly in the past decade from $1.2 billion in 2010 to $2.0 billion in 2019. The probability of success of compounds entering Phase I trials is only 7%. With only 53% of Phase III drugs reaching the market, late-stage failures are common and especially painful as sponsors have already incurred significant cost and time. At the same time, scientific advances are driving increased complexity as the R&D pipeline shifts from small molecules to biologics and cell and gene therapies. The increasing cost, time and complexity of developing drugs have driven down the rate of return on R&D to less than 2% in 2019 for the 12 leading biopharmaceutical companies analyzed in a report by the Deloitte Center for Health Solutions.

With greater investment dollars being spent and increasing competition in the race to develop novel medicines, the speed and efficiency with which drugs are developed and brought to market have never been more critical. As a result, the demand for and willingness to adopt innovative approaches to discovery, development, and commercialization are rapidly increasing. Continued development and innovation in software and technology such as biosimulation, virtual trials, and real-world evidence tools are helping biopharmaceutical companies increase efficiency and decrease costs. This is further supported by regulatory agencies that have increasingly issued guidance on the adoption of many of these innovations. As technology and analytics become increasingly powerful and the application of new solutions is validated, we anticipate this will drive further demand for these innovations. We believe we are still in the early stages of a long-term trend that will continue to advance traditional drug discovery and development into a technology-enabled era of advanced modeling and analytics.

In addition, as a result of the COVID-19 pandemic, we believe that the demand for innovative technology solutions in drug discovery and development is accelerating. Disruption of clinical trials during the pandemic has highlighted some of the limitations of human trials and is expected to drive increased utilization of technology during and after the pandemic. Sponsors, regulators, and their partners have adopted a number of technology-driven solutions and procedures, which we believe they will continue to utilize and benefit from in the post-COVID environment. Moving forward, we believe there will be an increase in adoption of software and technology-enabled solutions as a means to proactively mitigate the future risks of disruptions to clinical trials. We believe that these trends will only serve to accelerate our market opportunity.

We have purpose-built our innovative end-to-end platform to capitalize on industry trends by delivering biosimulation technology and technology-enabled services that span all stages of the drug discovery and development continuum.

Role of Our Platform across the Stages of Drug Discovery and Development



Our core markets today include:

- ***Biosimulation***: Biosimulation is the mathematical modeling of biological processes and systems to simulate how a drug affects the body, how the body affects the drug, how potential doses will affect different patient groups, and how patients will respond under various clinical scenarios. Biosimulation informs every stage of the drug discovery and development process and brings value through:
  - Identifying potential winners and losers at an earlier stage and allowing programs to "fail faster";
  - Streamlining preclinical and clinical studies or eliminating certain ones altogether;
  - Optimizing dosing for different populations for enhanced safety and efficacy; and
  - Increasing probability of success and return on R&D, amongst others.
- ***Regulatory Science***: Regulatory science is the development and application of scientific methods, tools, and approaches to support regulatory and other policy objectives. Expert management of these processes is critical to drugs receiving regulatory approval and ultimately reaching patients and generating sales. Providers of regulatory technology and expertise drive significant value for biopharmaceutical companies through:
  - Utilizing best-in-class technology to reduce time-intensive regulatory writing activities and the need for regulatory writing staff;
  - Managing submission timelines and other requirements of global regulatory agencies;
  - Generating clear, accurate applications and submissions; and
  - Developing comprehensive global regulatory strategies, amongst others.
- ***Market Access***: To achieve commercial access, sponsors must assess, optimize and persuasively communicate the value of a new therapy, both therapeutic and economic, that stakeholders such as payors and health care providers will accept and act on. Market access services, including real-world evidence and health economics outcomes research, generate value by:
  - Creating cost and comparative effectiveness models to support pricing and payor reimbursement;
  - Analyzing payor needs and using economic models to develop contracting strategies that optimize value; and
  - Collecting and analyzing real-world data for use in market and payor communications, amongst others.

We believe that our end-to-end platform is well-positioned to continue benefiting from market trends. In addition to continued growth in our core markets, we expect to capture a broader share of overall biopharmaceutical R&D spend as we continue to innovate and add new solutions to our end-to-end platform.

Our Competitive Strengths

We compete by offering a broad and deep combination of industry-standard biosimulation software and technology-enabled services across all stages of the continuum, from discovery and development to regulatory approval and market access. We have cultivated the following competitive strengths for more than two decades:

Our Proprietary, Scalable Biosimulation Software

Our proprietary, scalable biosimulation software, built on first principles and including more than 9.3 million lines of code, integrates biosimulation models, scientific knowledge, and data, which we believe would require years of effort, immense resources, and scarce expertise to duplicate. Our versatile biosimulation software is deployed to public and private cloud networks, on-premises, and data centers. Scientists can run multiple simulation projects on a cloud compute platform or internal clusters. We protect our proprietary technology through intellectual property rights, including copyrights, patents, trade secrets, know-how, and trademarks.

Our Integrated End-to-End Platform

We have developed a differentiated, integrated end-to-end platform of software and technology-enabled services, powered by proprietary technology and unique talent, spanning discovery through market access. Our customers, facing declining R&D productivity and an increasingly complex regulatory and market access environment, seek trusted partners to accelerate their R&D programs and achieve regulatory and commercial success. Our integrated set of solutions uniquely positions us to be their first-choice partner. Ninety percent of our top 50 customers by revenue use both our biosimulation solutions and regulatory and market access offerings.

Our Innovation Framework

We are at the forefront of innovation in biosimulation. Beyond our sustained R&D investment ($18.9 million or 9.1% of revenues in 2019), our innovation framework advances both incremental and breakthrough innovations in biosimulation to transform traditional drug discovery and development.

- ***Customer-Centricity***: Through our consortium model and approximately 1,000 biosimulation projects and workshops annually, we derive significant insights that inform the development of our biosimulation software. These insights help us to anticipate and align our technology roadmap with our customers' needs and priorities.
- ***Regulatory Alignment***: As we continuously engage with regulators through our customers' programs, training workshops, and attendance at FDA and other regulator meetings, we develop an in-depth understanding of how to align our biosimulation software and services to meet evolving regulatory expectations and requirements.
- ***Scalable Data Collection and Curation***: Using artificial intelligence and our scientific team, we have curated data from more than 8,000 clinical studies and 18,000 peer-reviewed manuscripts. We have created 25 different virtual patient populations, more than 90 compound drug files, more than 40 clinical outcomes databases, and advanced mathematical models for ten organs.
- ***Scientific Research***: We work with our customers, a scientific advisory board of thought leaders, and more than 120 academic institutions to innovate bottom-up, mechanistic models of drug, disease, and human biology. Each mathematical equation or parameter estimation is based on up-to-date scientific knowledge and data. We use scientific literature, lab data, and our customers' preclinical and clinical studies to refine, verify, and validate these models to ensure that they meet rigorous scientific and quality standards.

Our Trusted, Long-Term Customer and Regulatory Partnerships

We work continuously and closely with our customers to provide software and technology-enabled services from drug discovery and development to regulatory science and market access, applying biosimulation throughout the continuum to maximize R&D productivity and increase the probability of success. We have substantial repeat business and long-term partnerships. Our top 30 customers by revenue in 2019 have been with us for more than nine years on average. We are often favored by our customers for follow-on projects throughout a

drug's lifecycle, leveraging our early engagements in preclinical or Phase I to provide continuous support in later phases such as dose optimization for a Phase III study or a new drug application regulatory filing.

- ***Consortium Model with Biopharmaceutical Companies***: Our Simcyp Platform benefits from a unique business and customer collaboration model that we term a "consortium." Established 20 years ago, our consortium model provides for intense and detailed customer input into software enhancements. This R&D feedback loop, driven by customer needs, results in ongoing advancement and incorporation of more scientific data that increases the value of our Simcyp Platform over time. Our consortium members, consisting of scientists from leading global biopharmaceutical companies, sign multi-year contracts and actively participate in consortium meetings, so that we continuously extend our scientific and commercial leadership.
- ***Long-Standing Regulatory Partnerships***: Seventeen regulatory agencies license our biosimulation software. In addition, our scientists are regularly invited by U.S., European, and Japanese regulatory agencies to teach and participate in their workshops. We have received four grants and a Cooperative Research and Development Agreement from the FDA as well as grants from six European organizations, including the EU Commission, to develop biosimulation models and conduct biosimulation analyses.
- ***Academic Centers of Excellence***: We work closely with the global academic community on research, publications, and training of the next generation of biopharmaceutical scientists. We have established nine Centers of Excellence worldwide, which use our biosimulation software in their courses and scientific research. Additionally, nearly 400 academic institutions worldwide license our biosimulation software.
- ***Certara University***: We recognize that education in the theory and practice of biosimulation is pivotal to adoption and achieving the benefits of biosimulation. Certara University provides in-person and online training on biosimulation and the use of our biosimulation software to more than 4,500 scientists in the past three years.

The Deep Expertise of Our People and Our Culture of Innovation

We are led by a diverse, global, and talented team of scientists, software engineers, and subject matter experts who not only advance our technology but also seek to understand and tackle our customers' greatest challenges. Over the last decade, we have worked on more than 5,000 customer projects, leading to extensive experience, which our customers highly value. As of November 9, 2020, approximately 300 of our employees held PhD, PharmD, or MD degrees and an additional 266 held graduate or other advanced degrees. Our team of nearly 100 software engineers and technologists excels at applying computer science, engineering, and scientific and mathematical principles in designing and developing complex software with consistent execution. World-leading experts in biosimulation, drug discovery and development, software development, regulatory science, and market access work and thrive at Certara.

Our global executive management team brings together extensive experience in science, technology, and business. Sharing core values of dedication, quality, and respect, the executive management team is focused on fostering our passion for science and growing our culture of innovation, excellence, collaboration, and customer-centricity as well as delivering exceptional performance.

Our Growth Strategy

Our growth strategy is to build upon our scalable, end-to-end platform. We continue to innovate in biosimulation, engage with regulatory agencies, and land and expand our customer partnerships. We remain focused on reducing the cost, time, and probability of failure of clinical trials for our customers, so that they can materially accelerate the availability of future therapies that are needed by patients worldwide. As exciting, new research areas arise, such as cell and gene therapy, we attract and hire specialized talent and acquire businesses to expand our offerings accordingly.

Advance Our Technology

The science, technology, and data behind biosimulation continue to advance rapidly, and our top investment priority is to develop additional functionality and uses for biosimulation to improve patient outcomes. We release new software, additional features, and upgrades on a frequent and regular basis. In the past two years, we

have introduced more than 10 new software applications and upgrades, including D360 Biologics Scientific Informatics, Simcyp Immuno-oncology Quantitative Systems Pharmacology, and COVID-19 Quantitative Systems Pharmacology.

We are investing in three major areas to elevate our technology:

- ***Spearheading the Frontier of QSP and Toxicology***, an emerging approach with enormous potential for industry-wide transformation to optimize decisions in both drug discovery and development. In addition to QSP for immunogenicity, immuno-oncology, and COVID-19, we are ramping up our QSP consortia for neurodegenerative diseases, such as Alzheimer's and Parkinson's, and for quantitative systems toxicology and safety ("QSTS"). Neuroscience is expected to have the most growth in QSP modeling over the next several years, followed by oncology and autoimmune disorders. All of our mechanistic simulators communicate seamlessly with each other, which is a major advantage for complex drug discovery and development programs;
- ***Continuing to Develop Cloud-Based Solutions***, such as Certara Integral Data Repository, CODEx Clinical Outcomes Databases, and BaseCase Value Communication Software, which enhance computing scalability, significantly reduce maintenance time and cost, and promote access, collaboration and mobility. This also allows us to easily deliver new features and explore new business models; and
- ***Architecting an Ecosystem of Interconnected Software Applications*** to facilitate seamless workflows and sharing of data across the drug discovery and development continuum for efficiency and speed.

Grow Within Our Existing Customers

As we continue to expand our portfolio of offerings, we integrate our solutions and sell more across our end-to-end platform. Our scientists and regulatory and market access experts, business developers, marketing professionals, and business leaders work together to ensure a high-quality customer experience and nurture long-term partnerships. As a result, our customer relationships grow steadily over time, driven by higher adoption of biosimulation with additional user licenses and more modules. For example, for our top 300 customers in 2019 by revenue, our Phoenix revenues grew by more than 15% from 2018 to 2019 as customers purchased more annual user licenses and adopted more modules, such as our new PK Submit software, which was recently recognized as a finalist in R&D's 100 Awards.

We also cross-sell our software and technology-enabled services throughout our end-to-end platform. Many of our customers who use biosimulation also rely on us for regulatory strategy, writing, and submissions support, including the majority of our top 50 customers. Of our top 300 customers in 2019 by revenue, 67% purchased two or more of our four major solution areas in 2019, up from 55% in 2018, a 22% increase. The number of customers with annual customer value of $100,000 or more in revenue increased from 197 in 2018 to 228 in 2019, a 16% increase. The success of our land and expand approach is further demonstrated by our high re-occurring revenue streams with a net revenue retention rate (defined as the level of software revenue generated from our existing customers from period to period, accounting for expansion and churn) of 106% for our 1,401 Simcyp and Phoenix software customers from 2018 to 2019 and net revenue repeat rate (defined as the level of technology-enabled services revenue generated from our existing customers from period to period, accounting for expansion and churn) of 110% for our 770 technology-enabled services customers from 2018 to 2019.

Expand Our Customer Base Globally

We are growing our footprint globally to match that of the biopharmaceutical industry. There are more than 4,800 biopharmaceutical companies worldwide with active R&D pipelines, up from nearly 2,400 in 2011, according to Informa's Pharma R&D Annual Review 2020. Informa also estimates that the R&D pipeline encompasses approximately 18,000 drug programs in 2020. As drug discovery and development in Asia Pacific grows, we are investing heavily to expand our presence in the region to work with these customers where they are, just as we already have in North America, Europe and Japan. In Europe, we have more than 300 employees and partner with all of the top ten European-based biopharmaceutical companies by R&D spend. In Asia Pacific, we have more than 100 employees in Japan, India, Philippines, and Australia. We work with all of the top ten biopharmaceutical companies based in Japan, by R&D spend. In China, our revenue from biopharmaceutical companies and academic institutions increased by more than 50% from 2018 to 2019. We continue to build our sales and marketing capabilities and capacity to expand our global reach. In October 2020, we opened an office in Shanghai, China.

Scale Through Acquisitions

Biosimulation is an exciting technology with many promising, future developments, and we believe there are numerous opportunities to pursue strategic acquisitions to accelerate our development roadmap. We have a proven record of successfully acquiring and integrating software and services companies. To date, we have acquired 12 companies of which nine included software or technology such as Simcyp, the core of our mechanistic biosimulation platform, and Xenologiq, which jumpstarted our biosimulation initiative using QSP. As we build out the depth and breadth of our biosimulation platform, we continually seek and assess a range of highly focused opportunities in our immediately addressable market and in related adjacent markets, whether through acquisitions, licenses, or partnerships.

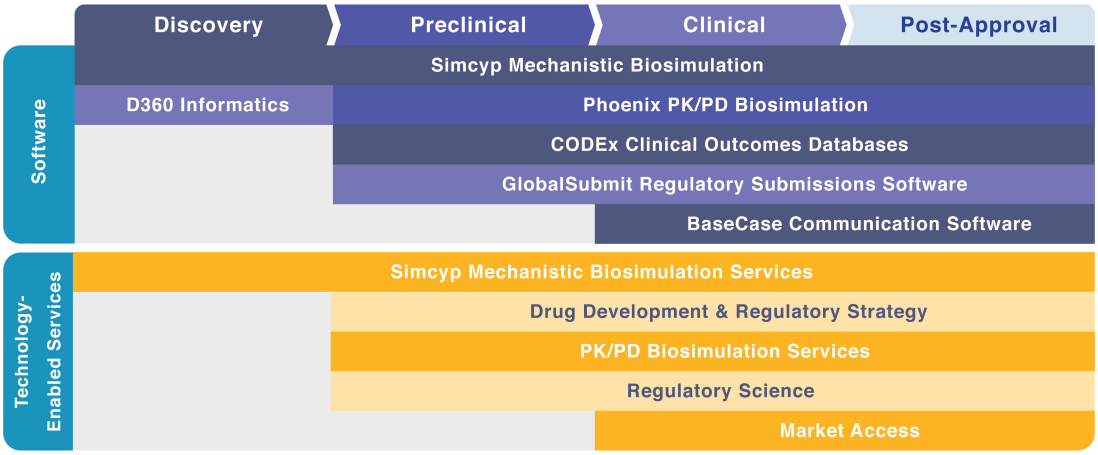
Inspire Our People

Our people, 900 strong, are the key to our success. The diversity and depth of expertise, experience, and backgrounds in our vibrant community bring richness of ideas, problem-solving capabilities, and mutual respect. We are dedicated to attracting, retaining, and growing leading scientists and experts who are passionate about developing medicines that matter. We strive to encourage intellectual curiosity and offer a myriad of professional development opportunities. We continue to invest in our people to help them thrive and solidify our position as an employer of choice in our industry.

The Certara End-to-End Platform

We provide both software and technology-enabled services to enable customers to realize the full benefits of biosimulation in drug discovery, preclinical and clinical research, regulatory submission, and market access. Our software is primarily subscription-based with licenses ranging from one to three years. We estimate that 65% of our revenue in 2019 came from the application of our solutions in the clinical stage, the most expensive and time-consuming part of the drug discovery and development process, according to Nature Reviews Drug Discovery. We estimate that in 2019, 10% of our total revenues were attributed to the use of our solutions in the discovery stage, 15% in the preclinical stage and 10% in the post-approval stage.

Certara End-to-end Platform



Software

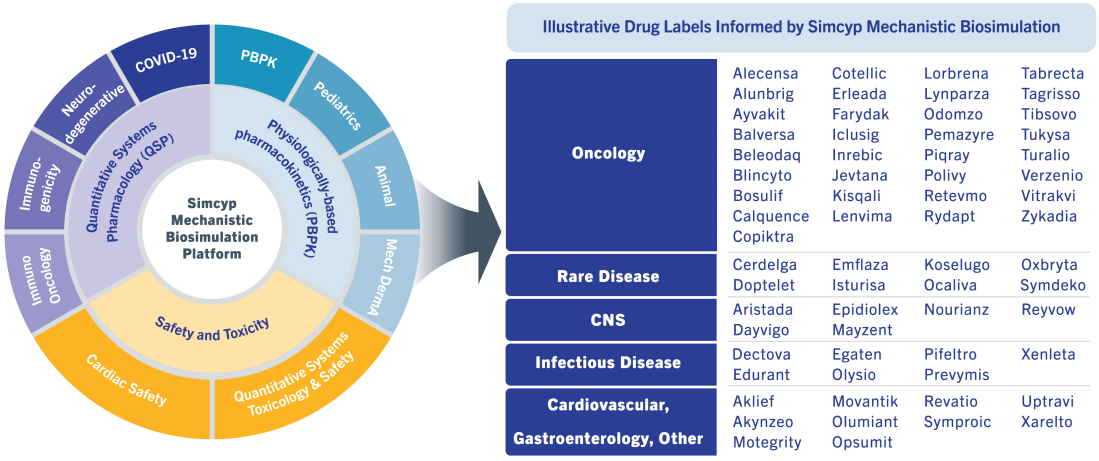
Our software, utilized by more than 20,000 licensed users in biosimulation and 28,000 more in regulatory and market access, addresses six main applications: 1) mechanistic biosimulation; 2) empirical pharmacokinetic and pharmacodynamic biosimulation; 3) scientific informatics; 4) clinical outcomes databases for biosimulation; 5) authoring and management of regulatory submissions; and 6) market access communication. We deploy our software to customers on public and private cloud networks, on-premises, and in data centers.

- ***Mechanistic Biosimulation Platform (Simcyp)***: Mechanistic biosimulation predicts both how a drug is handled within the body (known as “pharmacokinetics” or “PK”) and drug effect (known as

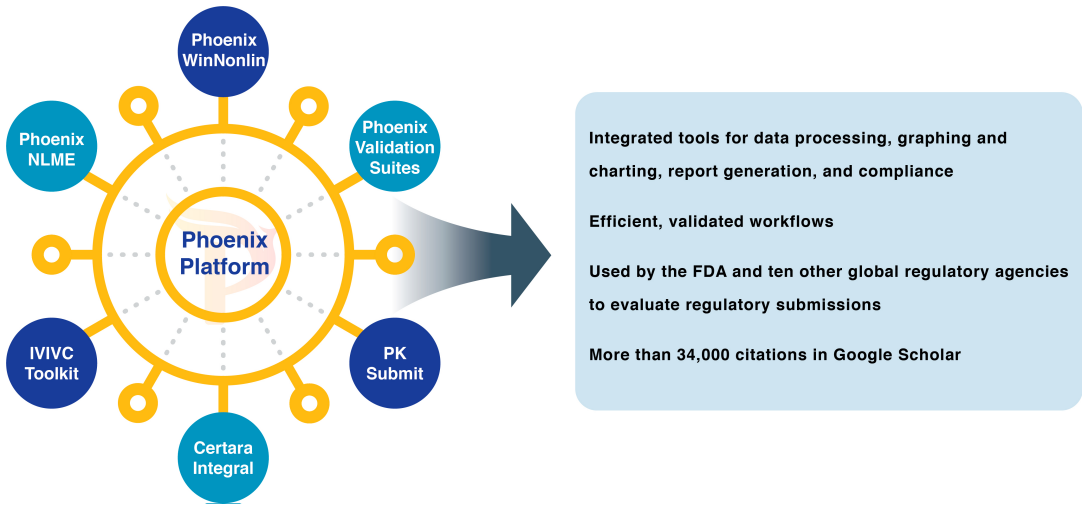
"pharmacodynamics" or "PD"), *without the need for actual in vivo human or animal studies*. Seventeen of the top 20 biopharmaceutical companies by R&D spend in 2019 licensed Simcyp. Simcyp includes three main modules:

- *Physiologically-based pharmacokinetic ("PBPK") modeling and simulation*: Our industry-standard Simcyp PBPK Simulator includes a whole-body PBPK model to run virtual "what if?" scenarios without having to resort to human clinical studies. One benefit is understanding how dosing should be adjusted for special populations such as children or the elderly. A second is to identify potential drug-drug interactions so they can be included on drug labels to make the product safer. Simcyp is used by 11 regulatory agencies to evaluate submissions.
- *Quantitative systems pharmacology*: A rapidly growing field in biosimulation, QSP combines computational modeling and vast amounts of 'omics (e.g., genomics, proteomics, metabolomics) data to predict clinical efficacy outcomes for novel targets, drug modalities, and combination therapies. By using QSP to understand the physiological mechanisms driving efficacy, customers can terminate unpromising discovery programs earlier, and promote stronger candidates to clinical testing, thus reducing costly late-stage failures. Once marketed, the same physiological knowledge can differentiate launch messaging, helping the drug to stand out from the competition.
- *Quantitative systems toxicology and safety*: QSTS integrates toxicology with quantitative analysis of large networks of molecular and functional biological changes to identify drug toxicity and adverse drug reactions earlier.

  Our biosimulation platform has generated results that inform approximately 200 label claims for more than 70 drugs. Had customers attempted to acquire the same information through conventional human trials, we believe they would have faced millions in additional costs and significant launch delays, given that clinical trials are estimated to take 1 to 2.5 years on average and cost many millions of dollars, according to Nature Reviews Drug Discovery.



- ***Empirical PK/PD Biosimulation Platform (Phoenix)***: Once our customers have empirical data from their actual trials assessing drug dissolution, blood concentration, and effect, they must interpret the data and make interpolations and extrapolations to inform dosing, handling of drug-drug interactions, and formulation decisions for subsequent trials and for patient use after launch. Phoenix includes multiple modules for the full empirical biosimulation workflow including conventional and biosimulation-driven interpretation (WinNonlin, NLME, and IVIVC), and related workflow modules for validated data handling, model management, and regulatory reporting (PK Submit, Certara Integral, Validation Suites). Customers benefit by gaining a validated, streamlined workflow for reporting their clinical pharmacology information to the FDA and other agencies. Furthermore, customers can be confident they are using the same tools used by regulators to evaluate their products.



- ***Scientific Informatics Platform (D360)***: D360 provides customers with self-service access and analytics to manage their small molecule and biologics discovery projects. The platform includes chemical structure search capabilities for structure-activity relationship analysis, molecular design tools and visualization solutions. The product connects seamlessly with biology and chemistry data systems from third-party companies, without extensive IT setup and maintenance. We estimate that more than 6,000 discovery research scientists worldwide use D360.
- ***Clinical Outcomes Databases for Biosimulation (CODEx)***: Our customers license our 40+ proprietary CODEx databases in a range of disease areas for meta-analysis of a new drug's safety and efficacy in relation to competitive products. The databases cover more than 8,000 clinical trials and observational studies and are accessible via an online portal with analytical and visualization tools. We recently introduced a new CODEx database for COVID-19.
- ***Authoring and Management of Regulatory Submissions Platform (GlobalSubmit)***: Our customers license our advanced, cloud-based electronic common technical document ("eCTD") software for publishing, review, validation, and electronic filing of regulatory submissions.
- ***Market Access Communication Platform (BaseCase)***: We license a cloud-based SaaS platform for drag-and-drop visualization of biosimulation results and other complex data. Customers use our software to communicate the value of a new therapy to payors and providers to gain formulary acceptance and reimbursement.

Technology-Enabled Services

Our technology-enabled, biosimulation services help customers who do not have staff capability or availability to gain the benefits of biosimulation. We also provide related, technology-enabled services to guide our customers' new drugs through the regulatory submission process and into the market. Our technology-enabled services include mechanistic biosimulation, empirical biosimulation, drug development and regulatory strategy, clinical pharmacology, model-based meta-analysis, regulatory writing and medical communications, regulatory operations, and market access. Regulatory agencies promote and endorse the use of biosimulation in drug development as "model informed drug discovery and development," which integrates our software and technology-enabled services to inform key decisions during drug discovery, development, approval, and subsequent market access.

- ***Mechanistic Biosimulation***: We utilize our Simcyp Platform for predicting PK to determine first-in-human dose selection, design more efficient and effective clinical studies, evaluate new drug formulations, and predict drug-drug interactions. We use our QSP and QSTS software to advise customers on target selection and ranking and strategies for avoiding toxicities.
- ***Empirical Biosimulation***: We use our Phoenix Platform and other tools to provide a wide range of quantitative biosimulation approaches such as non-compartmental analysis, PK/PD modeling, and population PK/PD analyses.

- ***Drug Development and Regulatory Strategy***: We develop and deliver drug development and regulatory plans and provide high-level regulatory input to customer projects, incorporating biosimulation and supporting decision making through critical development and investment stage gates.
- ***Clinical Pharmacology***: We provide early-phase development plans and study designs across the development life-cycle, often incorporating biosimulation. We use clinical pharmacology gap analysis and modeling to anticipate and manage development risks.
- ***Model-Based Meta-Analysis***: We utilize curated clinical trial data from our CODEx clinical outcomes database platform together with model-based meta-analysis to assess a new drug's safety and efficacy in relation to competitive products.
- ***Regulatory Writing and Medical Communications***: We support submissions from early-stage investigational new drugs to late-stage new drug applications, biologics license applications, and market authorization applications, by writing regulatory documents such as clinical study protocols/reports, safety submissions, and other summary documents for submission to the FDA and global regulatory authorities. We manage technical editing including transparency and disclosure services to ensure that our customers' regulatory documents are "filing-ready." Our team also offers advanced publication planning and writing support for scientific and medical publications. We deploy natural language processing software and other technology to enable efficient and scalable document creation.
- ***Regulatory Operations*:** We manage the submission of regulatory documents using our GlobalSubmit platform. Our submission management services include submission leadership, program management and planning, due diligence and readiness preparation, submission compilation, and eCTD publishing. We support applications to all major health agencies, including the FDA, Europe's EMA, Health Canada, Japan's PMDA, and China's NMPA.
- ***Market Access*:** We assist customers in demonstrating the value of new drugs and health technologies to payors and other stakeholders to support their efforts in securing reimbursement and access in global markets. These services include conducting real-world evidence and health economics outcomes research, delivering value and access consultancy solutions, creating cost and comparative effectiveness models to support pricing and payor reimbursement, and collecting and analyzing real-world data for use in market and payor communications. We use our proprietary technology called the Health Outcomes Performance Estimator (HOPE), based on a Bayesian engine, that translates clinical trial findings and population health knowledge into expected real-world impact.

Sales and Marketing

Our sales and marketing functions pursue a coordinated approach with a global commercial team of business development, product management, and marketing experts. Our global commercial team collaborates with our scientists, subject matter experts, and technologists to engage with customers and prospects to understand their needs and offer tailored solutions with our biosimulation software and technology-enabled services. Our marketing campaigns include integrated, multi-channel campaigns designed to highlight the benefits and differentiated capabilities of our biosimulation software and technology-enabled services to reach new audiences and generate and nurture leads. Furthermore, we invest significant time and resources on thought leadership. Our scientists and experts have authored thousands of scientific publications, posters, and articles to share biosimulation knowledge and methods and advance adoption. We also partner with software distributors in global regions to expand our reach.

Competition

The market for our biosimulation products and related services for the biopharmaceutical industry is competitive and highly fragmented. In biosimulation software, we primarily compete with companies smaller than ourselves, such as Simulations Plus and NONMEM, a division of ICON. Other competitors include Schrodinger, open-sourced solutions such as R and PK-Sim, and internally-developed software in biopharmaceutical companies. We generally compete in biosimulation software on the basis of the quality and capabilities of our products, our scientific and technical expertise, our ability to innovate and develop solutions attractive to customers, our customer and regulatory agency partnerships, and price, amongst other factors.

Our technology-enabled services generally compete with companies significantly smaller than ourselves, such as Nuventra, Metrum Research Group, and Simulations Plus. We also face competition in this space from in-house teams at biopharmaceutical companies and academic and government institutions. In some standard biosimulation services and in regulatory science and market access, we compete with contract research organizations. We generally compete in the technology-enabled services markets on the basis of our reputation and experience, our expertise and the qualifications of our team, our ability to offer services attractive to customers, and price, amongst other factors.

We believe that our competitive position is strong, and that we are able to effectively win new projects with our integrated, end-to-end platform.

Intellectual Property

We safeguard and enhance our innovative technology platforms, systems, processes, and databases with a full array of intellectual property rights, including copyrights, trade secrets and know-how, patents, and tradenames/trademarks.

All of our proprietary software products are copyright protected, and further reinforced by contractual provisions in our software license agreements prohibiting our users from reverse engineering, deriving, or otherwise using the source code and underlying algorithms for anything other than the permitted and intended use. Embedded within some of our biosimulation tools, including the Simcyp Simulator, are several decades' worth of proprietary data that have been compiled and collated from both public and private sources. These data, in tandem with our proprietary source code and algorithms, create powerful modeling tools that cannot be readily duplicated. Continual ongoing development of source code and algorithms as well as new version release of modelling tools also ensures that our proprietary software products are regularly updated such that copying is made more difficult. Our processes and systems are further protected by trade secrets and know-how, which we secure by requiring and strictly enforcing confidentiality obligations with our employees, contractors, customers, and other third parties, and invention assignment agreements with our employees, as well as through administrative and technical safeguards. However, trade secrets and confidential know-how are difficult to protect. Agreements may not always provide meaningful protection. These agreements may also be breached, and we may not have an adequate remedy for any such breach. In addition, our trade secrets and/or confidential know-how may become known or be independently developed by a third party, or misused by any collaborator to whom we disclose such information. Despite any measures taken to protect our intellectual property, unauthorized parties may attempt to copy aspects of our products or to obtain or use information that we regard as proprietary. Although we take steps to protect our proprietary information, third parties may independently develop the same or similar proprietary information or may otherwise gain access to our proprietary information. As a result, we may be unable to meaningfully protect our trade secrets and proprietary information. We license and use the intellectual property of third parties, primarily in our software development, although no one such license is considered to be material to the business as a whole.

We also maintain a portfolio of issued and pending patents in several of jurisdictions in which we do business. As of September 30, 2020, our patent portfolio consisted of 31 issued patents and four pending patent applications related to our software and technology. The Company does not currently consider any of its issued patents to be material to its business. Several of our most recently filed patent applications relate to our liquid biopsy project, and describe a method of gleaning information from a simple blood test that can be used to predict and optimize how that individual patient will absorb and metabolize a drug, thereby allowing a clinician to determine the optimal dosing of a drug on an individual basis. Our pending Virtual Twin patent application describes the use of our Simcyp Simulator to identify characteristics of a Virtual Twin to a real patient based on physiological and demographic characteristics of a real patient and estimate appropriate drug dosage levels for the real patient. We believe these patent applications, if issued, will accelerate our leadership in individualized precision dosing. We cannot predict whether the patent applications we are currently pursuing will issue as patents in any particular jurisdiction or whether the claims of any issued patents will provide sufficient proprietary protection from competitors.

We also have applied for and/or obtained and maintain registration in the United States and other countries for numerous trademarks, including Certara, Simcyp, Phoenix, Virtual Twin, WinNonlin, and BaseCase. We pursue trademark registrations to the extent we believe doing so would be beneficial to our competitive position.

We are not presently a party to any legal proceedings relating to intellectual property that, in the opinion of our management, would individually or taken together have a material adverse effect on our business, financial condition, results of operations or cash flows.

Human Capital

We are led by a diverse, global, and talented team of scientists, software developers, and subject matter experts who seek to understand our customers' challenges and are dedicated to tackling these challenges. As of November 9, 2020, we employed a total of 899 individuals, including 841 full-time employees and 58 part-time employees, of which 302 held Ph.Ds. in their respective disciplines, including clinical pharmacology and pharmacometrics, and an additional 266 employees held one or more graduate or other advanced degrees. As of November 9, 2020, we employed approximately 300 scientists, 220 regulatory experts, 100 market access specialists, and 100 software developers and technologists. Most of the senior management team and the members of our board of directors hold either PhDs and/or other advanced degrees. We are very proud to say that some of the world-leading experts in biosimulation, drug discovery and development, software development, regulatory science, and market access work and thrive at Certara. We offer employees a myriad of professional development opportunities and encourage a performance-driven environment. In 2020, we have focused on creating a robust culture in a remote work environment to encourage retention and engagement. None of our employees are represented by a labor union, and we have never experienced a work stoppage. We believe that our relations with our employees are positive.

Government Regulation

Regulation of Biopharmaceutical Products

The development, testing, manufacturing, labeling, approval, promotion, distribution and post-approval monitoring and reporting of biopharmaceutical products are subject to regulation by numerous governmental authorities at both the national and local levels, including the FDA in the United States, as well as those of other countries, such as the EMA in the European Union and the Medicines and Healthcare products Regulatory Agency in the United Kingdom. Although our biosimulation software products and platforms are not approved by the FDA or other government agencies, our customers' products are subject to these regulations, which may be applicable to us to the extent that the services and deliverables we provide to our customers are used in their marketing applications. Consequently, we must comply with relevant laws and regulations relating to certain aspects of the drug and biologic development and approval process. For example, our customers may require that documents or records we produce that may be used in the approval process be compliant with part 11 of Title 21 of the U.S. Code of Federal Regulations, which relates to the creation, modification, maintenance, storage, retrieval, or transmittal of electronic records submitted to the FDA. Further, certain portions of our business, such as the biosimulation work we conduct in connection with designing clinical trials, must comply with current Good Laboratory Practices ("GLP") and Good Clinical Practices ("GCP") requirements as established by the International Council on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use, as adopted by the FDA and similar regulatory authorities in other countries, which helps ensure the quality and integrity of the data we produce. To help ensure compliance with GLP and GCP, we have established a robust quality management system that includes standard operating procedures, working practice documents and processes, and quality assurance personnel to audit deliverables intended to be used in our customers' drug and biologic approval applications.

Privacy and Security Laws

The collection, processing, use, disclosure, disposal and protection of information about individuals, in particular healthcare data, is highly regulated both in the United States and other jurisdictions, including but not limited to, under HIPAA, as amended by HITECH; U.S. state privacy, security and breach notification and healthcare information laws; the GDPR; and other European privacy laws as well as privacy laws being adopted in other regions around the world. Although most of the clinical data we receive from our customers is de-identified, in certain parts of our business, such as our real-world data and analytics program, we hold confidential personal health and other information relating to persons who have been, are and may in the future be involved in clinical trials. The possession, retention, use and disclosure of such information is highly regulated, including under the laws and regulations described above. These data privacy and security regulations govern the use, handling and disclosure of information about individuals and, in the case of

HIPAA, require the use of standard contracts, privacy and security standards and other administrative simplification provisions. In relation to HIPAA, we do not consider our service offerings to generally cause us to be subject as a covered entity; however, in certain circumstances we are subject to HIPAA as a business associate and may enter into business associate agreements with our customers who are covered entities under HIPAA. These business associate agreements define our obligations to safeguard the personal health information of patients provided by our customers. We have adopted identity protection practices and have implemented procedures to satisfy data protection requirements and safeguards regarding the creation, receipt, maintenance and transmission of protected health information.

In addition, the FTC and many state attorneys general are interpreting existing federal and state consumer protection laws to impose evolving standards for the online collection, use, dissemination and security of information about individuals, including health-related information. Courts may also adopt the standards for fair information practices promulgated by the FTC, which concern consumer notice, choice, security and access. Consumer protection laws require us to publish statements that describe how we handle information about individuals and choices individuals may have about the way we handle their information. Certain states have also adopted robust data privacy and security laws and regulations. For example, the CCPA, which took effect in 2020, imposes obligations and restrictions on businesses regarding their collection, use, and sharing of personal information and provides new and enhanced data privacy rights to California residents, such as affording them the right to access and delete their personal information and to opt out of certain sharing of personal information. Protected health information that is subject to HIPAA is excluded from the CCPA, however, information we hold about individuals which is not subject to HIPAA would be subject to the CCPA It is unclear how HIPAA and the other exceptions may be applied under the CCPA.

The collection, use, storage, disclosure, transfer, or other processing of any personal data regarding individuals in the European Union, including personal health data, is subject to the GDPR, which became effective on May 25, 2018. The GDPR is wide-ranging in scope and imposes numerous requirements on companies that process personal data, including requirements relating to processing health and other sensitive data, obtaining consent of the individuals to whom the personal data relates, providing information to individuals regarding data processing activities, implementing safeguards to protect the security and confidentiality of personal data, providing notification of data breaches, and taking certain measures when engaging third-party processors. The GDPR also imposes strict rules on the transfer of personal data to countries outside the European Union, including the United States, and permits data protection authorities to impose large penalties for violations of the GDPR, including potential fines of up to €20 million or 4% of annual global revenues, whichever is greater. The GDPR also confers a private right of action on data subjects and consumer associations to lodge complaints with supervisory authorities, seek judicial remedies, and obtain compensation for damages resulting from violations of the GDPR.

Recent legal developments in Europe have created complexity and uncertainty regarding transfers of personal data from the EEA to the United States, e.g. on July 16, 2020, the CJEU invalidated the Privacy Shield under which personal data could be transferred from the EEA to U.S. entities who had self-certified under the Privacy Shield scheme. While the CJEU upheld the adequacy of the standard contractual clauses (a standard form of contract approved by the European Commission as an adequate personal data transfer mechanism, and potential alternative to the Privacy Shield), it made clear that reliance on them alone may not necessarily be sufficient in all circumstances; this has created uncertainty. We have previously relied on our own Privacy Shield certification and our relevant customers'/ clients'/ partners'/ providers'/ third parties' Privacy Shield certification(s) for the purposes of transferring personal data from the EEA to the United States in compliance with the GDPR's data export conditions. We also currently rely on the standard contractual clauses to transfer personal data outside the EEA, including to the United States, among other data transfer mechanisms pursuant to the GDPR, but excluding Privacy Shield.

In response to the data privacy laws and regulations discussed above and those in other countries in which we do business, we have implemented several technological safeguards, processes, contractual third-parties provisions, and employee trainings to help ensure that we handle information about our employees, customers, and in a compliant manner. We maintain a global privacy policy and related procedures, and train our workforce to understand and comply with applicable privacy laws.

Bribery, Anti-Corruption and Other Laws

We are subject to compliance with the FCPA and similar anti-bribery laws, such as the Bribery Act, which generally prohibit companies and their intermediaries from making improper payments to foreign government

officials for the purpose of obtaining or retaining business. In addition, in the United States, we may also be subject to certain state and federal fraud and abuse laws, including the federal Anti-Kickback Statute and False Claims Act, that are intended to reduce waste, fraud and abuse in the health care industry. Our employees, distributors, and agents are required to comply with these laws, and we have implemented policies, procedures, and training, to minimize the risk of violating these laws.

Properties

As of September 30, 2020, we had 49 offices in 15 countries, with our headquarters located in Princeton, New Jersey. We lease or sublease all of our offices. None of our facilities are used for anything use other than general office use. We believe that our facilities are adequate for our operations and that suitable additional space will be available when needed. Because of the COVID-19 pandemic, in March 2020, we temporarily closed all of our offices. As of September 30, 2020, all of our offices remained closed, but we have instituted a protocol for assessing the need to re-open any facilities and determining what safety measures are required or recommended by local health authorities to re-open such facilities. We believe our employees have been able to maintain the same level of productivity in a remote working environment as they did prior to the pandemic. We expect that most of our offices will re-open in some capacity once the current pandemic has abated.

As of September 30, 2020, our material operating locations, which we define as the facilities we lease with more than 10,000 square feet, were as follows:

LOCATION	APPROXIMATE SQUARE FOOTAGE	LEASE EXPIRATION DATES
Wilmington, Delaware, USA	18,250	2/28/2027
Princeton, New Jersey, USA	17,560	6/30/2025
Makati, Philippines	16,710	10/31/2022
Sheffield, UK	13,910	1/28/2028
Raleigh, North Carolina, USA	11,560	2/28/2022

Legal Proceedings

From time to time, we may become involved in legal proceedings arising in the ordinary course of our business. Management believes that we do not have any pending or threatened litigation which, individually or in the aggregate, would have a material adverse effect on our business, results of operations, financial condition and/or cash flows.

Indemnification and Insurance

Our business exposes us to potential liability including, but not limited to, potential liability for (i) breach of contract or negligence claims by our customers, (ii) non-compliance with applicable laws and regulations, and (iii) employment-related claims. In certain circumstances, we may also be liable for the acts or omissions of others, such as suppliers of goods or services.

We attempt to manage our potential liability to third-parties through contractual protection (such as indemnification and limitation of liability provisions) in our contracts with customers and others, and through insurance. The contractual indemnification provisions vary in scope and generally do not protect us against all potential liabilities, such as liability arising out of our gross negligence or willful misconduct. In addition, in the event that we seek to enforce such an indemnification provision, the indemnifying party may not have sufficient resources to fully satisfy its indemnification obligations or may otherwise not comply with its contractual obligations.

We generally require our customers and other counterparties to maintain adequate insurance, and we currently maintain errors, omissions and professional liability insurance coverage with limits we believe to be appropriate. The coverage provided by such insurance may not be adequate for all claims made and such claims may be contested by applicable insurance carriers.

MANAGEMENT

Executive Officers and Board of Directors

The following table sets forth information about our directors and executive officers as of , 2020:

NAME	AGE	POSITION
William F. Feehery	50	Chief Executive Officer and Director
M. Andrew Schemick	46	Chief Financial Officer
Robert Aspbury	49	President, Simcyp
Justin Edge	52	President, Regulatory and Access
Leif E. Pedersen	56	President, Software
Craig R. Rayner	47	President, Integrated Drug Development
Richard M. Traynor	49	Senior Vice President and General Counsel
Jieun W. Choe	46	Chief Strategy and Marketing Officer
Judith Dickinson	47	Chief Human Resources Officer and Senior Vice President, Human Resources
Sherilyn S. McCoy	62	Chairman of the Board
James E. Cashman III	67	Director
Eric C. Liu	44	Director
Stephen M. McLean	63	Director
Mason P. Slaine	67	Director
Matthew Walsh	54	Director
Ethan Waxman	32	Director

Set forth below is a brief description of the business experience of our directors and executive officers. All of our executive officers serve at the discretion of our board of directors.

William F. Feehery, Ph.D. William F. Feehery, Ph.D., has served as Chief Executive Officer of the Company or Certara Holdco, our operating subsidiary, since June 2019. Prior to joining us, Dr. Feehery served as President of DuPont Industrial Biosciences since 2013. Dr. Feehery currently serves on the board of directors for West Pharmaceutical Services, a manufacturer of packing components and delivery systems for pharmaceutical, biotech and medical device companies. We believe Dr. Feehery brings to our board of directors extensive knowledge of the pharmaceutical industry, which together with his experience leading the Company as our Chief Executive Officer, makes him well qualified to serve as one of our directors.

M. Andrew Schemick. M. Andrew Schemick has served as Chief Financial Officer of the Company or Certara Holdco, since August 2014. Prior to joining us, Mr. Schemick served as Vice President of Financial Planning and Analysis for Haights Cross Communications, a holding company for education and media investments. Mr. Schemick also held the Chief Financial Officer role for a division of Kaplan Inc., a leading education company.

Robert Aspbury, Ph.D. Robert Aspbury, Ph.D., has served as President of our Simcyp division since January 2020. Prior to this appointment, he served as Simcyp's Chief Operating Officer from April 2019 to December 2019. Prior to joining the Company, Dr. Aspbury served as Vice President of Strategic Solutions, Biosimilars, for Covance Inc., a contract research organization and drug development services company (a subsidiary of Laboratory Corporation of America) from September 2016 to March 2019, and as Vice President and General Manager, Global Clinical Pharmacology from November 2011 to August 2016.

Justin Edge. Justin Edge has served as President of our regulatory science division since January 2019. Since January 2020, Mr. Edge has also had oversight for Certara's Evidence and Access unit. Prior to joining the Company, Mr. Edge worked at GfK, a leading global research and analytics firm, from 2012 to January 2019 where he most recently led the company's healthcare business unit.

Leif E. Pedersen. Leif E. Pedersen has served as President of Software since September 2020. Prior to joining the Company, Mr. Pedersen was a Senior Operating Partner at SymphonyAI, an operating group of artificial intelligence companies, from October 2019 to August 2020, Chief Executive Officer of BIOVA (a division of

Dassault Systèmes), a scientific product development software firm, from September 2017 to September 2019, and Executive Vice President at Innovative Interfaces, a library management software company, from December 2015 to August 2017.

Craig R. Rayner, PharmD. Craig Rayner, PharmD, has served as President of our Integrated Drug Development and Strategic Consulting Services division since January 1, 2020. Prior to that, Dr. Rayner was Senior Vice President of Integrated Drug Development at Certara. Prior to joining the Company, Dr. Rayner was the co-founder and chief executive officer of d3 Medicine from 2012 to 2016. Prior to that, Dr. Rayner's appointments included leadership roles in Clinical Pharmacology and Early Development (Roche), Clinical Development (CSL-Behring), in Business Development/Licensing as Global Due Diligence Director (Roche), and in clinical pharmacology and infectious disease research (Monash University). Dr. Rayner was appointed an Adjunct Associate Professor at Monash University in 2011.

Richard M. Traynor. Richard M. Traynor has served as Senior Vice President and General Counsel of the Company or Certara Holdco since March 2018. Prior to joining us, Mr. Traynor was Associate General Counsel for Edge Therapeutics, a clinical stage biotechnology company, from August 2017 to March 2018, and served in various positions at LifeCell Corporation, a medical device product manufacturer, most recently as Chief Legal & Compliance Officer from January 2012 to January 2017.

Jieun W. Choe. Jieun W. Choe has served as an officer since October 2020 and has served as our Chief Strategy & Marketing Officer since January 24, 2020 and was previously our Senior Vice President of Strategic Ventures from April 16, 2018 to January 23, 2020. Prior to joining the Company, Ms. Choe was Chief Marketing Officer at Triumph Learning, an educational content company.

Judith (Jodi) Dickinson. Jodi Dickinson has served as an officer since October 2020 and has served as our Chief Human Resources Officer and Senior Vice President, Human Resources since October 2019. Prior to joining the Company, Ms. Dickinson was employed by Novel Learning Communities, a private school operator, from October 2013 through August 2019, most recently serving as Senior Vice President, Human Resources.

Sherilyn S. McCoy. Sherilyn S. McCoy has served as our Chairman since February 2018 and as a director since January 2018. Ms. McCoy served as Chief Executive Officer of Avon Products, Inc., a personal care products company, from April 2012 until her retirement in February 2018. Prior to Avon, Ms. McCoy had a 30-year career at Johnson & Johnson, where she led a variety of large medical device, pharmaceutical and consumer businesses and rose to the position of Vice Chair. She currently serves as a director of AstraZeneca plc, a global, science-led biopharmaceutical company; Kimberly-Clark, a multinational manufacturer of personal care products; Stryker Corporation, a medical technologies firm; and Novocure, a novel oncology company. We believe Ms. McCoy contributes to our board of directors her deep global experience, as well as her background in the medical technology industry and extensive experience working with public companies.

James E. Cashman III. James E. Cashman III has served as a director since May 2018. Mr. Cashman served as Chairman of the board of directors of ANSYS Inc., an engineering simulation software company, from January 2017 until his retirement in April 2019. Prior to becoming Chairman of ANSYS, Mr. Cashman was the Chief Executive Officer and a director of ANSYS from February 2000 to December 2016. Mr. Cashman currently serves on the board of directors of National Instruments Corp, a producer of automated test equipment and virtual instrumentation software. We believe Mr. Cashman contributes to our board of directors his expertise in the areas of technical, financial, operations and sales management.

Eric C. Liu. Eric C. Liu has served as a director since 2017. Mr. Liu has served as Partner and Global Co-Head of Healthcare at EQT, an alternative asset management firm, since July 2014. Mr. Liu currently serves on the board of directors of Aldevron, LLC, a contract manufacturing and scientific services company, and Waystar, Inc., a healthcare revenue cycle management company. We believe Mr. Liu contributes to our board of directors his finance and capital markets experience as well as insight into the healthcare industry, gained from advising and serving as a director of multiple EQT portfolio companies.

Stephen M. McLean. Stephen M. McLean has served as a director of us or our predecessor since 2013. Mr. McLean has served as a Partner at Arsenal Capital, a private equity firm, since 2010. Mr. McLean currently serves on the board of directors of a number of private companies, including WIRB Copernicus Group, Inc., a clinical services organization to the pharmaceutical industry; BioIVT, LLP, a provider of biospecimens for drug discovery; Caprion HistoGeneX BioSciences, Inc., a provider of specialized research services in the development of immunology and oncology focused drugs; Accumen, Inc., a provider of technology-enabled solutions to optimize clinical laboratories and imaging departments; TractManager Inc., a provider of contract

and spend optimization solutions for hospitals and payers; Pharma Value Demonstration, Inc., a provider of services to generate and communicate the value and effectiveness of drugs. He is also a founder and Chairman of the International Biomedical Research Alliance, a non-profit organization dedicated to training biomedical researchers in collaboration with the National Institutes of Health, Oxford and Cambridge Universities. We believe Mr. McLean contributes to our board of directors his insight into the healthcare industry, gained from founding, investing in, and serving as a director of multiple healthcare companies as well as his knowledge of finance.

Mason P. Slaine. Mason P. Slaine has served as a director since August 2017. Mr. Slaine has led investments through the Slaine Family Office since January 2016. Prior to that, Mr. Slaine was the Executive Chairman of Interactive Data Corporation, the financial markets data and analytics company, from 2010 to December 2015, when it was acquired by The Intercontinental Exchange, the financial and commodity markets company. He currently serves as Chairman of the board of directors of Cast & Crew Entertainment Services, an entertainment payroll provider, and a board member of Reorg Research, Inc., a provider of news, commentary and analysis related to the debt markets. We believe Mr. Slaine contributes to our board of directors his finance and capital markets experience as well as corporate governance based on his experience as a corporate board member.

Matthew Walsh. Matthew Walsh has served as a director since August 2020. Mr. Walsh has served as Executive Vice President and Chief Financial Officer of Organon & Co., a global pharmaceutical business since June 2020. Prior to Organon, he served as Executive Vice President and Chief Financial Officer of Allergan, a publicly traded, global biopharmaceutical company, from 2018 until the sale of the company to Abbvie in 2020. From 2008 to 2018, Mr. Walsh served as Chief Financial Officer of Catalent, a global provider of delivery technologies, development, and manufacturing solutions to the life sciences industry. Before Catalent, from 2006 to 2008, he was President, Chief Financial Officer and Acting Chief Executive Officer at Escala Group, Inc. Mr. Walsh served on the board of directors of Multicolor Corporation from 2015 to 2017. We believe Mr. Walsh contributes deep experience in the pharmaceutical industry to our board of directors.

Ethan Waxman. Ethan Waxman has served as a director since August 2020. Mr. Waxman serves as a Director at EQT, where he has worked since August 2015. Mr. Waxman previously served as a board observer to our board of directors from August 2017 to August 2020. Mr. Waxman served as a non-employee executive officer for the Company and certain of our subsidiaries from June 2017 to October 2020. We believe Mr. Waxman contributes to our board of directors his finance and capital markets experience as well as insight into the healthcare industry, gained from advising multiple EQT portfolio companies.

Board of Directors

Our business and affairs are managed under the direction of our board of directors. Our board of directors currently consists of eight directors. Following the completion of this offering, we expect our board of directors to initially consist of eight directors.

Our amended and restated certificate of incorporation will provide that, subject to the right of holders of any series of preferred stock, our board of directors will be divided into three classes of directors, with the classes to be as nearly equal in number as possible, and with the directors serving staggered three-year terms, with only one class of directors being elected at each annual meeting of stockholders. As a result, approximately one-third of our board of directors will be elected each year. We expect that, following this offering, our initial Class I directors will be Messrs. , and (with their terms expiring at the annual meeting of stockholders to be held in 2024), our initial Class II directors will be Messrs. , and (with their terms expiring at the annual meeting of stockholders to be held in 2025) and our initial Class III directors will be Messrs. and (with their terms expiring at the annual meeting of stockholders to be held in 2026).

Our amended and restated certificate of incorporation and amended and restated bylaws will provide that, subject to any rights of holders of preferred stock to elect additional directors under specified circumstances, the number of directors will be fixed from time to time exclusively pursuant to a resolution adopted by the board of directors; however, if at any time EQT owns at least 40% in voting power of the stock of our Company entitled to vote generally in the election of directors, the stockholders may also fix the number of directors pursuant to a resolution adopted by the stockholders. Subject to certain exceptions described below with respect to the stockholders agreement we intend to enter into, newly created director positions resulting from an increase in size of the board of directors and vacancies may be filled by our board of directors or our stockholders; provided, however, that at any time when EQT beneficially owns less than 40% in voting power

of the stock of our company entitled to vote generally in the election of directors, such vacancies shall be filled by our board of directors (and not by the stockholders).

Our stockholders agreement will provide that following the completion of this offering, EQT and Arsenal will have the right to nominate the number of directors to our board of directors described below (such persons nominated by EQT, the "EQT nominees" and such person nominated by Arsenal, the "Arsenal nominee"). EQT and certain of its affiliates will have the right to nominate a number of nominees equal to (x) the total number of directors comprising our board of directors at such time, multiplied by (y) the percentage of our outstanding common stock held from time to time by EQT. For purposes of calculating the number of EQT nominees, any fractional amounts are rounded up to the nearest whole number. In addition, Arsenal and certain of its affiliates will have the right to nominate one nominee for so long as Arsenal and such affiliates collectively own at least 5% of our outstanding common stock; provided, that such individual is an investment professional employed by Arsenal or one of its affiliates or another individual with the prior written consent of EQT. For so long as we have a classified board, the EQT nominees will be divided by EQT as evenly as possible among the classes of directors. See "Certain Relationships and Related Party Transactions — Stockholders Agreement."

Pursuant to the stockholders agreement, for so long as EQT or Arsenal has the right to nominate any persons to our board of directors, (i) we will include the EQT nominees and the Arsenal nominees on the slate that is included in our proxy statements relating to the election of directors of the class to which such persons belong and provide the highest level of support for the election of each such persons as we provide to any other individual standing for election as a director, and (ii) we will include on the slate that is included in our proxy statement relating to the election of directors only (x) the EQT nominees, (y) the Arsenal nominees and (z) the other nominees (if any) nominated by the nominating and corporate governance committee of our board of directors, In addition, EQT, Arsenal, and certain other stockholders will agree with the Company to vote in favor of the Company slate that is included in our proxy.

In the event that an EQT or Arsenal nominee ceases to serve as a director for any reason (other than the failure of our stockholders to elect such individual as a director), the persons entitled to designate such nominee director under the stockholders agreement will be entitled to appoint another nominee to fill the resulting vacancy.

Background and Experience of Directors

When considering whether directors and nominees have the experience, qualifications, attributes or skills, taken as a whole, to enable our board of directors to satisfy its oversight responsibilities effectively in light of our business and structure, the board of directors focused primarily on each person's background and experience as reflected in the information discussed in each of the directors' individual biographies set forth above. We believe that our directors provide an appropriate mix of experience and skills relevant to the size and nature of our business. Once appointed, directors serve until their term expires, they resign or they are removed by the stockholders.

Role of Board of Directors in Risk Oversight

The board of directors has extensive involvement in the oversight of risk management related to us and our business and accomplishes this oversight through the regular reporting by the Audit Committee. The purpose of the Audit Committee is to assist the board of directors in fulfilling its fiduciary oversight responsibilities relating to (1) the quality and integrity of our financial statements, including oversight of our accounting and financial reporting processes, internal controls and financial statement audits, (2) our compliance with legal and regulatory requirements, (3) our independent registered public accounting firm's qualifications, performance and independence, (4) our corporate compliance program, including our code of conduct and anti-corruption compliance policy, and investigating possible violations thereunder, (5) our risk management policies and procedures and (6) the performance of our internal audit function. Through its regular meetings with management, including the finance, legal and internal audit functions, the Audit Committee reviews and discusses all significant areas of our business and summarizes for the board of directors all areas of risk and the appropriate mitigating factors. In addition, our board of directors receives periodic detailed operating performance reviews from management.

Controlled Company Exception

After the completion of this offering, EQT will continue to beneficially own more than 50% of our common stock and voting power. As a result, (a) under certain provisions of our amended and restated bylaws which will

be in effect upon the closing of this offering, EQT and those other parties to our stockholders agreement will be entitled to nominate at least a majority of the total number of directors comprising our board of directors and (b) we will be a "controlled company" as that term is set forth in Section 5615(c)(1) of the Nasdaq Marketplace Rules. Under the Nasdaq corporate governance standards, a company of which more than 50% of the voting power is held by an individual, group or another company is a "controlled company" and may elect not to comply with certain corporate governance standards, including (1) the requirement that a majority of the board of directors consist of independent directors, (2) the requirement that we have a compensation committee that is composed entirely of independent directors with a written charter addressing the committee's purpose and responsibilities and (3) the requirement that our director nominations be made, or recommended to our full board of directors, by our independent directors or by a nominations committee that consists entirely of independent directors and that we adopt a written charter or board resolution addressing the nominations process. Following this offering, we do not intend to utilize these exemptions. However, if we utilize any of these exemptions in the future, you will not have the same protections afforded to stockholders of companies that are subject to all of the Nasdaq corporate governance requirements. In the event that we cease to be a "controlled company," we will be required to comply with these provisions within the transition periods specified in the Nasdaq corporate governance rules.

Committees of the Board of Directors

After the completion of this offering, the standing committees of our board of directors will consist of an Audit Committee, a Compensation Committee and a Nominating and Corporate Governance Committee.

Our chief executive officer and other executive officers will regularly report to the non-executive directors and the Audit, the Compensation and the Nominating and Corporate Governance Committees to ensure effective and efficient oversight of our activities and to assist in proper risk management and the ongoing evaluation of management controls. The internal audit function will report functionally and administratively to our chief financial officer and directly to the Audit Committee. We believe that the leadership structure of our board of directors provides appropriate risk oversight of our activities given the controlling interests held by EQT.

Audit Committee

The members of our current Audit Committee are Messrs. Walsh, Cashman, McLean, and Waxman. Upon the completion of this offering, we expect to have an Audit Committee consisting of , and . , and all qualify as independent directors under the Nasdaq corporate governance standards and independence requirements of Rule 10A-3 of the Exchange Act. Our board of directors has determined that each of , and qualify as an "audit committee financial expert" as such term is defined in Item 407(d)(5) of Regulation S-K.

The purpose of the Audit Committee will be to prepare the audit committee report required by the SEC to be included in our proxy statement and to assist our board of directors in overseeing and monitoring (1) the quality and integrity of our financial statements, including oversight of our accounting and financial reporting processes, internal controls and financial statement audits, (2) our compliance with legal and regulatory requirements, (3) our independent registered public accounting firm's qualifications, performance and independence, (4) our corporate compliance program, including our code of conduct and anti-corruption compliance policy, and investigating possible violations thereunder, (5) our risk management policies and procedures and (6) the performance of our internal audit function.

Our board of directors will adopt a written charter for the Audit Committee, which will be available on our website upon the completion of this offering.

Compensation Committee Interlocks and Insider Participation

Compensation decisions are made by our Compensation Committee. None of our current or former executive officers or employees currently serves, or has served during our last completed fiscal year, as a member of our Compensation Committee and, during that period, none of our executive officers served as a member of the compensation committee (or other committee serving an equivalent function) of any other entity whose executive officers served as a member of our board of directors.

We have entered into certain indemnification agreements with our directors and are party to certain transactions with EQT described in "Certain Relationships and Related Party Transactions — Indemnification of Directors and Officers," "— Registration Rights Agreement" and "— Stockholders Agreement," respectively.

Compensation Committee

The members of our current Compensation Committee are Mme. McCoy and Messrs. Liu, and Slaine. Upon the completion of this offering, we expect to have a Compensation Committee consisting of Messrs. , and .

The purpose of the Compensation Committee will be to assist our board of directors in discharging its responsibilities relating to, among other things, (1) setting our compensation program and compensation of our executive officers and directors, (2) administering our incentive and equity-based compensation plans and (3) preparing the compensation committee report required to be included in our proxy statement under the rules and regulations of the SEC.

Our board of directors will adopt a written charter for the Compensation Committee, which will be available on our website upon the completion of this offering.

Nominating and Corporate Governance Committee

Upon the completion of this offering, we expect to have a Nominating and Corporate Governance Committee consisting of Messrs. , and . The purpose of our Nominating and Corporate Governance Committee will be to assist our board of directors in discharging its responsibilities relating to (1) identifying individuals qualified to become new board members, consistent with criteria approved by the board of directors, (2) reviewing the qualifications of incumbent directors to determine whether to recommend them for reelection and selecting, or recommending that the board of directors select, the director nominees for the next annual meeting of stockholders, (3) identifying board members qualified to fill vacancies on any committee of the board of directors and recommending that the board of directors appoint the identified member or members to the applicable committee, (4) reviewing and recommending to the board of directors corporate governance principles applicable to us, (5) overseeing the evaluation of the board of directors and management and (6) handling such other matters that are specifically delegated to the committee by the board of directors from time to time.

Our board of directors will adopt a written charter for the Nominating and Corporate Governance Committee, which will be available on our website upon completion of this offering.

Director Independence

Pursuant to the corporate governance listing standards of the Nasdaq, a director employed by us cannot be deemed to be an "independent director." Each other director will qualify as "independent" only if our board of directors affirmatively determines that he has no material relationship with us, either directly or as a partner, stockholder or officer of an organization that has a relationship with us. Ownership of a significant amount of our stock, by itself, does not constitute a material relationship.

Our board of directors is expected to affirmatively determine that each of our directors, other than , qualifies as "independent" in accordance with the Nasdaq rules. In making its independence determinations, our board of directors is expected to consider and review all information known to it (including information identified through directors' questionnaires).

Code of Conduct

Prior to the consummation of this offering, we will adopt a Code of Conduct (the "Code of Conduct") applicable to all employees, executive officers and directors that addresses legal and ethical issues that may be encountered in carrying out their duties and responsibilities, including the requirement to report any conduct they believe to be a violation of the Code of Conduct. The Code of Conduct will be available on our website, www.certara.com. The information available on or through our website is not part of this prospectus. If we ever were to amend or waive any provision of our Code of Conduct that applies to our principal executive officer, principal financial officer, principal accounting officer or any person performing similar functions, we intend to satisfy our disclosure obligations with respect to any such waiver or amendment by posting such information on our internet website set forth above rather than by filing a Form 8-K.

EXECUTIVE COMPENSATION

The following table sets forth information concerning the compensation earned by or paid to our named executive officers ("NEOs"), during our fiscal year ended December 31, 2019 ("fiscal year 2019"). Our NEOs include our current Chief Executive Officer ("CEO"), our former CEO, our two most highly compensated executive officers, other than our CEO, and another former executive officer.

SUMMARY COMPENSATION TABLE

NAME AND PRINCIPAL POSITION	YEAR	SALARY ($)	BONUS ($)[4]	EQUITY AWARDS ($)[5]	NON-EQUITY INCENTIVE PLAN COMPENSATION ($)[6]	ALL OTHER COMPENSATION ($)[7]	TOTAL ($)
William F. Feehery. *Chief Executive Officer*[1]	2019	437,500	—	2,792,621	274,838	3,022	3,507,981
Edmundo Muniz. *Former Chief Executive Officer*[1]	2019	118,750	—	446,821	—	519,982	1,085,553
Craig R. Rayner[2] *President, Integrated Drug Development*[3]	2019	246,252	350,400	139,633	—	20,767	757,052
Justin Edge *President, Regulatory and Access*	2019	353,846	175,000	335,115	131,384	15,188	1,010,533
Thomas Kerbusch[2] *Former President, Integrated Drug Development*[3]	2019	391,350	122,186	111,706	280,616	40,868	946,726

(1) Dr. Muniz served as our CEO until March 31, 2019. Dr. Feehery became our CEO on June 3, 2019.

(2) Dr. Kerbusch's 2019 compensation was paid in euros. The amounts listed above were converted into US. dollars for presentation in the Summary Compensation Table based on the monthly exchange rates during 2019. The monthly exchange rate used for the conversion was 1 U.S. dollar to the following number of euros for each of the months from January through December of 2019, respectively: 1.1405602, 1.1375798, 1.1245628, 1.1182109, 1.1175318, 1.1348925, 1.1163878, 1.104456, 1.0959954, 1.1112466, 1.103272, and 1.1130075.

(3) Dr. Kerbusch served as our President, Integrated Drug Development through October 2019, at which time Dr. Rayner became acting head of Integrated Drug Development. Effective as of January 1, 2020, Dr. Rayner formally assumed the title of President, Integrated Drug Development.

(4) The amounts in this column with respect to Mr. Edge represent a sign-on bonus and with respect to Dr. Kerbusch represent a special retention bonus. The amount for Dr. Rayner represents a discretionary bonus based on a percentage of the profitability of the Integrated Drug Development division for 2019 deemed to be attributable to Dr. Rayner's efforts.

(5) Class B Units were granted to our NEOs under our 2017 Incentive Plan. Except for the 2019 award to Dr. Muniz, 50% of each award is subject to time-based vesting and 50% is subject to performance-based vesting. The Class B Unit award granted to Dr. Muniz in 2019 in connection with his transition from an employee member of our board of directors and the board of managers of the EQT Investor's general partner to a non-employee member of such boards is only subject to time-based vesting. Except for the Class B Units granted to Dr. Feehery, 20% of the Class B Units granted to our NEOs that are subject to time-based vesting are scheduled to vest on each of the first five anniversaries of the grant date, subject to continued employment on each such date. With respect to the Class B Units granted to Dr. Feehery that are subject to time-based vesting, 25% are scheduled to vest on the first anniversary of the grant date, and an additional 2.0833% are scheduled to vest monthly thereafter, subject to his continued employment. All Class B Units that are subject to time-based vesting will automatically vest upon a change of control. The Class B Units subject to performance-based vesting will vest as to (i) one-third of such units at the time EQT realizes a return on investment (the "ROI") of at least 2.0, (ii) an additional one-third of such units at the time EQT realizes a ROI of at least 2.5, and (iii) an additional one-third of such units at the time EQT realizes a ROI of at least 3.0. In addition, Dr. Feehery's performance-based Class B Units will vest if the aggregate value attributable to this offering equals or exceeds an amount equivalent to the ROI performance targets set forth above (as if EQT were to receive the proceeds of the offering). As such, all of Dr. Feehery's performance-based Class B Units are expected to vest upon the completion of this offering. The performance-vesting Class B Units are subject to market conditions and an implied performance condition as defined under applicable accounting standards. The grant date fair value of performance-vesting Class B Units was computed based upon the probable outcome of the performance conditions as of the grant date in accordance with FASB ASC Topic 718. Achievement of the performance conditions for the performance-vesting Class B Units was not deemed probable on the grant date and, accordingly, no value is included in the table for these awards pursuant to the SEC's disclosure rules. Assuming achievement of the performance conditions, the aggregate grant date fair values of the performance-vesting Class B Units would have been: Dr. Feehery $2,629,185; Dr. Rayner $131,461; Mr. Edge $315,503; and Dr. Kerbusch — $105,169. See Note 2(r) ("Summary of Significant Accounting Policies — Equity-based compensation") and Note 12 ("Equity-Based Compensation") to our audited consolidated financial statements included elsewhere in this prospectus for a discussion of the valuation of our equity-based awards.

(6) Amounts shown reflect annual bonus payments under our incentive bonus plan earned with respect to fiscal year 2019 based on the achievement

of financial and strategic performance objectives that were established by our board of directors at the beginning of the fiscal year. See "— Non-Equity Incentive Plan Compensation" below.

(7) Amounts in this column for (i) Dr. Feehery, reflect Company paid life insurance premiums, (ii) Dr. Muniz, reflect $356,250 in severance payments, $13,769 in Company payments for COBRA premiums, $3,563 in Company contributions under a 401(k) savings plan, $105,000 in directors fees and $41,400 in post-employment consulting fees, (iii) Dr. Rayner reflect our contributions to the Australian superannuation pension scheme, (iv) Mr. Edge, reflect our contributions under a under a 401(k) savings plan, and (v) Dr. Kerbusch, reflect $28,683 in vacation allowance as well as a car allowance and our contributions to a Dutch pension scheme. For additional information about Dr. Muniz's separation arrangements and consulting agreement, see "— Employment Arrangements — Edmundo Muniz" below. For additional information on our policy on Company contributions to 401(k) savings policies and the foreign pension schemes in which Dr. Rayner and Dr. Kerbusch participate, see "— Retirement Benefits" below.

Non-Equity Incentive Plan Compensation

We maintain an annual cash-based Corporate Incentive Plan (the "CIP") to motivate our employees to achieve short-term performance goals. For fiscal year 2019, each of Dr. Feehery, Mr. Edge and Dr. Kerbusch participated in the CIP. For fiscal 2019, Dr. Rayner and Dr. Muniz, whose employment terminated in March 2019, did not participate in the CIP.

Incentive awards and bonus payouts under the CIP are based on the achievement of certain corporate and divisional goals established by our compensation committee at the beginning of each year. For 2019, 25% of the annual bonus payouts for the NEO participants was tied to the achievement of company-wide, combined EBITDA and 75% was tied to the achievement of EBITDA at the divisional level. Specifically, for Dr. Feehery, 25% of his bonus payout was tied to the achievement of company-wide, combined EBITDA and 25% for each of our three main divisions (Simcyp, Regulatory and Access, and IDD). For Mr. Edge and Dr. Kerbusch, 25% of their bonus payouts were tied to the achievement of company-wide, combined EBITDA and 75% for the divisions they were associated with (Edge – Regulatory and Access and Kerbush – IDD).

The 2019 target incentive opportunities under the CIP for the NEO participants were based on a percentage of base salary. The amounts paid to the NEO participants under the CIP were calculated by multiplying each NEO participant's target incentive opportunity by (i) the company-wide, combined EBITDA achievement factor and (ii) the applicable divisional EBITDA achievement factors. Each applicable EBITDA achievement factor was determined by multiplying the weight attributed to each performance measure by the applicable payout percentage for each measure. For each of the EBITDA performance measures, payout percentages were determined by calculating actual achievement against the target goal based on a pre-established scale. Bonus payouts were subject to threshold achievement of 90% of target, below which no bonuses would be earned. For achievement above the threshold level, the compensation committee retained discretion to determine the bonus based on the level of under or over-achievement of target, as well as individual performance metrics.

The following table illustrates the calculation of the non-equity incentive plan awards payable to each of the NEO participants under our CIP for fiscal 2019.

NAME	BASE SALARY ($)	TARGET BONUS (% OF BASE SALARY)	BONUS PAYOUT AT TARGET ($)	COMBINED PERFORMANCE FACTOR[1] (% OF TARGET ACHIEVEMENT)	TOTAL BONUS PAYOUT FOR 2019 ($)
Dr. Feehery	437,500[2]	60%	262,500	105%	274,838[2]
Mr. Edge	353,846[2]	35%	123,846	106%	131,384[2]
Dr. Kerbusch	391,350	70%	273,945	102%	280,616

[1] The final percentage (rounded) after applying the company and divisional EBITDA achievement factors and individual performance factors.

[2] Amounts shown reflect the proration of Dr. Feehery's and Mr. Edge's base salary and total award amount based upon their respective June and mid-January 2019 employment dates with the Company.

Employment Arrangements

William F. Feehery

Effective as of May 14, 2019, we entered into an employment agreement with Dr. Feehery (the "Feehery Agreement") to serve as our CEO commencing on June 3, 2019. The Feehery Agreement provides for an initial annual base salary and an annual target bonus of 60% of such base salary based upon achievement of

specific individual and company performance objectives to be established by our Board of Directors or Compensation Committee. Dr. Feehery's base salary is subject to possible increases, as approved by our Compensation Committee. Effective January 1, 2020, Dr. Feehery's annual base salary of $750,000 was increased to $772,500.

Pursuant to the Feehery Agreement, in the event Dr. Feehery's employment is terminated by us without "cause" or by Dr. Feehery for "good reason" (each as defined in the Feehery Agreement) and Dr. Feehery executes and does not revoke a general release of claims in favor of us and complies with the restrictive covenants to which he is subject following such termination, then Dr. Feehery will receive (i) any unpaid annual bonus in respect of any completed fiscal year that has ended prior to the date of such termination, payable in a lump sum at such time as annual bonuses are paid to our other senior executives, (ii) subject to satisfaction of the applicable performance objectives, a pro rata portion of the annual bonus otherwise payable to Dr. Feehery for the fiscal year in which such termination occurs, based on the number of days he was employed, (iii) the sum of his base salary plus his target bonus amount, payable in substantially equal payments over 12 months following such termination, (iv) monthly payments for 12 months following such termination equal to the difference between the monthly COBRA premium cost for the health care coverage elected by Dr. Feehery under the Company's group health plan and the monthly contribution paid by active employees for the same level of coverage (subject to mitigation, to the extent Dr. Feehery and his dependents become eligible to receive any health benefits as a result of Dr. Feehery's subsequent employment or service) and (v) all accrued but unpaid obligations.

In the event that any payment, benefit or distribution pursuant to the terms of the Feehery Agreement or otherwise becomes subject to the excise taxes under Section 4999 of the Code, such payments will be subject to reduction to an amount equal to 2.99 times Dr. Feehery's "base amount" (as defined in Section 280G(b)(3) of the Code) to the extent that such reduction will produce a more favorable after-tax result for Dr. Feehery.

Dr. Feehery is party to a restrictive covenants agreement that contains indefinite covenants of confidentiality of information and non-disparagement, covenants of non-competition and non-solicitation of our employees and customers during employment and for the one-year period thereafter.

Edmundo Muniz

Effective as of May 15, 2014, we entered into an employment agreement with Dr. Muniz, which was subsequently amended as of February 21, 2019 (the "Muniz Agreement"). The Muniz Agreement provided for an initial annual base salary and an annual target bonus of 50% of such base salary (or greater for overachievement), based on certain criteria determined by our board on an annual basis. Dr. Muniz's base salary was subject to annual review and possible increases, as we determined from time to time.

Effective March 31, 2019, Dr. Muniz's employment was terminated. In connection with Dr. Muniz's termination, he executed a general release of claims in favor of us, and we agreed to pay Dr. Muniz the severance owed to him pursuant to the Muniz Agreement, consisting of (i) the continuation of his base salary for 12 months following his termination, (ii) payment of 100% of the health insurance premiums for Dr. Muniz and his eligible dependents under COBRA until the earlier of (A) the date that is 18 months following his termination or (B) the date he is eligible for equal or better coverage under another group health plan, and (iii) all of his accrued but unpaid obligations.

Immediately following his termination of employment, we entered into a consulting agreement with Dr. Muniz (the "Muniz Consulting Agreement") pursuant to which he agreed to provide consulting services during the month of April 2019 as a senior executive consultant with responsibilities to lead, manage and work with our executive management team. In consideration of the consulting services, we agreed to pay Dr. Muniz $4,600 per week. The original one-month term of the Muniz Consulting Agreement was extended to the end of May 2019.

Dr. Muniz continued to serve as a member of our board of directors and the board of managers of the EQT Investor's general partner following his termination of employment. However, his status as a member of such boards changed from that of an employee member to that of a non-employee member and, as such, he became entitled to receive fees for such board service. In addition, immediately following his termination of employment, Dr. Muniz was appointed as Chairperson of the Science Committee of our board.

Craig R. Rayner

Effective as of September 2, 2016, we entered into an employment agreement with Dr. Rayner (the "Rayner Agreement"). The Rayner Agreement provides for an initial annual base salary and contributions to a government

mandated pension fund. In addition, the Rayner Agreement provided for an initial discretionary bonus of up to 30% of such base salary. Dr. Rayner's base salary is subject to annual review and possible increases, as we may determine from time to time. Effective January 1, 2020, Dr. Rayner's 2019 base salary of $257,500 was increased to $309,000 and he was assigned an annual target bonus of $250,000, with 20% based on company-wide performance and 80% based on participation in the Integrated Drug Development Profit-Sharing Plan.

Pursuant to the Rayner Agreement, we may terminate Dr. Rayner's employment without cause (i) upon delivery to Dr. Rayner of a written notice at least six months prior to his termination or (ii) payment of six months base salary to Dr. Rayner in lieu of notice.

In connection with our plans to relocate Dr. Rayner from Australia to the U.S., we entered into a new employment agreement with Dr. Rayner, on September 17, 2020, on substantially the same terms as described above, effective as of November 21, 2020.

The Rayner Agreement also imposes certain restrictive covenants on Dr. Rayner, including indefinite covenants of confidentiality of information and non-disparagement, covenants relating to intellectual property and covenants of non-competition during employment and for the one-year period thereafter and non-solicitation of our employees and customers during employment and for the one-year period thereafter.

Justin Edge

Effective as of January 23, 2019, we entered into an employment agreement with Mr. Edge (the "Edge Agreement"). The Edge Agreement provides for an initial annual base salary and an initial discretionary bonus of up to 35% of such base salary. Mr. Edge's base salary is subject to annual review and possible increases, as we may determine from time to time. Effective January 1, 2020, Mr. Edge's 2019 base salary of $375,000 was increased to $386,250.

Pursuant to the Edge Agreement, in the event Mr. Edge's employment is terminated by us without "cause" or by Mr. Edge for "good reason" (each as defined in the Edge Agreement) and Mr. Edge executes and does not revoke a general release of claims in favor of us and complies with the restrictive covenants to which he is subject following such termination, then Mr. Edge will receive (i) continuation of his base salary for 9 months following such termination and (ii) all accrued but unpaid obligations, including any unpaid annual bonus that has been authorized by us and approved by our CEO in respect of any completed fiscal year that has ended prior to the date of such termination.

The Edge Agreement also imposes certain restrictive covenants on Mr. Edge, including indefinite covenants of confidentiality of information and non-disparagement, covenants relating to intellectual property and covenants of non-competition during employment and for the one-year period thereafter and non-solicitation of our employees and customers during employment and for the two-year period thereafter.

Thomas Kerbusch

Effective as of June 20, 2014, we entered into an employment agreement with Dr. Kerbusch (the "Kerbusch Agreement"). The Kerbusch Agreement provides for an initial annual base salary and an initial annual bonus based in part on our worldwide gross profits and in part on the gross profits of our EU operations. Dr. Kerbusch's 2019 base salary remained unchanged at €350,000 as of January 1, 2020.

Pursuant to an addendum to the Kerbusch Agreement (the "Kerbusch Addendum"), in the event Dr. Kerbusch's employment is terminated by us without "cause" or by Dr. Kerbusch for "good reason" (each as defined in the Kerbusch Addendum), Dr. Kerbusch will be entitled to 12 months of base salary and holiday allowance.

The Kerbusch Addendum also imposes certain restrictive covenants on Dr. Kerbusch, including covenants of non-competition and non-solicitation of our employees during employment and for the one-year period thereafter.

Outstanding Equity Awards at 2019 Year End

The following table includes certain information with respect to Class B Units of the EQT Investor held by the Named Executive Officers as of December 31, 2019.

OUTSTANDING EQUITY AWARDS AT FISCAL YEAR END

NAME	GRANT DATE	NUMBER OF SHARES OR UNITS OF STOCK THAT HAVE NOT VESTED (#)[1]	MARKET VALUE OF SHARES OR UNITS OF STOCK THAT HAVE NOT VESTED ($)[2]	EQUITY INCENTIVE PLAN AWARDS: NUMBER OF UNEARNED SHARES, UNITS OR OTHER RIGHTS THAT HAVE NOT VESTED (#)[3]	EQUITY INCENTIVE PLAN AWARDS: MARKET VALUE OF UNEARNED SHARES, UNITS OR OTHER RIGHTS THAT HAVE NOT VESTED ($)[4]
William F. Feehery					
Class B Unit Award	6/3/2019	710,591	4,405,664	710,591	0
Edmundo Muniz					
Class B Unit Award	4/1/2019	113,695	704,909	N/A	N/A
Craig R. Rayner					
Class B Unit Award	11/17/2017	12,791	115,119	21,318	0
Class B Unit Award	4/16/2019	7,106	44,057	7,106	0
Class B Unit Award	11/8/2019	28,424	146,384	28,424	0
Justin Edge					
Class B Unit Award	1/23/2019	85,271	528,680	85,271	0
Thomas Kerbusch					
Class B Unit Award	11/17/2017	42,636	383,724	71,060	0
Class B Unit Award	2/27/2018	11,369	90,952	14,212	0
Class B Unit Award	3/15/2019	28,424	176,229	28,424	0

(1) Consists of time-based vesting Class B Units issued under the 2017 Incentive Plan. See "— Equity Awards."

(2) Amounts in this column are based on the appreciation in the value of our business from and after the date of grant through the date of our most recent valuation prior to December 31, 2019.

(3) Consists of performance-based vesting Class B Units issued under the 2017 Incentive Plan. See "— Equity Awards."

Our equity value as of December 31, 2019 had not appreciated to a level that would have created value in the performance-vesting Class B Units. Therefore, the market value of the performance-vesting Class B Units was $0 as of December 31, 2019.

Equity Awards

On November 17, 2017, the 2017 Incentive Plan was established under the terms of the Partnership Agreement of the EQT Investor to provide our employees, including our executives, as well as our directors and consultants, with incentives to align their interests with the interests of our sole shareholder, the EQT Investor. In fiscal 2019, Dr. Feehery was granted 1,421,181 Class B Units in connection with the commencement of his employment with the Company. In 2019, Dr. Muniz was awarded 113,695 units in connection with his transition from an employee-member of our board of directors and the board of managers of the EQT Investor's general partner to a non-employee member of such boards. In 2019, Dr. Rayner received two separate grants of Class B units (14,212 units on April 16, 2019 and 56,848 units on November 8, 2019), Mr. Edge received 170,542 Class B Units, and Dr. Kerbusch received a grant of 56,848 Class B Units. The Class B Units are "profits interests" under U.S. federal income tax law having economic characteristics similar to stock appreciation rights (i.e., representing the rights to share in any increase in the equity value of the EQT Investor that exceeds specified thresholds).

Grants of Class B Units to our NEOs under the 2017 Incentive Plan are typically subject to both time- and performance-based vesting conditions, with 50% time-based vesting and 50% performance-based vesting. The Class B Units granted to Dr. Muniz in 2019, in connection with his transition from an employee-member of

our board of directors and the board of managers of the EQT Investor's general partner to a non-employee member of such boards, are only subject to time-based vesting. Except for the Class B Units granted to Dr. Feehery, 20% of the Class B Units granted to our NEOs that are subject to time-based vesting are scheduled to vest on each of the first five anniversaries of the grant date, subject to continued employment on each such date. With respect to the Class B Units granted to Dr. Feehery that are subject to time-based vesting, 25% are scheduled to vest on the first anniversary of the grant date, and an additional 2.0833% are scheduled to vest monthly thereafter, subject to his continued employment. All Class B Units that are subject to time-based vesting will automatically vest upon a change of control. The Class B Units subject to performance-based vesting will vest as to (i) one-third of such units at the time EQT realizes a ROI of at least 2.0, (ii) an additional one-third of such units at the time EQT realizes a ROI of at least 2.5, and (iii) an additional one-third of such units at the time EQT realizes a ROI of at least 3.0. In addition, Dr. Feehery's performance-based Class B Units will vest if the aggregate value attributable to this offering equals or exceeds an amount equivalent to the ROI performance targets set forth above (as if EQT were to receive the proceeds of the offering). As such, all of Dr. Feehery's performance-based Class B Units are expected to vest upon the completion of this offering. As a condition to receiving the grant, each employee, including each NEO, entered into the Company's standard form of restrictive covenants agreement that contains an indefinite covenant of confidentiality of information and covenants of non-competition and non-solicitation of our employees and customers during employment and for the one-year period thereafter.

Except as provided below, all vesting of Class B Units will cease immediately upon an NEO's termination of employment for any reason, all unvested Class B Units will be immediately cancelled and forfeited without consideration upon such termination, and if such termination is by for cause, all vested Class B Units will be immediately cancelled and forfeited without consideration upon such termination. In the event of a termination without cause, or due to death or disability, the Class B Units subject to performance-based vesting will remain outstanding and eligible to vest during the six-month period following the date of such termination, and any such Class B Units that do not vest prior to the expiration of such six-month period will be immediately cancelled and forfeited without consideration at the end of such period. With respect to the Class B Units granted to Dr. Feehery, upon his termination of employment without cause, for good reason or due to death or disability, the Class B Units subject to time-based vesting that are scheduled to vest during the 12-month period following such termination will immediately vest on termination.

Actions in Connection with this Offering

In connection with this offering, all outstanding unvested Class B Units, including those held by our NEOs, will be converted into restricted shares of our common stock on the basis of an exchange ratio that takes into account the number of unvested Class B Units held, the applicable distribution threshold applicable to such Class B Units and the value of distributions that the holder would have been entitled to receive had the EQT Investor liquidated on the date of such conversion in accordance with the terms of the distribution "waterfall" set forth in its Partnership Agreement. Vested Class B Units will similarly be converted into shares of our common stock. Based upon an assumed initial public offering price of $ per share, which is the midpoint of the range set forth on the cover of this prospectus, we expect that holders of vested Class B Units will receive an aggregate of shares of common stock in the EQT Equity Conversion and holders of unvested shares of Class B Units will receive an aggregate of shares of restricted stock in the EQT Equity Conversion. The unvested restricted shares of our common stock that the NEOs receive in respect of their time-based vesting Class B Units will be subject to the same time-vesting schedule that applies to such time-vesting Class B Units, provided, that such restricted shares will not vest upon a change of control unless such NEO's employment is terminated without cause following such change of control. The unvested restricted shares of our common stock that the NEOs receive in respect of their performance-based vesting Class B Units will no longer be subject to any performance-based vesting conditions and such restricted shares will vest as to 20% of such restricted shares on each anniversary of the grant date of such performance-based vesting Class B Units, subject to the NEO's continued employment through each applicable vesting date, provided, that such restricted shares will vest upon the termination of such NEO's employment without cause following a change of control. The 2017 Incentive Plan will terminate upon the effectiveness of this offering. The following table sets forth the assumed number and value of vested shares of our common stock and unvested restricted shares of our common stock that each of our NEOs will receive

upon conversion of their vested and unvested Class B Units, in each case, based on an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the front cover of this prospectus.

NAME	SHARES OF COMMON STOCK RECEIVED UPON CONVERSION OF VESTED CLASS B UNITS		UNVESTED SHARES OF RESTRICTED STOCK RECEIVED UPON CONVERSION OF UNVESTED CLASS B UNITS	
	#	$	#	$
William F. Feehery				
Edmundo Muniz				
Craig R. Rayner				
Justin Edge				
Thomas Kerbusch				

2020 Incentive Plan

Our board of directors expects to adopt, and we expect our stockholders to approve, the 2020 Incentive Plan prior to the completion of the offering.

Purpose. The purpose of the 2020 Incentive Plan is to provide a means through which to attract, retain and motivate key personnel and to provide a means whereby our directors, officers, employees, consultants and advisors can acquire and maintain an equity interest in the Company, or be paid incentive compensation, including incentive compensation measured by reference to the value of our common stock, thereby strengthening their commitment to the Company's welfare and aligning their interests with those of our stockholders.

Persons Eligible to Participate. Awards under the Omnibus Plan may be granted to any (i) individual employed by us or our subsidiaries (other than those U.S. employees covered by a collective bargaining agreement unless and to the extent that such eligibility is set forth in such collective bargaining agreement or similar agreement); (ii) director or officer of us or our subsidiaries; or (iii) consultant or advisor to us or our subsidiaries who may be offered securities registrable pursuant to a registration statement on Form S-8 under the Securities Act.

Administration. The 2020 Incentive Plan will be administered by the Compensation Committee or such other committee of our board of directors to which it has properly delegated power, or if no such committee or subcommittee exists, our board of directors. The Compensation Committee has the authority to make all decisions and determinations with respect to the administration of the Omnibus Plan, and is permitted, subject to applicable law or exchange rules and regulations, to delegate all or any part of its responsibilities and powers to any person or persons selected by it in accordance with the terms of the 2020 Incentive Plan.

Shares Subject to 2020 Incentive Plan. The 2020 Incentive Plan provides that the total number of shares of common stock that may be issued under the 2020 Incentive Plan is shares (the "plan share reserve"), provided, however, that the plan share reserve shall be increased on the first day of each fiscal year beginning with the 2021 fiscal year in an amount equal to the lesser of (i) the positive difference, if any, between (x) % of the outstanding common stock on the last day of the immediately preceding fiscal year and (y) the plan share reserve on the last day of the immediately preceding fiscal year and (ii) a lower number of shares of our common stock as determined by our board of directors. No more than the number of shares of common stock equal to the plan share reserve may be issued in the aggregate pursuant to the exercise of incentive stock options. The maximum number of shares of common stock granted during a single fiscal year to any non-employee director, taken together with any cash fees paid to such non-employee director during the fiscal year, may not exceed $1,000,000 in total value, except for certain awards made to a non-executive chair of our board of directors. Except for substitute awards (as described below), in the event any award expires or is cancelled, forfeited or terminated without issuance to the participant of the full number of shares of common stock to which the award related, the unissued shares of common stock underlying such award will be returned to the plan share reserve and may be granted again under the 2020 Incentive Plan. Shares of common stock withheld in payment of an option exercise price or taxes relating to an award, and shares equal to the number of shares of common stock surrendered in payment of any option exercise price, a stock appreciation right's base price, or taxes relating to an award will constitute shares of common stock

issued to a participant and will thus reduce the plan share reserve and will not be returned to the plan share reserve. Awards may, in the sole discretion of the Compensation Committee, be granted in assumption of, or in substitution for, outstanding awards previously granted by an entity directly or indirectly acquired by the Company or with which we combine (referred to as "substitute awards"), and such substitute awards will not be counted against the plan share reserve, except that substitute awards intended to qualify as "incentive stock options" will count against the limit on incentive stock options described above. Awards granted in substitution of previous awards granted under the 2017 Incentive Plan will also constitute substitute awards under the 2020 Incentive Plan. No award may be granted under the 2020 Incentive Plan after the tenth anniversary of the effective date (as defined therein), but awards granted before then may extend beyond that date.

Vesting. All awards granted under the 2020 Incentive Plan will vest and/or become exercisable in such manner and on such date or dates or upon such event or events as determined by the Compensation Committee, including, without limitation, satisfaction of Performance Conditions, if any. For purposes of this prospectus, "Performance Conditions" means specific levels of performance of the Company (and/or one or more of its subsidiaries, divisions or operational and/or business units, product lines, brands, business segments, administrative departments, or any combination of the foregoing), which may be determined in accordance with GAAP or on a non-GAAP basis on, without limitation, the following measures: (i) net earnings, net income (before or after taxes), or consolidated net income; (ii) basic or diluted earnings per share (before or after taxes); (iii) net revenue or net revenue growth; (iv) gross revenue or gross revenue growth, gross profit or gross profit growth; (v) net operating profit (before or after taxes); (vi) return measures (including, but not limited to, return on investment, assets, capital, employed capital, invested capital, equity, or sales); (vii) cash flow measures (including, but not limited to, operating cash flow, free cash flow, or cash flow return on capital), which may be but are not required to be measured on a per share basis; (viii) actual or adjusted earnings before or after interest, taxes, depreciation, and/or amortization (including EBIT and EBITDA); (ix) gross or net operating margins; (x) productivity ratios; (xi) share price (including, but not limited to, growth measures and total stockholder return); (xii) expense targets or cost reduction goals, general and administrative expense savings; (xiii) operating efficiency; (xiv) objective measures of customer/client satisfaction; (xv) working capital targets; (xvi) measures of economic value added or other 'value creation' metrics; (xvii) enterprise value; (xviii) sales; (xix) stockholder return; (xx) customer/client retention; (xxi) competitive market metrics; (xxii) employee retention; (xxiii) objective measures of personal targets, goals, or completion of projects (including, but not limited to, succession and hiring projects, completion of specific acquisitions, dispositions, reorganizations, or other corporate transactions or capital-raising transactions, expansions of specific business operations, and meeting divisional or project budgets); (xxiv) comparisons of continuing operations to other operations; (xxv) market share; (xxvi) cost of capital, debt leverage, year-end cash position or book value; (xxvii) strategic objectives; (xxviii) gross or net authorizations; (xxix) backlog; or (xxx) any combination of the foregoing. Any one or more of the aforementioned Performance Conditions may be stated as a percentage of another Performance Condition, or used on an absolute or relative basis to measure the performance of one or more of the Company or its subsidiaries as a whole or any divisions or operational and/or business units, product lines, brands, business segments, or administrative departments of the Company and/or one or more of its subsidiaries or any combination thereof, as the Compensation Committee may deem appropriate, or any of the above performance criteria may be compared to the performance of a selected group of comparison companies, or a published or special index that the Compensation Committee, in its sole discretion, deems appropriate, or as compared to various stock market indices.

Types of Awards.

Options. The Compensation Committee may grant non-qualified stock options and incentive stock options, under the 2020 Incentive Plan, with terms and conditions determined by the Compensation Committee that are not inconsistent with the 2020 Incentive Plan. All stock options granted under the 2020 Incentive Plan are required to have a per share exercise price that is not less than 100% of the fair market value of our common stock underlying such stock options on the date such stock options are granted (other than in the case of options that are substitute awards). All stock options that are intended to qualify as incentive stock options must be granted pursuant to an award agreement expressly stating that the options are intended to qualify as incentive stock options and will be subject to the terms and conditions that comply with the rules as may be prescribed by Section 422 of the Code. The maximum term for stock options granted under the 2020 Incentive Plan will be ten years from the initial date of grant, or with respect to any stock options intended to qualify as incentive stock options, such shorter period as prescribed by Section 422 of the Code. However, if a non-qualified stock option would expire at a time when trading of shares of our common stock is prohibited

by our insider trading policy (or "blackout period" imposed by the Company), the term will automatically be extended to the 30th day following the end of such period. The purchase price for the shares of common stock as to which a stock option is exercised may be paid to the Company, to the extent permitted by law, (i) in cash or its equivalent at the time the stock option is exercised; (ii) in shares of common stock having a fair market value equal to the aggregate exercise price for the shares of common stock being purchased and satisfying any requirements that may be imposed by the Compensation Committee (so long as such shares have been held by the participant for at least six months or such other period established by the Compensation Committee to avoid adverse accounting treatment); or (iii) by such other method as the Compensation Committee may permit in its sole discretion, including, without limitation, (A) in other property having a fair market value on the date of exercise equal to the purchase price, (B) if there is a public market for the shares of our common stock at such time, through the delivery of irrevocable instructions to a broker to sell the shares of common stock being acquired upon the exercise of the stock option and to deliver to the Company the amount of the proceeds of such sale equal to the aggregate exercise price for the shares of common stock being purchased or (C) through a "net exercise" procedure effected by withholding the minimum number of shares of common stock needed to pay the exercise price or any applicable taxes that are statutorily required to be withheld, or both. Any fractional shares of common stock will be settled in cash. Options will become vested and exercisable in such manner and on such date(s) or event(s) as determined by the Compensation Committee, including, without limitation, satisfaction of Performance Conditions, provided that the Compensation Committee may, in its sole discretion, accelerate the vesting of any options at any time for any reason.

Unless otherwise provided by the Compensation Committee (whether in an award agreement or otherwise), in the event of (i) a participant's termination of service for cause, all outstanding options will immediately terminate and expire, (ii) a participant's termination of service due to death or disability, each outstanding unvested option will immediately terminate and expire, and vested options will remain exercisable for one year following termination of service (or, if earlier, through the last day of the tenth year from the initial date of grant), and (iii) a participant's termination for any other reason, outstanding unvested options will terminate and expire and vested options remain exercisable for 90 days following termination (or, if earlier, through the last day of the tenth year from the initial date of grant).

Restricted Stock and Restricted Stock Units. The Compensation Committee may grant restricted shares of our common stock or restricted stock units, representing the right to receive, upon vesting and the expiration of any applicable restricted period, one share of common stock for each restricted stock unit, or, in the sole discretion of the Compensation Committee, the cash value thereof (or any combination thereof). As to restricted shares of our common stock, subject to the other provisions of the 2020 Incentive Plan, the holder will generally have the rights and privileges of a stockholder as to such restricted shares of common stock, including, without limitation, the right to vote such restricted shares of common stock. Participants generally have no rights or privileges as a stockholder with respect to restricted stock units. Restricted shares of our common stock and restricted stock units will become vested in such manner and on such date(s) or event(s) as determined by the Compensation Committee, including, without limitation, satisfaction of Performance Conditions, provided that the Compensation Committee may, in its sole discretion, accelerate the vesting of any restricted shares of our common stock or restricted stock units at any time for any reason. Unless otherwise provided by the Compensation Committee, whether in an award agreement or otherwise, in the event of a participant's termination for any reason prior to vesting of any restricted shares or restricted stock units, as applicable (i) all vesting with respect to the participant's restricted shares or restricted stock units, as applicable, will cease and (ii) unvested restricted shares and unvested restricted stock units will be forfeited for no consideration on the date of termination.

Other Equity-Based Awards and Cash-Based Awards. The Compensation Committee may grant other equity-based or cash-based awards under the 2020 Incentive Plan, with terms and conditions, including, without limitation, satisfaction of Performance Conditions, determined by the Compensation Committee that are not inconsistent with the 2020 Incentive Plan.

Effect of Certain Events on 2020 Incentive Plan and Awards. Other than with respect to cash-based awards, in the event of (i) any dividend (other than regular cash dividends) or other distribution (whether in the form of cash, shares of common stock, other securities or other property), recapitalization, stock split, reverse stock split, reorganization, merger, consolidation, split-up, split-off, spin-off, combination, repurchase or exchange

of shares of common stock or other securities, issuance of warrants or other rights to acquire shares of common stock or other securities, or other similar corporate transaction or event that affects the shares of common stock (including a change in control, as defined in the 2020 Incentive Plan), or (ii) unusual or nonrecurring events affecting the Company, including changes in applicable rules, rulings, regulations or other requirements, that the Compensation Committee determines, in its sole discretion, could result in substantial dilution or enlargement of the rights intended to be granted to, or available for, participants (any event in (i) or (ii), an "Adjustment Event"), the Compensation Committee will, in respect of any such Adjustment Event, make such proportionate substitution or adjustment, if any, as it deems equitable, to any or all of: (A) the plan share reserve, or any other limit applicable under the 2020 Incentive Plan with respect to the number of awards which may be granted thereunder, (B) the number of shares of common stock or other securities of the Company (or number and kind of other securities or other property) which may be issued in respect of awards or with respect to which awards may be granted under the 2020 Incentive Plan or any sub-plan and (C) the terms of any outstanding award, including, without limitation, (x) the number of shares of common stock or other securities of the Company (or number and kind of other securities or other property) subject to outstanding awards or to which outstanding awards relate, (y) the exercise price or strike price with respect to any award, or (z) any applicable performance measures; it being understood that, in the case of any "equity restructuring," the Compensation Committee will make an equitable or proportionate adjustment to outstanding awards to reflect such equity restructuring.

In connection with any change in control, the Compensation Committee may, in its sole discretion, provide for any one or more of the following: (i) a substitution or assumption of, acceleration of the vesting of, the exercisability of, or lapse of restrictions on, any one or more outstanding awards and (ii) cancellation of any one or more outstanding awards and payment to the holders of such awards that are vested as of such cancellation (including any awards that would vest as a result of the occurrence of such event but for such cancellation) the value of such awards, if any, as determined by the Compensation Committee (which value, if applicable, may be based upon the price per share of common stock received or to be received by other holders of our common stock in such event), including, in the case of stock options and stock appreciation rights, a cash payment equal to the excess, if any, of the fair market value of the shares of common stock subject to the option or stock appreciation right over the aggregate exercise price or base price thereof.

Nontransferability of Awards. Each award under the 2020 Incentive Plan will not be transferable or assignable by a participant other than by will or by the laws of descent and distribution and any such purported assignment, alienation, pledge, attachment, sale, transfer or encumbrance will be void and unenforceable against the Company or any of our subsidiaries. However, the Compensation Committee may, in its sole discretion, permit awards (other than incentive stock options) to be transferred, including transfers to a participant's family members, any trust established solely for the benefit of a participant or such participant's family members, any partnership or limited liability company of which a participant, or such participant and such participant's family members, are the sole member(s), and a beneficiary to whom donations are eligible to be treated as "charitable contributions" for tax purposes.

Amendment and Termination. Our board of directors may amend, alter, suspend, discontinue, or terminate the 2020 Incentive Plan or any portion thereof at any time; but no such amendment, alteration, suspension, discontinuance or termination may be made without stockholder approval if (i) such approval is required under applicable law; (ii) it would materially increase the number of securities which may be issued under the 2020 Incentive Plan (except for adjustments in connection with certain corporate events); or (iii) it would materially modify the requirements for participation in the 2020 Incentive Plan; and any such amendment, alteration, suspension, discontinuance or termination that would materially and adversely affect the rights of any participant or any holder or beneficiary of any award will not to that extent be effective without such individual's consent.

The Compensation Committee may, to the extent consistent with the terms of any applicable award agreement, waive any conditions or rights under, amend any terms of, or alter, suspend, discontinue, cancel or terminate, any award granted or the associated award agreement, prospectively or retroactively (including after a participant's termination). However, except as otherwise permitted in the 2020 Incentive Plan, any such waiver, amendment, alteration, suspension, discontinuance, cancellation or termination that would materially and adversely affect the rights of any participant with respect to such award will not to that extent be effective without such individual's consent. In addition, without stockholder approval, except as otherwise

permitted in the 2020 Incentive Plan, (i) no amendment or modification may reduce the exercise price of any option or the strike price of any stock appreciation right; (ii) the Compensation Committee may not cancel any outstanding option or stock appreciation right and replace it with a new option or stock appreciation right (with a lower exercise price or strike price, as the case may be) or other award or cash payment that is greater than the value of the cancelled option or stock appreciation right; and (iii) the Compensation Committee may not take any other action which is considered a "repricing" for purposes of the stockholder approval rules of any securities exchange or inter-dealer quotation system on which our securities are listed or quoted.

Dividends and Dividend Equivalents. The Compensation Committee in its sole discretion may provide that any award under the 2020 Incentive Plan includes dividends or dividend equivalents, on such terms and conditions as may be determined by the Compensation Committee in its sole discretion. Unless otherwise provided in the award agreement, any dividend payable in respect of any share of restricted stock that remains subject to vesting conditions at the time of payment of such dividend will be retained by the Company and remain subject to the same vesting conditions as the share of restricted stock to which the dividend relates. To the extent provided in an award agreement, the holder of outstanding restricted stock units will be entitled to be credited with dividend equivalents either in cash, or in the sole discretion of the Compensation Committee, in shares of common stock having a fair market value equal to the amount of the dividends (and interest may be credited, at the discretion of the Compensation Committee, on the amount of cash dividend equivalents, at a rate and subject to terms determined by the Compensation Committee), which accumulated dividend equivalents (and any interest) will be payable at the same time as the underlying restricted stock units are settled following the lapse of restrictions (and with any accumulated dividend equivalents forfeited if the underlying restricted stock units are forfeited).

Clawback/Repayment. All awards are subject to reduction, cancellation, forfeiture or recoupment to the extent necessary to comply with (i) any clawback, forfeiture or other similar policy adopted by our board of directors or the Compensation Committee and as in effect from time to time and (ii) applicable law. Unless otherwise determined by the Compensation Committee, to the extent that a participant receives any amount in excess of the amount that the participant should otherwise have received under the terms of the award for any reason (including, without limitation, by reason of a financial restatement, mistake in calculations or other administrative error), the participant will be required to repay any such excess amount to the Company. If a participant engages in any detrimental activity (as described below), as determined by the Compensation Committee, the Compensation Committee may, in its sole discretion, provide for one or more of the following: (i) cancellation of any or all of a participant's outstanding awards or (ii) forfeiture by the participant of any gain realized on the vesting or exercise of awards, and repayment of any such gain promptly to the Company. For purposes of the 2020 Incentive Plan and awards thereunder, "detrimental activity" means: any unauthorized disclosure or use of confidential or proprietary information of the Company or its subsidiaries; any activity that would be grounds to terminate the participant's employment or service for cause; the participant's breach of any restrictive covenant (including, but not limited, to any non-competition or non-solicitation covenants); or fraud or conduct contributing to any financial restatements or irregularities, as determined by the Compensation Committee in its discretion.

2020 Employee Stock Purchase Plan

Our board of directors expects to adopt, and we expect our stockholders to approve, the 2020 Employee Stock Purchase Plan, which we refer to as the Employee Stock Purchase Plan for purposes of this disclosure, prior to the completion of the offering. Under the Employee Stock Purchase Plan, our employees, and those of our subsidiaries, may purchase shares of our common stock, during pre-specified offering periods. Our NEOs will be eligible to participate in the Employee Stock Purchase Plan on the same terms and conditions as all other participating employees.

Administration. The Employee Stock Purchase Plan will be administered by a committee of our board of directors, which we refer to as the Committee for purposes of this disclosure. The Committee will have full authority to administer the Employee Stock Purchase Plan and make and interpret rules and regulations regarding administration of the Employee Stock Purchase Plan as it may deem necessary or appropriate.

Shares Available Under the Employee Stock Purchase Plan. The maximum number of shares of our common stock which we expect will be approved by our board of directors and stockholders and authorized for sale under the Employee Stock Purchase Plan will be shares, subject to adjustment for certain

changes in our capitalization. The issuance of shares pursuant to the Employee Stock Purchase Plan will reduce the total number of shares available under the Employee Stock Purchase Plan.

Eligible Employees. All of our employees and those of our subsidiaries will be eligible to participate in the Employee Stock Purchase Plan, except for employees who own 5% or more of the combined voting power or value of all of our issued and outstanding stock.

Participation. Eligible employees may elect to participate in the Employee Stock Purchase Plan by filing a subscription agreement with us prior to any offering period indicating the amount of eligible compensation to be withheld from payroll during that offering period and applied to the Employee Stock Purchase Plan. Once enrolled in the Employee Stock Purchase Plan, a participant shall continue to participate in subsequent offering periods until such participant terminates employment or withdraws from any offering period.

Eligible Compensation. Eligible employees may authorize payroll deductions of 1% to 15% of such employees' base compensation on each payroll date that falls within an offering period. Payroll deductions shall commence on the first payroll date following the beginning of the offering period and shall continue until the participant withdraws from an offering period or terminates employment. Participants may not acquire rights to purchase more than $25,000 of our common stock under the Employee Stock Purchase Plan for any calendar year.

Offering Periods. We plan to offer our common stock to participants for up to 27 months, with an expected period of 6 months, beginning in 2021.

Purchase of Shares. Shares of our common stock will be automatically purchased for the accounts of participants at the end of each offering period with their elected payroll deductions accumulated during the offering period. Shares will be purchased at a discounted per-share purchase price equal to 85% of the per-share closing price of our common stock on the last day of the applicable offering period.

Cancellation of Election to Purchase. A participant may cancel his or her participation in the Employee Stock Purchase Plan, but may not reduce or increase his or her contributions during an offering period. Termination of a participant's employment for any reason, will also terminate such participant's participation in the Employee Stock Purchase Plan. In any of these cases, the participant is entitled to receive a refund of the payroll deductions collected on his or her behalf.

Effect of a Change in Control. Upon a future change in control of the Company, the administrator may, in its sole discretion, (i) shorten an offering period to provide for a purchase date on or prior to the change in control date or (ii) provide for the assumption of the purchase rights under the Employee Stock Purchase Plan and substitution of rights to purchase shares of the successor company in accordance with Section 424 of the Code.

Termination and Amendment. Our board of directors or the Committee may amend or terminate the Employee Stock Purchase Plan at any time, although no amendment may be made (i) that adversely affects the rights of any participant participating in an offering period or (ii) without approval of our stockholders to the extent such approval would be required under Section 423 of the Code.

Retirement Benefits

U.S. 401(k) Plan

We maintain a tax-qualified defined contribution 401(k) savings plan (the "401(k) Plan"), in which all our U.S.-based employees, including our U.S.-based NEOs, are eligible to participate. The 401(k) Plan allows participants to contribute up to 100% of their compensation on a pre-tax basis (or on a post-tax basis, with respect to elective Roth deferrals) into individual retirement accounts, subject to the maximum annual limits set by the Internal Revenue Service. The 401(k) Plan also allows us to make employer matching contributions. We have historically made employer matching contributions of up to 50% of our employees' deferral, limited to the first 6% of each employee's compensation, except for one division for which we matched 100% of our employees' deferral up to 6% of compensation. In 2019, we contributed $1,402,530 in total employer contributions on behalf of our U.S.-based employees. Participants are immediately fully vested in their own contributions to the 401(k) Plan. Participants vest in the matching contributions we make to their accounts after four years of service, at the rate of 25% per year, except for one division in which they fully vest after three years.

The Netherlands

We contribute to a government structured defined benefit pension scheme for our Dutch employees, including Dr. Kerbusch. Pursuant to this pension scheme, our Dutch employees contribute the maximum allowable pensionable gross salary plus Holiday pay gross through pre-tax payroll deductions and we contribute an amount equal to the pensionable amount multiplied by the age percentage as set forth on the applicable statutory contribution matrix. In 2019, we contributed $161,803 to the Dutch pension scheme on behalf of our Dutch employees. The contributions we made for Dr. Kerbusch are set forth in the Summary Compensation Table above.

Australia

We contribute to a government mandated superannuation pension scheme for our Australian employees, including Dr. Rayner. Pursuant to this pension scheme, we contribute 9.5% of gross salary as a mandatory minimum company contribution, subject to a maximum of $50,000 Australian dollars per employee, per year. In 2019, we contributed $128,844 AUD to the Australian superannuation pension scheme on behalf of our Australian employees. The contributions we made for Dr. Rayner are set forth in the "Summary Compensation Table" above.

Director Compensation

For fiscal 2019, we did not provide compensation to members of our board who were employed by us or by Arsenal or the EQT Investor. However, all of our board members are reimbursed for their reasonable out-of-pocket expenses related to their services as a member of our board of directors or one of its committees.

For 2019, non-employee members of our board were entitled to an annual cash retainer of $40,000. Ms. McCoy also received an annual cash retainer of $125,000 as Chairperson of our board, and she received $56,000 for her service as executive chairperson for part of 2019. Upon his appointment as Chairperson of the Science Committee of our board, Dr. Muniz became entitled to an annual cash retainer of $140,000. Effective August 26, 2020, the annual cash retainer for each of Messrs. Slaine and Cashman was increased from $40,000 to $50,000. See the "Summary Compensation Table" above for information about Dr. Muniz's board compensation during 2019.

The following table summarizes the compensation paid to or earned by our Non-Employee Directors in 2019:

2019 DIRECTOR COMPENSATION

NAME	FEES EARNED OR PAID IN CASH ($)	TOTAL ($)
Sherilyn S. McCoy	181,000	181,000
James E. Cashman III	40,000	40,000
William F. Feehery	—	—
William E. Klitgaard	40,000	40,000
Eric C. Liu	—	—
Stephen M. McLean	—	—
Mason P. Slaine	40,000	40,000

Directors Deferral Plan

Our Board of Directors expects to adopt the Directors Deferral Plan prior to the completion of the offering. All directors who are not employees of the Company are eligible to participate in the Directors Deferral Plan.

Deferral Elections. Under the terms of the Directors Deferral Plan, our non-employee directors may elect to defer all or a portion of their annual cash compensation and/or all of the Company shares issued upon settlement of their annual restricted stock unit award, in each case in 25% increments, in the form of deferred stock units credited to an account maintained by the Company. The number of deferred stock units credited in respect

of annual cash compensation is determined by dividing the dollar amount of the deferred cash compensation by the fair market value of a share of the Company's common stock on the date the cash compensation would otherwise have been paid to the director. Deferred stock units will be awarded from, and subject to the terms of, the 2020 Incentive Plan.

Each deferred stock unit represents the right to receive a number of shares of our common stock equal to the number of deferred stock units initially credited to the director's account plus the number of deferred stock units credited as a result of any dividend equivalent rights (to which deferred stock units initially credited to a director's account are entitled).

Settlement of Deferred Stock Units. Directors may elect that settlement of deferred stock units be made or commence on (i) the first business day in a year following the year for which the deferral is made, (ii) following termination of service on our board of directors or (iii) the earlier of (i) or (ii). Directors may elect that deferred stock units be settled in a single one-time distribution or in a series of up to 15 annual installments. In addition, deferred stock unit accounts will be settled upon a Change in Control (as defined in the 2020 Incentive Plan) or upon a director's death.

Administration; Amendment and Termination. Our Compensation Committee will administer the Directors Deferral Plan. The Directors Deferral Plan or any deferral may be amended, suspended, discontinued by our Compensation Committee at any time in the Compensation Committee's discretion; provided that no amendment, suspension or discontinuance will reduce any director's accrued benefit, except as required to comply with applicable law. Our Compensation Committee may terminate the Plan at any time, as long as the termination complies with applicable tax and other requirements.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Registration Rights Agreement

We are parties to a registration rights agreement with EQT, Arsenal, the EQT Investor and certain other stockholders. We expect to amend and restate this registration rights agreement in connection with this offering.

The amended and restated registration rights agreement will contain provisions that entitle EQT, Arsenal, the EQT Investor and the other stockholder parties thereto to certain rights to have their securities registered by us under the Securities Act. EQT will be entitled to an unlimited number of "demand" registrations, subject to certain limitations. Every stockholder that holds registration rights will also be entitled to customary "piggyback" registration rights. In addition, the amended and restated registration rights agreement will provide that we will pay certain expenses of the stockholder parties relating to such registrations and indemnify them against certain liabilities which may arise under the Securities Act.

Stockholders Agreement

We intend to enter into a stockholders agreement with EQT, Arsenal and certain other stockholders in connection with this offering.

This stockholders agreement will provide that following the completion of this offering, our board of directors will consist of eight members. The EQT Investor and certain of its affiliates will have the right to nominate to our board of directors a number of nominees equal to (x) the total number of directors comprising our board of directors at such time, multiplied by (y) the percentage of our outstanding common stock held from time to time by the EQT Investor and such affiliates. For purposes of calculating the number of directors that the EQT Investor and such affiliates will be entitled to nominate, any fractional amounts are rounded up to the nearest whole number. In addition, Arsenal and certain of its affiliates will have the right to nominate to our board of directors one nominee for so long as Arsenal and such affiliates collectively own at least 5% of our outstanding common stock; provided, that such individual is an investment professional employed by Arsenal or one of its affiliates or another individual with the prior written consent of EQT. In addition, the board of directors will be divided into three classes and serve staggered, three year terms. For so long as we have a classified board, the EQT nominated board members will be divided by EQT as evenly as possible among the classes of directors.

Pursuant to the stockholders agreement, we will include the EQT and Arsenal nominees on the slate that is included in our proxy statement relating to the election of directors of the class to which such persons belong and provide the highest level of support for the election of each such person as we provide to any other individual standing for election as a director. In addition, pursuant to the stockholders agreement, EQT and Arsenal will agree with the Company to vote in favor of the Company slate that is included in our proxy statement.

In the event that an EQT or Arsenal nominee ceases to serve as a director for any reason (other than the failure of our stockholders to elect such individual as a director), EQT or Arsenal, as applicable, will be entitled to appoint another nominee to fill the resulting vacancy.

Other Transactions

In 2018, we paid Dr. Rayner and an affiliated family trust an aggregate of $468,750 in respect of an earn-out payment due in connection with a business we acquired from Dr. Rayner and certain other parties in 2015. The agreement governing the acquisition and such earn-out payment was entered into prior to the commencement of Dr. Rayner's employment with us. This payment represented the final amount due to Dr. Rayner under the agreement governing such acquisition.

During the year ended December 31, 2017, the Company paid Arsenal approximately $280,000 in management fees pursuant to an agreement that was terminated in August of that year.

Directed Share Program

At our request, the underwriters have reserved up to shares of common stock, or up to % of the shares offered by this prospectus, for sale at the initial public offering price through a directed share program to our directors, officers, employees, independent operators, business associates and related persons. The sales will be made at our direction by and its affiliates through a directed share program. The number of shares of our common stock available for sale to the general public in this offering will be reduced to the extent that such persons purchase such reserved shares. Any reserved shares not so purchased will be offered by the underwriters to the general public on the same terms as the other shares of common stock offered by this prospectus. Participants in the directed share program will not be subject to lockup or market standoff restrictions with the underwriters or with us with respect to any shares purchased through the directed share program, except in the case of shares purchased by any director or executive officer. For additional information, see "Underwriting."

Indemnification of Directors and Officers

We have entered, or will enter, into an indemnification agreement with each of our directors and executive officers. The indemnification agreements, together with our amended and restated bylaws, will provide that we will jointly and severally indemnify each indemnitee to the fullest extent permitted by the DGCL from and against all loss and liability suffered and expenses, judgments, fines and amounts paid in settlement actually and reasonably incurred by or on behalf of the indemnitee in connection with any threatened, pending, or completed action, suit or proceeding. Additionally, we will agree to advance to the indemnitee all out-of-pocket costs of any type or nature whatsoever incurred in connection therewith. See "Description of Capital Stock—Limitations on Liability and Indemnification of Officers and Directors."

Related Persons Transaction Policy

Prior to the completion of this offering, our board of directors is expected to adopt a written policy on transactions with related persons, which we refer to as our "related person policy." Our related person policy will require that all "related persons" (as defined in paragraph (a) of Item 404 of Regulation S-K) must promptly disclose to our general counsel any "related person transaction" (defined as any transaction that is anticipated would be reportable by us under Item 404(a) of Regulation S-K in which we were or are to be a participant and the amount involved exceeds $120,000 and in which any related person had or will have a direct or indirect material interest) and all material facts with respect thereto. Our general counsel will communicate that information to our board of directors or to a duly authorized committee thereof. Our related person policy will provide that no related person transaction entered into following the completion of this offering will be executed without the approval or ratification of our board of directors or a duly authorized committee thereof. It will be our policy that any directors interested in a related person transaction must recuse themselves from any vote on a related person transaction in which they have an interest.

PRINCIPAL AND SELLING STOCKHOLDERS

The following table and accompanying footnotes set forth information with respect to the beneficial ownership of the common stock of Certara, Inc. as of , 2020, assuming the EQT Equity Conversion is effected immediately prior to the consummation of the offering by:

- each person known by us to own beneficially 5% or more of our outstanding shares of common stock;
- the selling stockholders;
- each of our directors;
- each of our named executive officers; and
- our directors and executive officers as a group.

The number of shares and percentages of beneficial ownership prior to this offering set forth below are based on the number of shares of our common stock to be issued and outstanding immediately prior to the consummation of this offering following completion of the EQT Equity Conversion. Until the completion of the EQT Equity Conversion, all of our common stock will be beneficially owned by the EQT Investor. The number of shares and percentages of beneficial ownership after this offering set forth below are based on the number of shares of our common stock to be issued and outstanding immediately after the consummation of this offering, excluding any potential purchases pursuant to the directed share program relating to this offering.

Beneficial ownership for the purposes of the following table is determined in accordance with the rules and regulations of the SEC. A person is a "beneficial owner" of a security if that person has or shares "voting power," which includes the power to vote or to direct the voting of the security, or "investment power," which includes the power to dispose of or to direct the disposition of the security or has the right to acquire such powers within 60 days.

Unless otherwise noted in the footnotes to the following table, and subject to applicable community property laws, the persons named in the table have sole voting and investment power with respect to their beneficially owned common stock.

Except as otherwise indicated in the footnotes below, the address of each beneficial owner is c/o Certara, Inc., 100 Overlook Center, Suite 101, Princeton, New Jersey 08540.

	SHARES BENEFICIALLY OWNED PRIOR TO THE OFFERING		SHARES BENEFICIALLY OWNED AFTER THE OFFERING			
			IF UNDERWRITERS' OPTION TO PURCHASE ADDITIONAL SHARES IS NOT EXERCISED		IF UNDERWRITERS' OPTION TO PURCHASE ADDITIONAL SHARES IS EXERCISED IN FULL	
NAME OF BENEFICIAL OWNER	SHARES	PERCENTAGE	SHARES	PERCENTAGE	SHARES	PERCENTAGE
5% Stockholders:						
EQT Investor[1]		%		%		%
Arsenal Investors[2]						
Directors and Named Executive Officers:						
William F. Feehery		%		%		%
Justin Edge						
Thomas Kerbusch						
Craig R. Rayner						
Sherilyn S. McCoy						
James E. Cashman III						
Eric C. Liu[3]						
Stephen M. McLean						
Edmundo Muniz						
Mason P. Slaine						
Matthew Walsh						
Ethan Waxman[3]						
All directors and executive officers as a group 16 persons)		%		%		%
Other Selling Stockholders:						

* Indicates beneficial ownership of less than 1%.

(1) Consists of shares of common stock held directly by the EQT Investor. EQT Avatar Parent GP LLC ("Avatar Parent GP") is the general partner of the EQT Investor. Several investment vehicles collectedly make up the fund known as "EQT VII." EQT VII owns 100% of the membership interests in Avatar Parent GP. EQT Fund Management S.à r.l. ("EFMS") has exclusive responsibility for the management and control of the business and affairs of investment vehicles which constitute the majority of the total commitments to EQT VII. As such, EFMS has the power to control Avatar Parent GP's voting and investment decisions and may be deemed to have beneficial ownership of the securities held by the EQT Investor. EFMS is overseen by a board that acts by majority approval. The individual members of such board are Joshua Stone, Adam Larsson, Nicholas Curwen, Peter Veldman and James Arrol. The registered address of the EQT Investor, Avatar Parent GP, and EFMS is 26A, Boulevard Royal, L-2449 Luxembourg, Grand Duchy of Luxembourg.

(2) Consists of shares of common stock held directly by Arsenal Capital Partners III LP ("Partners III") and shares of common stock held directly by Arsenal Capital Partners III-B LP (together with Partners III, the "Arsenal Funds"). Arsenal Capital Investment III LP ("Investment LP") is the general partner of each of the Arsenal Funds and is governed by an investment committee consisting of 17 individuals, including Mr. McLean, who serves as one of our directors. Arsenal Capital Group LLC ("Group LLC") is the general partner of Investment LP and appoints the members of its investment committee. As such, Group LLC has the power to control Investment LP's voting and investment decisions and may be deemed to have beneficial ownership of the securities held by the Arsenal Funds. Group LLC is managed by a board of managers consisting of two members that acts by majority approval. The individual members of such board are Terry M. Mullen and Jeffrey B. Kovach. The mailing address for each of the persons and entities referenced above is c/o Arsenal Capital Partners, 100 Park Avenue, 31st Floor, New York, New York, 10017.

(3) The address of Messrs. Liu and Waxman is c/o EQT Partners, 1114 Avenue of the Americas, 45th Floor, New York, New York 10036.

DESCRIPTION OF CAPITAL STOCK

General

In connection with this offering, we will amend and restate our certificate of incorporation and our amended and restated bylaws. The following description summarizes the material terms of, and is qualified in its entirety by, the amended and restated certificate of incorporation and amended and restated bylaws that we intend to adopt, each of which will be in effect upon the consummation of this offering, the forms of which are filed as exhibits to the registration statement of which this prospectus is a part. For a complete description of our capital stock, you should refer to our amended and restated certificate of incorporation, amended and restated bylaws and the applicable provisions of Delaware laws. Under "Description of Capital Stock," "we," "us," "our," the "Company" and "our Company" refer to Certara, Inc. and not to any of its subsidiaries and "EQT" refers to the investment funds of EQT and its affiliates, so long as EQT owns shares of common stock of the Company.

Our purpose is to engage in any lawful act or activity for which corporations may now or hereafter be organized under the DGCL. Upon the consummation of this offering, our authorized capital stock will consist of shares of common stock, par value $0.01 per share, and shares of preferred stock, par value $0.01 per share. No shares of preferred stock will be issued or outstanding immediately after the public offering contemplated by this prospectus. Unless our board of directors determines otherwise, we will issue all shares of our capital stock in uncertificated form.

Common Stock

Holders of our common stock will be entitled to one vote for each share held of record on all matters on which stockholders are entitled to vote generally, including the election or removal of directors. The holders of our common stock do not have cumulative voting rights in the election of directors.

Upon our liquidation, dissolution or winding up and after payment in full of all amounts required to be paid to creditors and subject to the rights of the holders of one or more outstanding series of preferred stock having liquidation preferences, if any, the holders of our common stock will be entitled to receive pro rata our remaining assets available for distribution. Holders of our common stock do not have preemptive, subscription, redemption sinking fund or conversion rights. The common stock will not be subject to further calls or assessment by us. All shares of our common stock that will be outstanding at the time of the completion of the offering will be fully paid and non-assessable. The rights, powers, preferences and privileges of holders of our common stock will be subject to those of the holders of any shares of our preferred stock or any series or class of stock we may authorize and issue in the future.

Preferred Stock

Our amended and restated certificate of incorporation will authorize our board of directors to establish one or more series of preferred stock (including convertible preferred stock). Unless required by law or by the Nasdaq rules, the authorized shares of preferred stock will be available for issuance without further action by investors in our common stock, and holders of our common stock will not be entitled to vote on any amendment to our amended and restated certificate of incorporation that relates solely to the terms of any outstanding shares of preferred stock, if the holders of such shares of preferred stock are entitled to vote thereon. Our board of directors is authorized to determine, with respect to any series of preferred stock, the powers (including voting powers), preferences and relative, participating, optional and other special rights, and the qualifications, limitations or restrictions thereof, including, without limitation:

- the designation of the series;
- the number of shares of the series, which our board of directors may, except where otherwise provided in the preferred stock designation, increase (but not above the total number of authorized shares of the class of stock) or decrease (but not below the number of shares then outstanding);
- whether dividends, if any, will be cumulative or non-cumulative and the dividend rate of the series;

- the dates at which dividends, if any, will be payable;
- redemption rights and price or prices, if any, for shares of the series;
- the terms and amounts of any sinking fund provided for the purchase or redemption of shares of the series;
- the amounts payable on shares of the series in the event of any voluntary or involuntary liquidation, dissolution or winding-up of the affairs of our company;
- whether the shares of the series will be convertible into shares of any other class or series of the stock of our company, or any other security of our company or any other entity, and, if so, the specification of the other class or series or other security, the conversion price or prices or rate or rates, any rate adjustments, the date or dates as of which the shares will be convertible and all other terms and conditions upon which the conversion may be made;
- restrictions on the issuance of shares of the same series or of any other class or series of our capital stock; and
- the voting rights, if any, of the holders of the series.

We could issue a series of preferred stock that could, depending on the terms of the series, impede or discourage an acquisition attempt or other transaction that some, or a majority, of the holders of our common stock might believe to be in their best interests or in which the holders of our common stock might receive a premium for their common stock over the market price of the common stock. Additionally, the issuance of preferred stock may adversely affect the holders of our common stock, including, without limitation, by restricting dividends on the common stock, diluting the voting power of the common stock or subordinating the liquidation rights of the common stock. As a result of these or other factors, the issuance of preferred stock could have an adverse impact on the market price of our common stock.

Dividends

Holders of our common stock will be entitled to receive dividends when, as and if declared by our board of directors out of funds legally available therefor, subject to any statutory or contractual restrictions on the payment of dividends and to the rights of the holders or one or more outstanding series of our preferred stock.

The DGCL permits a corporation to declare and pay dividends out of "surplus" or, if there is no "surplus," out of its net profits for the fiscal year in which the dividend is declared and/or the preceding fiscal year. "Surplus" is defined as the excess of the net assets of the corporation over the amount determined to be the capital of the corporation by the board of directors. The capital of the corporation is typically calculated to be (and cannot be less than) the aggregate par value of all issued shares of capital stock. Net assets equals the fair value of the total assets minus total liabilities. The DGCL also provides that dividends may not be paid out of net profits if, after the payment of the dividend, remaining capital would be less than the capital represented by the outstanding stock of all classes having a preference upon the distribution of assets.

Declaration and payment of any dividend will be subject to the discretion of our board of directors. The time and amount of such dividends, if any, will be dependent upon our financial condition, operations, compliance with applicable law, cash requirements and availability, debt repayment obligations, capital expenditure needs and restrictions in our debt instruments, contractual restrictions, business prospects, industry trends, the provisions of Delaware law affecting the payment of distributions to stockholders and any other factors our board of directors may consider relevant.

We do not expect to declare or pay any dividends on our common stock in the foreseeable future. In addition, our ability to pay dividends on our common stock is limited by the covenants of our Loan Agreement and Credit Agreement and may be further restricted by the terms of any future debt or preferred securities. See "Dividend Policy" and "Management's Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources — Credit Facilities."

Annual Stockholder Meetings

Our amended and restated certificate of incorporation and our amended and restated bylaws will provide that annual stockholder meetings will be held at a date, time and place, if any, as exclusively selected by our

board of directors. To the extent permitted under applicable law, we may conduct meetings by remote communications, including by webcast.

Effects of Our Certificate of Incorporation and Bylaws and Certain Provisions of Delaware Law

Our amended and restated certificate of incorporation and our amended and restated bylaws will contain, and the DGCL does contain, provisions (which are summarized in the following paragraphs) that are intended to enhance the likelihood of continuity and stability in the composition of our board of directors. These provisions are intended to avoid costly takeover battles, reduce our vulnerability to a hostile change of control and enhance the ability of our board of directors to maximize stockholder value in connection with any unsolicited offer to acquire us. However, these provisions may have the effect of delaying, deterring or preventing a merger or acquisition of our company by means of a tender offer, a proxy contest or other takeover attempt that a stockholder might consider in its best interest, including attempts that might result in a premium over the prevailing market price for the shares of common stock held by stockholders.

Authorized but Unissued Capital Stock

Delaware law does not require stockholder approval for any issuance of authorized shares. However, the listing requirements of the Nasdaq, which would apply if and so long as our common stock remains listed on the Nasdaq, require stockholder approval of certain issuances equal to or exceeding 20% of the then outstanding voting power or then outstanding number of shares of common stock. Additional shares that may be used in the future may be used for a variety of corporate purposes, including future public offerings, to raise additional capital or to facilitate acquisitions.

Our board of directors may generally issue one or more series of preferred shares on terms calculated to discourage, delay or prevent a change of control of our company or the removal of our management. Moreover, our authorized but unissued shares of preferred stock will be available for future issuances in one or more series without stockholder approval and could be utilized for a variety of corporate purposes, including future offerings to raise additional capital, to facilitate acquisitions and employee benefit plans.

One of the effects of the existence of authorized and unissued and unreserved common stock or preferred stock may be to enable our board of directors to issue shares to persons friendly to current management, which issuance could render more difficult or discourage an attempt to obtain control of our Company by means of a merger, tender offer, proxy contest or otherwise, and thereby protect the continuity of our management and possibly deprive our stockholders of opportunities to sell their shares of common stock at prices higher than prevailing market prices.

Classified Board of Directors

Our amended and restated certificate of incorporation will provide that, subject to the right of holders of any series of preferred stock, our board of directors will be divided into three classes of directors, with the classes to be as nearly equal in number as possible, and with the directors serving staggered three-year terms, with only one class of directors being elected at each annual meeting of stockholders. As a result, approximately one-third of our board of directors will be elected each year. The classification of directors will have the effect of making it more difficult for stockholders to change the composition of our board of directors. Our amended and restated certificate of incorporation and amended and restated bylaws will provide that, subject to any rights of holders of preferred stock to elect additional directors under specified circumstances, the number of directors will be fixed from time to time exclusively pursuant to a resolution adopted by the board of directors; however, if at any time EQT owns at least 40% in voting power of the stock of our Company entitled to vote generally in the election of directors, the stockholders may also fix the number of directors.

Business Combinations

We will opt out of Section 203 of the DGCL; however, our amended and restated certificate of incorporation will contain similar provisions providing that we may not engage in certain "business combinations" with any "interested stockholder" for a three-year period following the time that the stockholder became an interested stockholder, unless:

- prior to such time, our board of directors approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of our voting stock outstanding at the time the transaction commenced, excluding certain shares;
- at or subsequent to that time, the business combination is approved by our board of directors and by the affirmative vote of holders of at least 66 2/3% of our outstanding voting stock that is not owned by the interested stockholder; or
- the stockholder became an interested stockholder inadvertently and (i) as soon as practicable divested itself of sufficient ownership to cease to be an interested stockholder and (ii) had not been an interested stockholder but for the inadvertent acquisition of ownership within three years of the business combination.

Generally, a "business combination" includes a merger, asset or stock sale or other transaction resulting in a financial benefit to the interested stockholder. Subject to certain exceptions, an "interested stockholder" is a person who, together with that person's affiliates and associates, owns, or within the previous three years owned, 15% or more of our outstanding voting stock. For purposes of this section only, "voting stock" has the meaning given to it in Section 203 of the DGCL.

Under certain circumstances, this provision will make it more difficult for a person who would be an "interested stockholder" to effect various business combinations with our company for a three-year period. This provision may encourage companies interested in acquiring our Company to negotiate in advance with our board of directors because the stockholder approval requirement would be avoided if our board of directors approves either the business combination or the transaction which results in the stockholder becoming an interested stockholder. These provisions also may have the effect of preventing changes in our board of directors and may make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

Our amended and restated certificate of incorporation will provide that EQT, and any of its direct or indirect transferees and any group as to which such persons or entities are a party, does not constitute an "interested stockholder" for purposes of this provision.

Removal of Directors; Vacancies

Under the DGCL, unless otherwise provided in our amended and restated certificate of incorporation, directors serving on a classified board may be removed by the stockholders only for cause. Our amended and restated certificate of incorporation will provide that, other than directors elected by holders of our preferred stock, if any, directors may be removed with or without cause upon the affirmative vote of a majority in voting power of all outstanding shares of stock entitled to vote thereon, voting together as a single class; provided, however, at any time when EQT beneficially owns less than 40% in voting power of the stock of our company entitled to vote generally in the election of directors, directors may only be removed for cause, and only by the affirmative vote of holders of at least 66 2/3% in voting power of all the then-outstanding shares of stock of our company entitled to vote thereon, voting together as a single class. In addition, our amended and restated certificate of incorporation will also provide that, subject to the rights granted to one or more series of preferred stock then outstanding or the rights granted pursuant to the stockholders agreement, any newly created directorship on the board of directors that results from an increase in the number of directors and any vacancies on our board of directors will be filled only by the affirmative vote of a majority of the remaining directors, even if less than a quorum, or by a sole remaining director or by the stockholders; provided, however, at any time when EQT beneficially owns less than 40% in voting power of the stock of our company entitled to vote generally in

the election of directors, any newly created directorship on the board of directors that results from an increase in the number of directors and any vacancy occurring in the board of directors may only be filled by a majority of the directors then in office, although less than a quorum, or by a sole remaining director (and not by the stockholders). Our amended and restated certificate of incorporation will provide that the board of directors may increase the number of directors by the affirmative vote of a majority of the directors or, at any time when EQT beneficially owns at least 40% of the voting power of the stock of our Company entitled to vote generally in the election of directors, of the stockholders.

No Cumulative Voting

Under Delaware law, the right to vote cumulatively does not exist unless the certificate of incorporation specifically authorizes cumulative voting. Our amended and restated certificate of incorporation will not authorize cumulative voting. Therefore, stockholders holding a majority in voting power of the shares of our stock entitled to vote generally in the election of directors will be able to elect all of our directors.

Special Stockholder Meetings

Our amended and restated certificate of incorporation will provide that special meetings of our stockholders may be called at any time only by or at the direction of the board of directors or the chairman of the board of directors; provided, however, at any time when EQT beneficially owns, in the aggregate, at least 40% in voting power of the stock of our company entitled to vote generally in the election of directors, special meetings of our stockholders shall also be called by the board of directors or the chairman of the board of directors at the request of EQT. Our amended and restated bylaws will prohibit the conduct of any business at a special meeting other than as specified in the notice for such meeting. These provisions may have the effect of deferring, delaying or discouraging hostile takeovers, or changes in control or management of our Company.

Requirements for Advance Notification of Director Nominations and Stockholder Proposals

Our amended and restated bylaws will establish advance notice procedures with respect to stockholder proposals and the nomination of candidates for election as directors, other than nominations made by or at the direction of the board of directors or a committee of the board of directors. In order for any matter to be properly brought before a meeting of our stockholders, a stockholder will have to comply with advance notice requirements and provide us with certain information. Generally, to be timely, a stockholder's notice must be received at our principal executive offices not less than 90 days nor more than 120 days prior to the first anniversary date of the immediately preceding annual meeting of stockholders. Our amended and restated bylaws will also specify requirements as to the form and content of a stockholder's notice. Our amended and restated bylaws will allow the chairman of the meeting at a meeting of the stockholders to adopt rules and regulations for the conduct of meetings, which may have the effect of precluding the conduct of certain business at a meeting if the rules and regulations are not followed. These provisions may also deter, delay or discourage a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to influence or obtain control of our company.

Stockholder Action by Written Consent

Pursuant to Section 228 of the DGCL, any action required to be taken at any annual or special meeting of the stockholders may be taken without a meeting, without prior notice and without a vote if a consent or consents in writing, setting forth the action so taken, is signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares of our stock entitled to vote thereon were present and voted, unless our amended and restated certificate of incorporation provides otherwise. Our amended and restated certificate of incorporation will preclude stockholder action by written consent at any time when EQT beneficially owns less than 40% in voting power of the stock of our Company entitled to vote generally in the election of directors, other than certain rights that holders of our preferred stock may have to act by written consent.

Supermajority Provisions

Our amended and restated certificate of incorporation and our amended and restated bylaws will provide that the board of directors is expressly authorized to make, alter, amend, change, add to, rescind or repeal, in whole or in part, our amended and restated bylaws without a stockholder vote in any matter not inconsistent with Delaware law or our amended and restated certificate of incorporation. In addition, for as long as EQT beneficially owns at least 40% in voting power of the stock of our company entitled to vote generally in the election of directors, any amendment, alteration, rescission or repeal of our amended and restated bylaws by our stockholders will require the affirmative vote of a majority in voting power of the outstanding shares of our stock present in person or represented by proxy at the meeting of stockholders and entitled to vote on such amendment, alteration, change, addition, rescission, change, addition or repeal. At any time when EQT beneficially owns less than 40% in voting power of all outstanding shares of the stock of our company entitled to vote generally in the election of directors, any amendment, alteration, rescission, change, addition or repeal of our amended and restated bylaws by our stockholders will require the affirmative vote of the holders of at least 66 2/3% in voting power of all the then-outstanding shares of stock of our Company entitled to vote thereon, voting together as a single class.

The DGCL provides generally that the affirmative vote of a majority of the outstanding shares entitled to vote thereon, voting together as a single class, is required to amend a corporation's certificate of incorporation, unless the certificate of incorporation requires a greater percentage.

Our amended and restated certificate of incorporation will provide that at any time when EQT beneficially owns less than 40% in voting power of the stock of our Company entitled to vote generally in the election of directors, the following provisions in our amended and restated certificate of incorporation may be amended, altered, repealed or rescinded only by the affirmative vote of the holders of at least 66 2/3% in voting power of all the then-outstanding shares of stock of our company entitled to vote thereon, voting together as a single class:

- the provision requiring a 66 2/3% supermajority vote for stockholders to amend our bylaws;
- the provisions providing for a classified board of directors (the election and term of our directors);
- the provisions regarding resignation and removal of directors;
- the provisions regarding competition and corporate opportunities;
- the provisions regarding Section 203 of the DGCL and entering into business combinations with interested stockholders;
- the provisions regarding stockholder action by written consent;
- the provisions regarding calling annual or special meetings of stockholders;
- the provisions regarding filling vacancies on our board of directors and newly created directorships;
- the provisions eliminating monetary damages for breaches of fiduciary duty by a director; and
- the amendment provision requiring that the above provisions be amended only with a 66 2/3% supermajority vote.

The combination of the classification of our board of directors, the lack of cumulative voting and the supermajority voting requirements will make it more difficult for our existing stockholders to replace our board of directors as well as for another party to obtain control of us by replacing our board of directors. Because our board of directors has the power to retain and discharge our officers, these provisions could also make it more difficult for existing stockholders or another party to effect a change in management.

These provisions may have the effect of deterring hostile takeovers or delaying or preventing changes in control of our management or our company, such as a merger, reorganization or tender offer. These provisions are intended to enhance the likelihood of continued stability in the composition of our board of directors and its policies and to discourage certain types of transactions that may involve an actual or threatened acquisition of our company. These provisions are designed to reduce our vulnerability to an unsolicited acquisition proposal. These provisions are also intended to discourage certain tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for

our shares and, as a consequence, they also may inhibit fluctuations in the market price of our shares that could result from actual or rumored takeover attempts. Such provisions may also have the effect of preventing changes in management of our company.

Dissenters' Rights of Appraisal and Payment

Under the DGCL, with certain exceptions, our stockholders will have appraisal rights in connection with a merger or consolidation of us. Pursuant to the DGCL, stockholders who properly request and perfect appraisal rights in connection with such merger or consolidation will have the right to receive payment of the fair value of their shares as determined by the Delaware Court of Chancery.

Stockholders' Derivative Actions

Under the DGCL, any of our stockholders may bring an action in our name to procure a judgment in our favor, also known as a derivative action, provided that the stockholder bringing the action is a holder of our shares at the time of the incident to which the action relates or such stockholder's stock thereafter devolved by operation of law.

Exclusive Forum

Our amended and restated bylaws will provide that unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall, to the fullest extent permitted by law, be the sole and exclusive forum for any (i) derivative action or proceeding brought on behalf of our company, (ii) action asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of our company to our company or our company's stockholders, (iii) action asserting a claim against our company or any director, officer or other employee of our company arising pursuant to any provision of the DGCL or our amended and restated certificate of incorporation or our amended and restated bylaws or as to which the DGCL confers jurisdiction on the Court of Chancery of the State of Delaware or (iv) action asserting a claim against our company or any director, officer or other employee of our company governed by the internal affairs doctrine. These provisions shall not apply to suits brought to enforce a duty or liability created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction. Unless the Company consents in writing to the selections of an alternative forum, the federal district courts of the United States of America shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act. Any person or entity purchasing or otherwise acquiring any interest in shares of capital stock of our company shall be deemed to have notice of and consented to the forum provisions in our amended and restated bylaws. However, it is possible that a court could find our forum selection provisions to be inapplicable or unenforceable.

Conflicts of Interest

Delaware law permits corporations to adopt provisions renouncing any interest or expectancy in certain opportunities that are presented to the corporation or its officers, directors or stockholders. Our amended and restated certificate of incorporation will, to the maximum extent permitted from time to time by Delaware law, renounce any interest or expectancy that we have in, or right to be offered an opportunity to participate in, any business opportunities that are from time to time presented to our officers, directors or stockholders or their respective affiliates, other than those officers, directors, stockholders or affiliates who are our or our subsidiaries' employees. Our amended and restated certificate of incorporation will provide that, to the fullest extent permitted by law, none of EQT or any director who is not employed by us (including any non-employee director who serves as one of our officers in both his director and officer capacities) or his or her affiliates will have any duty to refrain from (i) engaging in a corporate opportunity in the same or similar business activities or lines of business in which we or our affiliates now engage or propose to engage or (ii) otherwise competing with us or our affiliates. In addition, to the fullest extent permitted by law, in the event that EQT or any non-employee director acquires knowledge of a potential transaction or other business opportunity which may be a corporate opportunity for itself or himself, or herself, or its or his, or her, affiliates or for us or our

affiliates, such person will have no duty to communicate or offer such transaction or business opportunity to us or any of our affiliates and they may take any such opportunity for themselves or offer it to another person or entity. Our amended and restated certificate of incorporation will not renounce our interest in any business opportunity that is expressly offered to a non-employee director solely in his or her capacity as a director or officer of our company. To the fullest extent permitted by law, no business opportunity will be deemed to be a potential corporate opportunity for us unless we would be permitted to undertake the opportunity under our amended and restated certificate of incorporation, we have sufficient financial resources to undertake the opportunity and the opportunity would be in line with our business.

Limitations on Liability and Indemnification of Officers and Directors

The DGCL authorizes corporations to limit or eliminate the personal liability of directors to corporations and their stockholders for monetary damages for breaches of directors' fiduciary duties, subject to certain exceptions. Our amended and restated certificate of incorporation will include a provision that eliminates the personal liability of directors for monetary damages for any breach of fiduciary duty as a director, except to the extent such exemption from liability or limitation thereof is not permitted under the DGCL. The effect of these provisions is to eliminate the rights of us and our stockholders, through stockholders' derivative suits on our behalf, to recover monetary damages from a director for breach of fiduciary duty as a director, including breaches resulting from grossly negligent behavior. However, exculpation does not apply to any director if the director has acted in bad faith, knowingly or intentionally violated a law during the performance of his or her duties, fiduciary or otherwise, owed to us, authorized illegal dividends, repurchases or redemptions or derived an improper benefit from his or her actions as a director.

Our amended and restated bylaws will provide that we must indemnify and advance expenses to our directors and officers to the fullest extent authorized by the DGCL. We also will be expressly authorized to carry directors' and officers' liability insurance providing indemnification for our directors, officers and certain employees for some liabilities. We believe that these indemnification and advancement provisions and insurance will be useful to attract and retain qualified directors and executive officers.

The limitation of liability, indemnification and advancement provisions in our amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duty. These provisions also may have the effect of reducing the likelihood of derivative litigation against directors and officers, even though such an action, if successful, might otherwise benefit us and our stockholders. In addition, any investment in our common stock may be adversely affected to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions.

We have entered, or will enter, into an indemnification agreement with each of our directors and officers. These agreements will require us to indemnify these individuals to the fullest extent permitted under the DGCL against liabilities that may arise by reason of their service to us, and to advance expenses incurred as a result of any proceeding against them as to which they could be indemnified.

There is currently no pending material litigation or proceeding involving any of our directors, officers or employees for which indemnification is sought.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is .

Listing

Our common stock is expected to be approved for listing on the Nasdaq under the symbol "CERT."

SHARES ELIGIBLE FOR FUTURE SALE

General

Prior to this offering, there has not been a public market for our common stock, and we cannot predict what effect, if any, market sales of shares of common stock or the availability of shares of common stock for sale will have on the market price of our common stock prevailing from time to time. Nevertheless, sales of substantial amounts of common stock, including shares issued upon the exercise of outstanding options, in the public market, or the perception that such sales could occur, could materially and adversely affect the market price of our common stock and could impair our future ability to raise capital through the sale of our equity or equity-related securities at a time and price that we deem appropriate. See "Risk Factors — Risks Related to this Offering and Ownership of Our Common Stock — Future sales, or the perception of future sales, by us or our existing stockholders in the public market following this offering could cause the market price for our common stock to decline."

Upon the consummation of this offering, we will have shares of common stock outstanding. All shares sold in this offering will be freely tradable without registration under the Securities Act and without restriction, except for (1) shares held by our "affiliates" (as defined under Rule 144) and (2) any shares purchased in our directed share program that are subject to the lock-up agreements described below. The shares of common stock held by EQT and certain of our directors, officers and employees after this offering will be "restricted" securities under the meaning of Rule 144 and may not be sold in the absence of registration under the Securities Act, unless an exemption from registration is available, including the exemptions pursuant to Rule 144 under the Securities Act.

Pursuant to Rule 144, the restricted shares held by our affiliates will be available for sale in the public market at various times after the date of this prospectus following the expiration of the applicable lock-up period.

In addition, a total of shares of our common stock has been reserved for issuance under the 2020 Incentive Plan, a total of shares of our common stock has been reserved for issuance under the Existing Plan and a total of shares of our common stock has been reserved for issuance under our 2020 Employee Stock Purchase Plan (each subject to adjustments for stock splits, stock dividends and similar events), which will equal approximately % of the shares of our common stock outstanding immediately following this offering. We intend to file one or more registration statements on Form S-8 under the Securities Act to register common stock issued or reserved for issuance under the 2020 Incentive Plan and our 2020 Employee Stock Purchase Plan. Any such Form S-8 registration statement will automatically become effective upon filing. Accordingly, shares registered under such registration statement will be available for sale in the open market, unless such shares are subject to vesting restrictions or the lock-up restrictions described below.

Rule 144

In general, under Rule 144, as currently in effect, a person (or persons whose shares are deemed aggregated) who is not deemed to be or have been one of our affiliates for purposes of the Securities Act at any time during 90 days preceding a sale and who has beneficially owned the shares proposed to be sold for at least six months, including the holding period of any prior owner other than an affiliate, is entitled to sell such shares without registration, subject to compliance with the public information requirements of Rule 144. If such a person has beneficially owned the shares proposed to be sold for at least one year, including the holding period of a prior owner other than an affiliate, then such person is entitled to sell such shares without complying with any of the requirements of Rule 144.

Under Rule 144, our affiliates or persons selling shares on behalf of our affiliates, who have met the six-month holding period for beneficial ownership of "restricted shares" of our common stock, are entitled to sell within any three-month period, a number of shares that does not exceed the greater of:

- 1% of the number of shares of our common stock then outstanding, which will equal approximately shares immediately after this offering; or

- the average reported weekly trading volume of our common stock on the Nasdaq during the four calendar weeks preceding the filing of a notice on Form 144 with respect to such sale.

Sales under Rule 144 by our affiliates or persons selling shares on behalf of our affiliates are also subject to certain manner of sale provisions and notice requirements and to the availability of current public information about us. The sale of these shares, or the perception that sales will be made, could adversely affect the price of our common stock after this offering because a great supply of shares would be, or would be perceived to be, available for sale in the public market.

Rule 701

In general, under Rule 701 of the Securities Act as currently in effect, any of our employees, consultants or advisors who purchase shares from us in connection with a compensatory stock or option plan or other written agreement in a transaction that was completed in reliance on Rule 701, and complied with the requirements of Rule 701, will be eligible to resell such shares 90 days after the effective date of this offering in reliance on Rule 144, but without compliance with certain restrictions, including the holding period, contained in Rule 144.

Registration Rights

EQT, Arsenal and certain other stockholders will have certain registration rights with respect to our common stock pursuant to the amended and restated registration rights agreement. See "Certain Relationships and Related Person Transactions — Registration Rights Agreement."

Lock-Up Agreements

In connection with this offering, we, our officers, directors and all significant equity holders, as well as the selling stockholders, have agreed with the underwriters, subject to certain exceptions, not to sell, dispose of or hedge any shares of our common stock or securities convertible into or exchangeable for shares of common stock during the period ending 180 days after the date of this prospectus, except with the prior written consent of the representatives of the underwriters.

Immediately following the consummation of this offering, equity holders subject to lock-up agreements will hold shares of our common stock, representing approximately % of our then outstanding shares of common stock, or approximately % if the underwriters exercise in full their option to purchase additional shares.

We have agreed not to issue, sell or otherwise dispose of any shares of our common stock during the 180-day period following the date of this prospectus. We may, however, grant options to purchase shares of common stock, issue shares of common stock upon the exercise of outstanding options, issue shares of common stock in connection with certain acquisitions or business combinations or an employee stock purchase plan and in certain other circumstances.

CERTAIN UNITED STATES FEDERAL INCOME AND ESTATE TAX CONSEQUENCES TO NON-U.S. HOLDERS

The following is a summary of certain United States federal income and estate tax consequences of the purchase, ownership and disposition of our common stock as of the date hereof. Except where noted, this summary deals only with common stock that is held as a capital asset by a non-U.S. holder (as defined below).

A "non-U.S. holder" means a beneficial owner of our common stock (other than an entity or arrangement treated as a partnership for United States federal income tax purposes) that is not, for United States federal income tax purposes, any of the following:

- an individual citizen or resident of the United States;
- a corporation (or any other entity treated as a corporation for United States federal income tax purposes) created or organized in or under the laws of the United States, any state thereof or the District of Columbia;
- an estate the income of which is subject to United States federal income taxation regardless of its source; or
- a trust if it (1) is subject to the primary supervision of a court within the United States and one or more United States persons have the authority to control all substantial decisions of the trust or (2) has a valid election in effect under applicable United States Treasury regulations to be treated as a United States person.

This summary is based upon provisions of the Code, and regulations, rulings and judicial decisions as of the date hereof. Those authorities may be changed, perhaps retroactively, so as to result in United States federal income and estate tax consequences different from those summarized below. This summary does not address all aspects of United States federal income and estate taxes and does not deal with foreign, state, local or other tax considerations that may be relevant to non-U.S. holders in light of their particular circumstances. In addition, it does not represent a detailed description of the United States federal income and estate tax consequences applicable to you if you are subject to special treatment under the United States federal income tax laws (including if you are a United States expatriate, foreign pension fund, "controlled foreign corporation," "passive foreign investment company" or a partnership or other pass-through entity for United States federal income tax purposes). We cannot assure you that a change in law will not alter significantly the tax considerations that we describe in this summary.

If a partnership (or other entity or arrangement treated as a partnership for United States federal income tax purposes) holds our common stock, the tax treatment of a partner will generally depend upon the status of the partner and the activities of the partnership. If you are a partner of a partnership holding our common stock, you should consult your tax advisors.

If you are considering the purchase of our common stock, you should consult your own tax advisors concerning the particular United States federal income and estate tax consequences to you of the purchase, ownership and disposition of our common stock, as well as the consequences to you arising under other United States federal tax laws and the laws of any other taxing jurisdiction.

Dividends

In the event that we make a distribution of cash or other property (other than certain pro rata distributions of our stock) in respect of our common stock, the distribution generally will be treated as a dividend for United States federal income tax purposes to the extent it is paid from our current or accumulated earnings and profits, as determined under United States federal income tax principles. Any portion of a distribution that exceeds our current and accumulated earnings and profits generally will be treated first as a tax-free return of capital, causing a reduction in the adjusted tax basis of a non-U.S. holder's common stock, and to the extent the amount of the distribution exceeds a non-U.S. holder's adjusted tax basis in our common stock, the excess will be treated as gain from the disposition of our common stock (the tax treatment of which is discussed below under "— Gain on Disposition of Common Stock").

Dividends paid to a non-U.S. holder generally will be subject to withholding of United States federal income tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. However, dividends that are effectively connected with the conduct of a trade or business by the non-U.S. holder within the United States (and, if required by an applicable income tax treaty, are attributable to a United States permanent establishment) are not subject to the withholding tax, provided certain certification and disclosure requirements are satisfied. Instead, such dividends are subject to United States federal income tax on a net income basis in the same manner as if the non-U.S. holder were a United States person as defined under the Code. Any such effectively connected dividends received by a foreign corporation may be subject to an additional "branch profits tax" at a 30% rate or such lower rate as may be specified by an applicable income tax treaty.

A non-U.S. holder who wishes to claim the benefit of an applicable treaty rate and avoid backup withholding, as discussed below, for dividends will be required (a) to provide the applicable withholding agent with a properly executed Internal Revenue Service ("IRS") Form W-BEN or Form W-8BEN-E (or other applicable form) certifying under penalty of perjury that such holder is not a United States person as defined under the Code and is eligible for treaty benefits or (b) if our common stock is held through certain foreign intermediaries, to satisfy the relevant certification requirements of applicable United States Treasury regulations. Special certification and other requirements apply to certain non-U.S. holders that are pass-through entities rather than corporations or individuals.

A non-U.S. holder eligible for a reduced rate of United States federal withholding tax pursuant to an income tax treaty may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS.

Gain on Disposition of Common Stock

Subject to the discussion of backup withholding and FATCA below, any gain realized by a non-U.S. holder on the sale or other disposition of our common stock generally will not be subject to United States federal income or withholding tax unless:

- the gain is effectively connected with a trade or business of the non-U.S. holder in the United States (and, if required by an applicable income tax treaty, is attributable to a United States permanent establishment of the non-U.S. holder);
- the non-U.S. holder is an individual who is present in the United States for 183 days or more in the taxable year of that disposition, and certain other conditions are met; or
- we are or have been a "United States real property holding corporation" for United States federal income tax purposes at any time within the five-year period preceding the disposition or the non-U.S. holder's holding period, whichever period is shorter, the non-U.S. holder is not eligible for a treaty exemption, and either (i) our common stock is not regularly traded on an established securities market during the calendar year in which the sale or disposition occurs or (ii) the non-U.S. holder owned or is deemed to have owned at any time within the five-year period preceding the disposition or the non-U.S. holder's holding period, whichever period is shorter, more than 5 percent of our common stock.

A non-U.S. holder described in the first bullet point immediately above will be subject to tax on the gain derived from the sale or other disposition in the same manner as if the non-U.S. holder were a United States person as defined under the Code. In addition, if any non-U.S. holder described in the first bullet point immediately above is a foreign corporation, the gain realized by such non-U.S. holder may be subject to an additional "branch profits tax" at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. An individual non-U.S. holder described in the second bullet point immediately above will be subject to a 30% (or such lower rate as may be specified by an applicable income tax treaty) tax on the gain derived from the sale or other disposition, which gain may be offset by United States source capital losses even though the individual is not considered a resident of the United States.

Generally, a corporation is a "United States real property holding corporation" if the fair market value of its United States real property interests equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests and its other assets used or held for use in a trade or business (all as determined for

United States federal income tax purposes). We believe we are not and do not anticipate becoming a "United States real property holding corporation" for United States federal income tax purposes.

Federal Estate Tax

Common stock held by an individual non-U.S. holder at the time of death will be included in such holder's gross estate for United States federal estate tax purposes, unless an applicable estate tax treaty provides otherwise.

Information Reporting and Backup Withholding

Distributions paid to a non-U.S. holder and the amount of any tax withheld with respect to such distributions generally will be reported to the IRS. Copies of the information returns reporting such distributions and any withholding may also be made available to the tax authorities in the country in which the non-U.S. holder resides under the provisions of an applicable income tax treaty.

A non-U.S. holder will not be subject to backup withholding on dividends received if such holder certifies under penalty of perjury that it is a non-U.S. holder (and the payor does not have actual knowledge or reason to know that such holder is a United States person as defined under the Code), or such holder otherwise establishes an exemption.

Information reporting and, depending on the circumstances, backup withholding will apply to the proceeds of a sale or other disposition of our common stock made within the United States or conducted through certain United States-related financial intermediaries, unless the beneficial owner certifies under penalty of perjury that it is a non-U.S. holder (and the payor does not have actual knowledge or reason to know that the beneficial owner is a United States person as defined under the Code), or such owner otherwise establishes an exemption.

Backup withholding is not an additional tax and any amounts withheld under the backup withholding rules will be allowed as a refund or a credit against a non-U.S. holder's United States federal income tax liability provided the required information is timely furnished to the IRS.

Additional Withholding Requirements

Under Sections 1471 through 1474 of the Code (such Sections commonly referred to as "FATCA"), a 30% United States federal withholding tax may apply to any dividends paid on our common stock to (i) a "foreign financial institution" (as specifically defined in the Code) which does not provide sufficient documentation, typically on IRS Form W-8BEN-E, evidencing either (x) an exemption from FATCA, or (y) its compliance (or deemed compliance) with FATCA (which may alternatively be in the form of compliance with an intergovernmental agreement with the United States) in a manner which avoids withholding, or (ii) a "non-financial foreign entity" (as specifically defined in the Code) which does not provide sufficient documentation, typically on IRS Form W-8BEN-E, evidencing either (x) an exemption from FATCA, or (y) adequate information regarding certain substantial United States beneficial owners of such entity (if any). If a dividend payment is both subject to withholding under FATCA and subject to the withholding tax discussed above under "— Dividends," the withholding under FATCA may be credited against, and therefore reduce, such other withholding tax. FATCA withholding may also apply to payments of gross proceeds of dispositions of our common stock, although under proposed regulations (the preamble to which specifies that taxpayers are permitted to rely on them pending finalization), no withholding will apply on payments of gross proceeds. You should consult your own tax advisors regarding these requirements and whether they may be relevant to your ownership and disposition of our common stock.

UNDERWRITING

Under the terms and subject to the conditions in an underwriting agreement dated the date of this prospectus, the underwriters named below, for whom Jefferies LLC and Morgan Stanley & Co. LLC are acting as representatives, have severally agreed to purchase, and we and the selling stockholders have agreed to sell to them, severally and not jointly, the number of shares indicated below:

NAME	NUMBER OF SHARES
Jefferies LLC	
Morgan Stanley & Co. LLC	
BofA Securities, Inc.	
Credit Suisse Securities (USA) LLC	
Barclays Capital Inc.	
William Blair & Company, L.L.C.	
Total:	

The underwriters and the representatives are collectively referred to as the “underwriters” and the “representatives,” respectively. The underwriters are offering the shares of common stock subject to their acceptance of the shares from us and subject to prior sale. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part. The underwriting agreement provides that the obligations of the several underwriters to pay for and accept delivery of the shares of common stock offered by this prospectus are subject to the approval of certain legal matters by their counsel and to certain other conditions, including receipt by the underwriters of officers’ certificates and legal opinions. The underwriters are obligated to take and pay for all of the shares of common stock offered by this prospectus if any such shares are taken. However, the underwriters are not required to take or pay for the shares covered by the underwriters’ option to purchase additional shares described below. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the non-defaulting underwriters may be increased or the underwriting agreement may be terminated.

The underwriters initially propose to offer part of the shares of common stock directly to the public at the offering price listed on the cover page of this prospectus and part to certain dealers at a price that represents a concession not in excess of $ per share under the public offering price. After the initial offering of the shares of common stock, the offering price and other selling terms may from time to time be varied by the representatives. Sales of shares of common stock made outside of the United States may be made by affiliates of the underwriters.

[We][The selling stockholders] have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase up to additional shares of common stock at the public offering price listed on the cover page of this prospectus, less the underwriting discount. The underwriters may exercise this option solely for the purpose of covering over-allotments, if any, made in connection with the offering of the shares of common stock offered by this prospectus. To the extent the option is exercised, each underwriter will become obligated, subject to certain conditions, to purchase about the same percentage of the additional shares of common stock as the number listed next to the underwriter’s name in the preceding table bears to the total number of shares of common stock listed next to the names of all underwriters in the preceding table.

The following table shows the per share and total public offering price, underwriting discount, and proceeds before expenses to us and the selling stockholders. These amounts are shown assuming both no exercise and full exercise of the underwriters’ option to purchase up to an additional shares of common stock.

	PER SHARE	TOTAL	
		NO EXERCISE	FULL EXERCISE
Public offering price	$	$	$
Underwriting discount to be paid by:			
Us	$	$	$
The selling stockholders	$	$	$
Proceeds, before expenses, to us	$	$	$
Proceeds, before expenses, to selling stockholders	$	$	$

The estimated offering expenses payable by us, exclusive of the underwriting discount, are approximately $. We have agreed to reimburse the underwriters for expenses relating to clearance of this offering with the Financial Industry Regulatory Authority, Inc. up to $.

The underwriters have informed us that they do not intend sales to discretionary accounts to exceed 5% of the total number of shares of common stock offered by them.

We expect the shares of our common stock to be approved for listing on the Nasdaq under the trading symbol “CERT.”

We, the selling stockholders and the underwriters have agreed to indemnify each other against certain liabilities, including liabilities under the Securities Act, and to contribute to payments that may be required to be made in respect of those liabilities.

No Sales of Similar Securities

We and all directors and officers and the holders of all of our outstanding stock and stock options have agreed that, without the prior written consent of on behalf of the underwriters, we and they will not, and will not publicly disclose an intention to, during the period ending 180 days after the date of this prospectus (the “restricted period”):

- offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any shares of common stock or any securities convertible into or exercisable or exchangeable for shares of common stock;
- file publicly (which for the avoidance of doubt shall not include confidential submissions with the SEC) any registration statement with the SEC relating to the offering of any shares of common stock or any securities convertible into or exercisable or exchangeable for common stock; or
- enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the common stock;

in each case, whether any such transaction described above is to be settled by delivery of common stock or such other securities, in cash or otherwise. In addition, we and each such person has agreed that, without the prior written consent of on behalf of the underwriters, we or such other person will not, during the restricted period, make any demand for, or exercise any right with respect to, the registration of any shares of common stock or any security convertible into or exercisable or exchangeable for common stock (other than any demand or exercise that does not result in the public filing of a registration statement by us).

The lock-up restrictions described in the immediately preceding paragraph are subject to specified exceptions, including the following:

- the sale of shares to the underwriters;
- the issuance by the Company of shares of common stock upon the exercise of an option or a warrant or the conversion of a security outstanding on the date of this prospectus of which the underwriters have been advised in writing;

- transactions by any person other than us relating to shares of common stock or other securities acquired in open-market transactions after the completion of the offering of the shares; provided that no filing under Section 16(a) of the Exchange Act is required or voluntarily made in connection with subsequent sales of the common stock or other securities acquired in such open-market transactions; or
- facilitating the establishment of a trading plan on behalf of a shareholder, officer or director of the Company pursuant to Rule 10b5-1 under the Exchange Act for the transfer of shares of common stock, provided that (i) such plan does not provide for the transfer of common stock during the restricted period and (ii) to the extent a public announcement or filing under the Exchange Act, if any, is required of or voluntarily made by the Company regarding the establishment of such plan, such announcement or filing shall include a statement to the effect that no transfer of common stock may be made under such plan during the restricted period.

Furthermore, after the offering, our employees, including our executive officers and/or directors, may enter into written trading plans that are intended to comply with Rule 10b5-1 under the Exchange Act. Sales under these trading plans would not be permitted until the expiration of the lock-up agreements relating to the offering described above.

, in their sole discretion, may release the common stock and other securities subject to the lock-up agreements described above in whole or in part at any time. There are no existing agreements between the underwriters and any of the holder of our common stock who will execute a lock-up agreement providing consent to the sale of shares prior to the expiration of the lock-up period.

Stabilization

In order to facilitate the offering of the common stock, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the common stock. Specifically, the underwriters may sell more shares than they are obligated to purchase under the underwriting agreement, creating a short position. A short sale is covered if the short position is no greater than the number of shares available for purchase by the underwriters under the option to purchase additional shares. The underwriters can close out a covered short sale by exercising the option to purchase additional shares or purchasing shares in the open market. In determining the source of shares to close out a covered short sale, the underwriters will consider, among other things, the open-market price of shares compared to the price available under the option to purchase additional shares. The underwriters may also sell shares in excess of the option to purchase additional shares, creating a naked short position. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market after pricing that could adversely affect investors who purchase in this offering. As an additional means of facilitating this offering, the underwriters may bid for, and purchase, shares of common stock in the open market to stabilize the price of the common stock. These activities may raise or maintain the market price of the common stock above independent market levels or prevent or retard a decline in the market price of the common stock. The underwriters are not required to engage in these activities and may end any of these activities at any time.

Electronic Distribution

In connection with the offering, certain of the underwriters or securities dealers may distribute prospectuses by electronic means, such as e-mail. A prospectus in electronic format may be made available on websites maintained by one or more underwriters, or selling group members, if any, participating in this offering. The representatives may agree to allocate a number of shares of common stock to underwriters for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives to underwriters that may make Internet distributions on the same basis as other allocations. Other than the prospectus in electronic format, the information on the underwriters' websites and any information contained in any other website maintained by any of the underwriters is not part of this prospectus, has not been approved and/or endorsed by us or the underwriters and should not be relied upon by investors.

Directed Share Program

At our request, the underwriters have reserved for sale at the initial public offering price up to shares of common stock for employees, directors and other persons associated with us who have expressed an interest in purchasing shares in the offering. The number of shares of common stock available for sale to the general public in the offering will be reduced to the extent these persons purchase the directed shares in the program. Any directed shares not so purchased will be offered by the underwriters to the general public on the same terms as the other shares. Except for certain participants who have entered into lock-up agreements as contemplated above, each person buying shares through the directed share program shall have no restriction regarding transferring shares purchased in the directed share program. For those participants who have entered into lock-up agreements as contemplated above, the lock-up agreements contemplated therein shall govern with respect to their purchases of shares of common stock in the program. in [its][their] sole discretion may release any of the securities subject to these lock-up agreements at any time. We have agreed to indemnify the underwriters against certain liabilities and expenses, including liabilities under the Securities Act, in connection with sales of the directed shares.

Other Activities and Relationships

The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. Certain of the underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, various financial advisory and investment banking services for us, for which they received or will receive customary fees and expenses. Certain of the underwriters or their respective affiliates are lenders under our Credit Agreement. Furthermore, to the extent we use the net proceeds of this offering to reduce indebtedness under our Credit Agreement, certain of the underwriters and their respective affiliates will receive a pro rata portion of such payments.

In addition, in the ordinary course of their various business activities, the underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve our securities and instruments. If the underwriters or their respective affiliates have a lending relationship with us, they routinely hedge their credit exposure to us consistent with their customary risk management policies. The underwriters and their respective affiliates may hedge such exposure by entering into transactions which consist of either the purchase of credit default swaps or the creation of short positions in our securities or the securities of our affiliates. The underwriters and their respective affiliates may also make investment recommendations or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long or short positions in such securities and instruments.

Pricing of the Offering

Prior to this offering, there has been no public market for our common stock. The initial public offering price was determined by negotiations between us and the representative. Among the factors considered in determining the initial public offering price were our future prospects and those of our industry in general, our sales, earnings and certain other financial and operating information in recent periods, and the price-earnings ratios, price-sales ratios, market prices of securities and certain financial and operating information of companies engaged in activities similar to ours. We offer no assurances that the initial public offering price will correspond to the price at which the common stock will trade in the public market subsequent to the offering or that an active trading market for the common stock will develop and continue after the offering.

The underwriters have advised us that, following the completion of this offering, they currently intend to make a market in the common stock as permitted by applicable laws and regulations. However, the underwriters are not obligated to do so, and the underwriters may discontinue any market-making activities at any time

without notice in their sole discretion. Accordingly, no assurance can be given as to the liquidity of the trading market for the common stock, that you will be able to sell any of the common stock held by you at a particular time or that the prices that you receive when you sell will be favorable.

Selling Restrictions

Other than in the United States, no action has been taken by us or the underwriters that would permit a public offering of the shares of common stock offered by this prospectus in any jurisdiction where action for that purpose is required. The shares of common stock offered by this prospectus may not be offered or sold, directly or indirectly, nor may this prospectus or any other offering material or advertisements in connection with the offer and sale of any such shares be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons into whose possession this prospectus comes are advised to inform themselves about and to observe any restrictions relating to the offering and the distribution of this prospectus. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any shares of stock offered by this prospectus in any jurisdiction in which such an offer or a solicitation is unlawful.

Canada

The shares of our common stock may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 *Prospectus Exemptions* or subsection 73.3(1) of the *Securities Act (Ontario)*, and are permitted clients, as defined in National Instrument 31-103 *Registration Requirements, Exemptions and Ongoing Registrant Obligations*. Any resale of the shares of our common stock must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation; provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 *Underwriting Conflicts* (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

European Economic Area

In relation to each Member State of the European Economic Area and the United Kingdom (each, a "Relevant State"), no shares of common stock have been offered or will be offered pursuant to the offering to the public in that Relevant State prior to the publication of a prospectus in relation to the shares of common stock which has been approved by the competent authority in that Relevant State or, where appropriate, approved in another Relevant State and notified to the competent authority in that Relevant State, all in accordance with the Prospectus Regulation, except that offers of shares of common stock may be made to the public in that Relevant State at any time under the following exemptions under the Prospectus Regulation:

(a) to any legal entity which is a qualified investor as defined under the Prospectus Regulation;

(b) to fewer than 150 natural or legal persons (other than qualified investors as defined under the Prospectus Regulation), subject to obtaining the prior consent of the representatives; or

(c) in any other circumstances falling within Article 1(4) of the Prospectus Regulation;

provided that no such offer of shares of common stock shall require us or any of our representatives to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation.

Each person located in a Relevant State to whom any offer of shares of common stock is made or who receives any communication in respect of an offer of shares of common stock, or who initially acquires any

shares of common stock, will be deemed to have represented, warranted, acknowledged and agreed to and with us and each underwriter that (1) it is a "qualified investor" within the meaning of the law in that Relevant State implementing Article 2(1)(e) of the Prospectus Regulation; and (2) in the case of any shares of common stock acquired by it as a financial intermediary as that term is used in Article 3(2) of the Prospectus Regulation, the shares of common stock acquired by it in the offer have not been acquired on behalf of, nor have they been acquired with a view to their offer or resale to, persons in any Relevant State other than qualified investors, as that term is defined in the Prospectus Regulation, or in circumstances in which the prior consent of the representatives has been given to the offer or resale, or where shares of common stock have been acquired by it on behalf of persons in any Relevant State other than qualified investors, the offer of those shares of common stock to it is not treated under the Prospectus Regulation as having been made to such persons.

We, the underwriters and our and their respective affiliates will rely upon the truth and accuracy of the foregoing representations, acknowledgments and agreements.

This prospectus has been prepared on the basis that any offer of shares of common stock in any Relevant State will be made pursuant to an exemption under the Prospectus Regulation from the requirement to publish a prospectus for offers of shares of common stock. Accordingly, any person making or intending to make an offer in that Relevant State of shares of common stock which are the subject of the offering contemplated in this prospectus may only do so in circumstances in which no obligation arises for us or any of underwriter to publish a prospectus pursuant to Article 3 of the Prospectus Regulation in relation to such offer. Neither we nor the underwriters have authorized, nor do they authorize, the making of any offer of shares of common stock in circumstances in which an obligation arises for us or the underwriters to publish a prospectus for such offer.

For the purposes of this provision, the expression an "offer to the public" in relation to any shares in any Relevant State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares of common stock to be offered so as to enable an investor to decide to purchase any shares of common stock; and the expression "Prospectus Regulation" means Regulation (EU) 2017/1129 (as amended).

United Kingdom

Each underwriter has represented and agreed that:

(a) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000 (the "FSMA") received by it in connection with the issue or sale of the shares of our common stock in circumstances in which Section 21(1) of the FSMA does not apply to us; and

(b) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the shares of our common stock in, from or otherwise involving the United Kingdom.

Switzerland

This prospectus is not intended to constitute an offer or solicitation to purchase or invest in our shares of common stock. The shares of common stock may not be publicly offered, directly or indirectly, in Switzerland within the meaning of the Swiss Financial Services Act ("FinSA") and no application has or will be made to admit the shares of common stock to trading on any trading venue (exchange or multilateral trading facility) in Switzerland. Neither this prospectus nor any other offering or marketing material relating to the shares of common stock constitutes a prospectus pursuant to the FinSA, and neither this prospectus nor any other offering or marketing material relating to the shares of common stock may be publicly distributed or otherwise made publicly available in Switzerland.

Dubai International Financial Centre

This prospectus relates to an "Exempt Offer" in accordance with the Offered Securities Rules of the Dubai Financial Services Authority (the "DFSA"). This prospectus is intended for distribution only to persons of a type specified in the Offered Securities Rules of the DFSA. It must not be delivered to, or relied on by, any other

person. The DFSA has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved this prospectus nor taken steps to verify the information set forth herein and has no responsibility for the prospectus. The common stock to which this prospectus relates may be illiquid or subject to restrictions on its resale. Prospective purchasers of the common stock offered should conduct their own due diligence on the common stock. If you do not understand the contents of this prospectus you should consult an authorized financial advisor.

Hong Kong

Shares of our common stock may not be offered or sold by means of any document other than (i) in circumstances which do not constitute an offer to the public within the meaning of the Companies Ordinance (Cap.32, Laws of Hong Kong), (ii) to "professional investors" within the meaning of the Securities and Futures Ordinance (Cap.571, Laws of Hong Kong) and any rules made thereunder or (iii) in other circumstances that do not result in the document being a "prospectus" within the meaning of the Companies Ordinance (Cap.32, Laws of Hong Kong), and no advertisement, invitation, or document relating to shares of our common stock may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the laws of Hong Kong) other than with respect to shares of our common stock that are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" within the meaning of the Securities and Futures Ordinance (Cap. 571, Laws of Hong Kong) and any rules made thereunder.

Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares of our common stock may not be circulated or distributed, nor may the shares of our common stock be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore (the "SFA"), (ii) to a relevant person pursuant to Section 275(1), or any person pursuant to Section 275(1A), and in accordance with the conditions specified in Section 275, of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares of our common stock are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

(a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

(b) a trust (where the trustee is not an accredited investor) the sole purpose of which is to hold investments and each beneficiary of the trust is an individual who is an accredited investor;

securities (as defined in Section 239(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares of our common stock pursuant to an offer made under Section 275 of the SFA except:

(1) to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;

(2) where no consideration is or will be given for the transfer;

(3) where the transfer is by operation of law;

(4) as specified in Section 276(7) of the SFA; or

(5) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore.

Singapore SFA Product Classification — In connection with Section 309B of the SFA and the CMP Regulations 2018, unless otherwise specified before an offer of shares of our common stock, we have determined, and hereby notify, all relevant persons (as defined in Section 309A(1) of the SFA), that shares of our common stock are "prescribed capital markets products" (as defined in the CMP Regulations 2018) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

Japan

No registration pursuant to Article 4, paragraph 1 of the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948, as amended) (the "FIEL") has been made or will be made with respect to the solicitation of the application for the acquisition of the shares of common stock.

Accordingly, the shares of common stock have not been, directly or indirectly, offered or sold and will not be, directly or indirectly, offered or sold in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan) or to others for re-offering or re-sale, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan except pursuant to an exemption from the registration requirements, and otherwise in compliance with, the FIEL and the other applicable laws and regulations of Japan.

For Qualified Institutional Investors ("QII")

Please note that the solicitation for newly issued or secondary securities (each as described in Paragraph 2, Article 4 of the FIEL) in relation to the shares of common stock constitutes either a "QII only private placement" or a "QII only secondary distribution" (each as described in Paragraph 1, Article 23-13 of the FIEL). Disclosure regarding any such solicitation, as is otherwise prescribed in Paragraph 1, Article 4 of the FIEL, has not been made in relation to the shares of common stock. The shares of common stock may only be transferred to QIIs.

For Non-QII Investors

Please note that the solicitation for newly issued or secondary securities (each as described in Paragraph 2, Article 4 of the FIEL) in relation to the shares of common stock constitutes either a "small number private placement" or a "small number private secondary distribution" (each as is described in Paragraph 4, Article 23-13 of the FIEL). Disclosure regarding any such solicitation, as is otherwise prescribed in Paragraph 1, Article 4 of the FIEL, has not been made in relation to the shares of common stock. The shares of common stock may only be transferred en bloc without subdivision to a single investor.

Australia

No placement document, prospectus, product disclosure statement or other disclosure document has been lodged with the Australian Securities and Investments Commission in relation to the offering. This prospectus does not constitute a prospectus, product disclosure statement or other disclosure document under the Corporations Act 2001 (the "Corporations Act"), and does not purport to include the information required for a prospectus, product disclosure statement or other disclosure document under the Corporations Act.

Any offer in Australia of the shares of common stock may only be made to persons ("Exempt Investors") who are "sophisticated investors" (within the meaning of section 708(8) of the Corporations Act), "professional investors" (within the meaning of section 708(11) of the Corporations Act) or otherwise pursuant to one or more exemptions contained in section 708 of the Corporations Act so that it is lawful to offer the shares of common stock without disclosure to investors under Chapter 6D of the Corporations Act.

The shares of common stock applied for by Exempt Investors in Australia must not be offered for sale in Australia in the period of 12 months after the date of allotment under the offering, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption under section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document that complies with Chapter 6D of the Corporations Act. Any person acquiring shares of common stock must observe such Australian on-sale restrictions.

This prospectus contains general information only and does not take into account the investment objectives, financial situation or particular needs of any particular person. It does not contain any securities

recommendations or financial product advice. Before making an investment decision, investors need to consider whether the information in this prospectus is appropriate for their needs, objectives and circumstances, and, if necessary, seek expert advice on those matters.

LEGAL MATTERS

The validity of the shares of common stock offered by this prospectus will be passed upon for us by Simpson Thacher & Bartlett LLP, Palo Alto, California. Certain legal matters relating to this offering will be passed upon for the underwriters by Latham & Watkins LLP, Washington, District of Columbia.

EXPERTS

The consolidated financial statements as of December 31, 2019 and 2018, and for the years then ended included in this prospectus have been audited by CohnReznick LLP, an independent registered public accounting firm, as stated in their report appearing herein. Such financial statements have been so included in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the common stock offered by this prospectus. This prospectus is a part of the registration statement and does not contain all of the information set forth in the registration statement and its exhibits and schedules, portions of which have been omitted as permitted by the rules and regulations of the SEC. For further information about us and our common stock, you should refer to the registration statement and its exhibits and schedules.

We will file annual, quarterly and special reports and other information with the SEC. Our filings with the SEC will be available to the public on the SEC's website at http://www.sec.gov. Those filings will also be available to the public on, or accessible through, our website under the heading "Investor Relations" at www.certara.com. The information we file with the SEC or contained on or accessible through our corporate website or any other website that we may maintain is not part of this prospectus or the registration statement of which this prospectus is a part.

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Stockholder of

Certara, Inc. and Subsidiaries

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Certara, Inc. (formerly EQT Avatar Topco, Inc.) and Subsidiaries (the "Company") as of December 31, 2019 and 2018, and the related consolidated statements of operations and comprehensive loss, stockholder's equity, and cash flows for the years then ended, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of Certara, Inc. and Subsidiaries as of December 31, 2019 and 2018, and the results of their operations and their cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Adoption of New Accounting Standard

As discussed in Note 2 to the consolidated financial statements, Certara, Inc. and Subsidiaries adopted Accounting Standards Codification ASU 2014-09, Revenue from Contracts with Customers ("Topic 606"), beginning January 1, 2019, using the modified retrospective method.

/s/ CohnReznick LLP

Roseland, New Jersey
October 7, 2020

We have served as Certara, Inc. and Subsidiaries' auditor since October 2019.

CERTARA, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

(IN THOUSANDS, EXCEPT PER COMMON SHARE AND SHARE DATA)	DECEMBER 31, 2019	2018
Assets		
Current assets:		
Cash and cash equivalents	$ 29,256	$ 11,684
Accounts receivable, net of allowance for doubtful accounts of $185 and $175, respectively	49,642	46,493
Restricted cash	506	503
Prepaid expenses and other current assets	8,119	8,763
Current portion of interest rate swap asset	—	1,487
Total current assets	87,523	68,930
Other assets:		
Property and equipment, net	4,623	5,401
Long-term deposits	1,096	1,264
Goodwill	514,996	514,274
Intangible assets, net of accumulated amortization of $85,925 and $46,649, respectively	427,998	459,623
Long-term portion of interest rate swap asset	—	1,164
Deferred income taxes	833	837
Total assets	$ 1,037,069	$ 1,051,493
Liabilities and stockholder's equity		
Current liabilities:		
Accounts payable	$ 4,917	$ 4,908
Accrued expenses	27,036	19,585
Current portion of deferred revenue	26,240	37,521
Current portion of interest rate swap liability	551	—
Current portion of long-term debt	4,210	3,153
Current portion of capital lease obligations	48	284
Total current liabilities	63,002	65,451
Long-term liabilities:		
Capital lease obligations, net of current portion	—	48
Deferred revenue, net of current portion	1,137	2,763
Deferred income taxes	82,160	85,667
Long-term portion of interest rate swap liability	1,601	—
Long-term debt, net of current portion and debt discount	397,121	404,795
Total liabilities	545,021	558,724
Commitments and contingencies		
Stockholder's equity		
Common shares, 0.01 par value, 1,000 shares authorized, 100 shares issued and outstanding	—	—
Additional paid-in capital	510,486	508,848
Accumulated deficit	(12,941)	(14,432)
Accumulated other comprehensive loss	(5,497)	(1,647)
Total stockholder's equity	492,048	492,769
Total liabilities and stockholder's equity	$ 1,037,069	$ 1,051,493

The accompanying notes are an integral part of the consolidated financial statements

CERTARA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS

(IN THOUSANDS, EXCEPT COMMON SHARE AND SHARE DATA))	YEAR ENDED DECEMBER 31 2019	2018
Revenues:		
Software	$ 68,341	$ 46,849
Services	140,170	116,870
Total revenues	208,511	163,719
Cost of revenues:		
Software	12,544	11,223
Services	67,226	59,820
Total cost of revenues	79,770	71,043
Operating expenses:		
Sales and marketing	10,732	9,416
Research and development	11,633	10,478
General and administrative	47,926	43,393
Intangible asset amortization	36,241	31,625
Depreciation and amortization expense	2,596	2,416
Total operating expenses	109,128	97,328
Income (loss) from operations	19,613	(4,652)
Other expenses:		
Interest expense	(28,004)	(27,802)
Miscellaneous, net	(760)	(107)
Total other expenses	(28,764)	(27,909)
Loss before income taxes	(9,151)	(32,561)
(Benefit from) provision for income taxes	(225)	697
Net loss	(8,926)	(33,258)
Other comprehensive income (loss)		
Foreign currency translation adjustment	433	(16,721)
Change in fair value of interest rate swap, net of tax	(4,283)	1,079
Total other comprehensive loss	(3,850)	(15,642)
Comprehensive loss	$ (12,776)	$ (48,900)
Net loss per common share – basic and diluted	$ (89,260)	$ (332,580)
Basic and diluted weighted average common shares outstanding	100	100

The accompanying notes are an integral part of the consolidated financial statements

CERTARA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF STOCKHOLDER'S EQUITY

(IN THOUSANDS, EXCEPT SHARE DATA)	COMMON STOCK SHARES	COMMON STOCK AMOUNT	ADDITIONAL PAID-IN CAPITAL	RETAINED EARNINGS (ACCUMULATED DEFICIT)	ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)	TOTAL STOCKHOLDER'S EQUITY
Balance as of December 31, 2017	100	$ —	$ 507,127	$ 18,826	$ 13,995	$ 539,948
Equity compensation	—	—	1,711	—	—	1,711
Capital contribution	—	—	1,110	—	—	1,110
Repurchase of Parent Class B units	—	—	(1,100)	—	—	(1,100)
Change in fair value of interest rate swap, net of tax	—	—	—	—	1,079	1,079
Net loss	—	—	—	(33,258)	—	(33,258)
Foreign currency translation adjustment	—	—	—	—	(16,721)	(16,721)
Balance as of December 31, 2018	100	—	508,848	(14,432)	(1,647)	492,769
Cumulative effect adjustment upon adoption of Topic 606	—	—	—	10,417	—	10,417
Equity compensation	—	—	1,691	—	—	1,691
Repurchase of Parent Class B units	—	—	(703)	—	—	(703)
Capital contribution	—	—	650	—	—	650
Change in fair value of interest rate swap, net of tax	—	—	—	—	(4,283)	(4,283)
Net loss	—	—	—	(8,926)	—	(8,926)
Foreign currency translation adjustment	—	—	—	—	433	433
Balance as of December 31, 2019	100	$ —	$ 510,486	$ (12,941)	$ (5,497)	$ 492,048

The accompanying notes are an integral part of the consolidated financial statements

CERTARA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

(IN THOUSANDS)	YEAR ENDED DECEMBER 31 2019	2018
Cash flows from operating activities:		
Net loss	$ (8,926)	$ (33,258)
Adjustments to reconcile net loss to net cash provided by operating activities:		
Depreciation and amortization of property and equipment	2,596	2,416
Amortization of intangible assets	38,964	34,595
Amortization of debt issuance costs	1,536	1,517
Provision for doubtful accounts	10	(250)
Loss on retirement of assets	113	91
Equity compensation expense	1,691	1,711
Deferred income taxes	(6,703)	(3,548)
Changes in assets and liabilities, net of acquisitions:		
Accounts receivable	(1,521)	(2,031)
Prepaid expenses and other assets	(1,831)	(2,614)
Accounts payable and accrued expenses	10,031	(6,357)
Deferred revenue	2,065	19,320
Net cash provided by operating activities	38,025	11,592
Cash flows from investing activities:		
Capital expenditures	(2,107)	(4,758)
Capitalized development costs	(7,410)	(6,727)
Business acquisitions, net of cash acquired	—	(62,420)
Net cash used in investing activities	(9,517)	(73,905)
Cash flows from financing activities:		
Capital contributions	650	1,110
Unit repurchase	(703)	(1,100)
Proceeds from borrowings on long-term debt	—	65,000
Payments on long-term debt and capital lease obligations	(3,436)	(3,981)
Proceeds on line of credit	—	10,000
Payment of contingent consideration obligations	—	(7,670)
Payments on line of credit	(5,000)	(5,000)
Debt issuance costs payments	—	(1,063)
Net cash (used in) provided by financing activities	(8,489)	57,296
Effect of foreign exchange rate changes on cash, cash equivalents, and restricted cash	(2,444)	(1,337)
Net increase (decrease) in cash, cash equivalents, and restricted cash	17,575	(6,354)
Cash, cash equivalents, and restricted cash, at beginning of year	12,187	18,541
Cash, cash equivalents, and restricted cash, at end of year	$ 29,762	$ 12,187
Supplemental disclosures of cash flow information		
Cash paid for interest	$ 26,428	$ 25,713
Cash paid for taxes	$ 4,109	$ 3,165
Supplemental schedules of noncash investing and financing activities		
Liabilities assumed in connection with business acquisition	$ —	$ 12,805

The accompanying notes are an integral part of the consolidated financial statements

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE AND SHARE AND UNIT DATA)

1. Description of Business

Certara, Inc. and its wholly-owned subsidiaries (together, the "Company") deliver software products and technology-enabled services to customers to efficiently carry out and realize the full benefits of biosimulation in drug discovery, preclinincal and clinical research, regulatory submissions and market access. The Company is a global leader in biosimulation, and the Company's biosimulation software and technology-enabled services help optimize, streamline, or even waive certain clinical trials to accelerate programs, reduce costs, and increase the probability of success. The Company's regulatory science and market access software and services are underpinned by technologies such as regulatory submissions software, natural language processing, and Bayesian analytics. When combined, these solutions allow the Company to offer customers end-to-end support across the entire product life cycle. On October 1, 2020, the Company amended the certificate of incorporation of EQT Avatar Topco, Inc. to change the name of the Company to Certara, Inc.

The Company has operations in the United States, Canada, Spain, Luxembourg, Portugal, United Kingdom, Germany, France, Netherlands, Denmark, Switzerland, Italy, Poland, Japan, Philippines, India, and Australia.

2. Summary of Significant Accounting Policies

(a) Basis of Presentation and Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. generally accepted accounting principles ("U.S. GAAP") requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Significant estimates include, among other estimates, the determination of fair values and useful lives of long-lived assets as well as intangible assets, goodwill, allowance for doubtful accounts receivable, recoverability of deferred tax assets, recognition of deferred revenue (including at the date of business combinations), value of interest rate swaps, determination of fair value of equity-based awards and assumptions used in testing for impairment of long-lived assets. Actual results could differ from those estimates, and such differences may be material to the consolidated financial statements.

The Company is an Emerging Growth Company, as defined in the Jumpstart Our Business Startups Act of 2012 (the "JOBS Act"). Under the JOBS Act, Emerging Growth Companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies. The Company has elected to use this extended transition period for complying with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date that it (i) is no longer an Emerging Growth Company or (ii) it affirmatively and irrevocably opts out of the extended transition period provided in the JOBS Act. As a result, these financial statements may not be comparable to companies that comply with the new or revised accounting pronouncements as of public company effective dates. The adoption dates discussed below reflect this election.

(b) Recently Adopted Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2014-09, "Revenue from Contracts with Customers" ("Topic 606"). Subsequent to the issuance of Topic 606, the FASB clarified the guidance through several ASUs, referred to as ASC 606. This guidance represents a comprehensive new revenue recognition model that requires a company to recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which that company expects to be entitled to receive in exchange for those goods or services. This update sets forth a new five-step revenue recognition model which replaces the prior revenue recognition guidance in its entirety.

On January 1, 2019, the Company adopted ASC 606, using the modified retrospective method, applied to all contracts not completed as of the date of adoption. This method requires the cumulative effect of the

adoption to be recognized as an adjustment to opening retained earnings or accumulated deficit in the period of adoption. The effects of adopting ASC 606 were a decrease of $10,417, net of taxes of $3,325, to accumulated deficit as of January 1, 2019, for the cumulative effect on prior years of having adopted the new standard, a decrease in deferred revenues of $13,587, an increase in deferred taxes of $3,325, and a decrease in cumulative translation adjustment of $155. These adjustments are a result of the upfront recognition of license revenues from term licenses.

Financial results for reporting periods beginning January 1, 2019 are presented under ASC 606, while prior period amounts were not adjusted and continue to be reported in accordance with the historical accounting guidance under ASC Topic 605.

In November 2016, the FASB issued ASU 2016-18 “Statement of Cash Flows (Topic 230): Restricted Cash”. ASU 2016-18 requires entities to show the changes in the total of cash, cash equivalents, restricted cash and restricted cash equivalents in the statement of cash flows. As a result, entities will no longer present transfers between cash and cash equivalents and restricted cash and restricted cash equivalents in the statement of cash flows. The ASU requires changes in the Company’s restricted cash to be classified as either operating activities, investing activities or financing activities in the Consolidated Statements of Cash Flows, depending on the nature of the activities that gave rise to the restriction. The new standard is effective for annual reporting periods beginning after December 15, 2018. Retrospective transition method is to be applied to each period presented. The Company adopted ASU 2016-18 on January 1, 2019. The adoption of ASU 2016-18 did not have a material impact to the Company’s consolidated financial statements.

In February 2018, the FASB issued ASU No. 2018-02, “Income Statement — Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income”. The amendments in this update allow a reclassification from accumulated other comprehensive income (“AOCI”) to retained earnings for adjustments to the tax effect of items in AOCI, that were originally recognized in other comprehensive income, related to the new statutory rate prescribed in the Tax Cuts and Jobs Act (“TCJA”) enacted on December 22, 2017, which reduced the US federal corporate tax rate from 35% to 21%. The amendments in this update should be applied either in the period of adoption or retrospectively to each period (or periods) in which the effect of the change in the US federal corporate income tax rate in the TCJA is recognized. The adoption of this standard on January 1, 2019 had no impact to the Company’s consolidated financial statements.

(c) Accounting Pronouncements Not Yet Adopted

In February 2016, the FASB issued ASU 2016-02, “Leases.” ASU 2016-02 establishes a right-of-use (“ROU”) model that requires a lessee to record a ROU asset and a lease liability on the balance sheet for all leases with terms longer than 12 months. Leases will be classified as either finance or operating, with classification affecting the pattern of expense recognition in the income statement. A modified retrospective transition approach is required for lessees for capital and operating leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements, with certain practical expedients available. In its April 2020 meeting, FASB deferred the effective date for ASC 842 for private companies to fiscal years beginning after December 15, 2021, and interim periods within fiscal years beginning after December 15, 2022. The Company will adopt ASU 2016-02 during the year beginning January 1, 2022 and is currently evaluating the impact of adopting this guidance on its consolidated financial statements.

In June 2016, the FASB issued ASU 2016-13 “Financial Instruments — Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments” (ASU 2016-13). ASU 2016-13 changes the impairment model for most financial assets and certain other instruments. For trade and other receivables, held-to-maturity debt securities, loans, and other instruments, entities will be required to use a new forward-looking “expected loss” model that generally will result in the earlier recognition of allowances for losses. The guidance also requires increased disclosures. Per ASU 2019-10 issued in November 2019, ASU 2016-13 is effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years for private companies. Early adoption is permitted. The Company will adopt ASU 2016-13 during

the year beginning January 1, 2023 and is currently evaluating the impact of adopting this guidance on its consolidated financial statements.

In January 2017, the FASB issued ASU 2017-04, "Intangibles — Goodwill and Other (Topic 350): Simplifying the Accounting for Goodwill Impairment". ASU 2017-04 removes Step 2 of the goodwill impairment test, which requires a hypothetical purchase price allocation. A goodwill impairment will now be the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying amount of goodwill. This standard will be effective for a private company (and thus, for those adopting exemption for Emerging Growth Companies) beginning in the first quarter of fiscal year 2022 and is required to be applied prospectively. Early adoption is permitted for interim or annual goodwill impairment tests performed on testing dates after January 1, 2017. The Company will adopt ASU 2017-04 during the year beginning January 1, 2022 and is currently evaluating the impact of adopting this guidance on its consolidated financial statements.

In August 2018, the FASB issued ASU 2018-15, "Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement that is a Service Contract," which included updated guidance on ASC 350-40 "Intangibles — Goodwill and Other — Internal-Use Software". The new guidance requires a customer in a cloud computing arrangement that is a service contract to follow the internal-use software guidance in ASC 350-40 to determine which implementation costs to capitalize as assets or expense as incurred. ASU 2018-15 is effective for calendar-year public business entities in 2020. For all other calendar-year entities, it is effective for annual periods beginning in 2021 and interim periods in 2022. Early adoption is permitted. The Company will adopt ASU 2018-15 during the year beginning January 1, 2020. The impact of adopting ASU 2018-15 did not have a material impact to the Company's consolidated financial statements.

In August 2018, the FASB issued ASU 2018-13, "Changes to Disclosure Requirements for Fair Value Measurements (Topic 820)", which improved the effectiveness of disclosure requirements for recurring and nonrecurring fair value measurements. The standard removes, modifies, and adds certain disclosure requirements. The amendments in this Update are effective for all entities for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. Early adoption is permitted. The Company will adopt ASU 2018-13 during the year beginning January 1, 2020. The impact of adopting ASU 2018-13 did not have a material impact to the Company's consolidated financial statements.

In December 2019, the FASB issued ASU No. 2019-12, "Simplifying the Accounting for Income Taxes" which removes certain exceptions related to the approach for intra-period tax allocation, the methodology for calculating income taxes in an interim period, the recognition of deferred tax liabilities for outside basis differences and clarifies the accounting for transactions that result in a step-up in the tax basis of goodwill. The guidance is effective as of January 1, 2021, with early adoption permitted. The Company is currently evaluating the impact of adopting this new guidance on the consolidated financial statements.

(d) Principles of Consolidation

The accompanying consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. All intercompany balances and transactions have been eliminated in consolidation. The results of certain of our foreign operations are recorded on a three-month lag in our consolidated financial statements. In the event that significant events occur during the lag period, the impact is included in the current period results.

(e) Fair Value Measurements

The Company follows FASB ASC 820-10, "Fair Value Measurements," which defines fair value, establishes a framework for measuring fair value in U.S. GAAP, and requires certain disclosures about fair value measurements.

ASC 820-10 defines fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the most advantageous market for the asset or liability in an orderly transaction. Fair value measurement is based on a hierarchy of observable or unobservable inputs. The standard describes three levels of inputs that may be used to measure fair value.

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Level 1 — Inputs to the valuation methodology are quoted prices available in active markets for identical securities as of the reporting date;

Level 2 — Inputs to the valuation methodology are other significant observable inputs, including quoted prices for similar securities, interest rates, credit risk etc. as of the reporting date, and the fair value can be determined through the use of models or other valuation methodologies; and

Level 3 — Inputs to the valuation methodology are unobservable inputs in situations where there is little, or no market activity of the securities and the reporting entity makes estimates and assumptions relating to the pricing of the securities including assumptions regarding risk.

If the inputs used to measure fair value fall in different levels of the fair value hierarchy, the hierarchy is based upon the lowest level of input that is significant to the fair value measurement. For the acquisitions noted in Note 5, the fair value measurement methods used to estimate the fair value of the assets acquired and liabilities assumed at the acquisition dates utilized a number of significant unobservable inputs of Level 3 assumptions. These assumptions included, among other things, projections of future operating results, implied fair value of assets using an income approach by preparing a discounted cash flow analysis, and other subjective assumptions.

Interest rate swaps are valued in the market using discounted cash flows techniques. These techniques incorporate Level 1 and Level 2 inputs. The market inputs are utilized in the discounted cash flows' calculation considering the instrument's term, notional amount, discount rate and credit risk. Significant inputs to the derivative instrument valuation model for interest rate swaps are observable in active markets and are classified as Level 2 in the hierarchy.

(f) Cash, Cash Equivalents and Restricted Cash

Cash equivalents include highly-liquid investments with maturities of three months or less from the date purchased. At times, cash balances held at financial institutions were in excess of the Federal Deposit Insurance Corporation's insured limits; however, the Company primarily places its temporary cash with high-credit quality financial institutions. The Company has never experienced losses related to these balances and believes it is not exposed to any significant credit risk on cash.

Restricted cash represents cash that is used as collateral to support an unsecured Company credit card program through a major bank. The restricted cash balance was $506 and $503 at December 31, 2019 and 2018, respectively.

As of December 31, 2019 and 2018, the carrying values reflected in the Consolidated Balance Sheets reasonably approximate the fair values for cash, cash equivalents and restricted cash due to the short-term maturity of these items. The following table provides a reconciliation of cash and cash equivalents and restricted cash reported within the consolidated balance sheets to the amounts presented in the consolidated statements of cash flows:

	DECEMBER 31,	
	2019	2018
Cash and cash equivalents	$ 29,256	$ 11,684
Restricted cash, current	506	503
Total cash and cash equivalents, and restricted cash	$ 29,762	$ 12,187

(g) Accounts Receivable

Accounts receivable includes current outstanding invoices billed to customers. Invoices are typically issued with net 30-days to net 90-days terms upon delivery of product or upon achievement of billable events for service-based contracts. The carrying amount of accounts receivable is reduced by a valuation allowance, if necessary,

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which reflects management's best estimate of the amounts that are doubtful. This allowance is estimated based on management's knowledge of its customers' financial condition, credit history, and existing economic conditions. Account balances are considered delinquent if payment is not received by the due date. Accounts receivable are written off when deemed uncollectible. Recovery of accounts receivable previously written off is recorded when received. Interest is not charged on accounts receivable. An allowance for doubtful accounts of $185 and $175 was provided in the accompanying consolidated financial statements as of December 31, 2019 and 2018, respectively.

	DECEMBER 31,	
	2019	2018
Trade receivables	$ 43,649	$ 41,933
Unbilled receivables	5,635	4,403
Other receivables	358	157
Accounts receivable, net	$ 49,642	$ 46,493

As of December 31, 2019 and 2018, the carrying values reflected in the Consolidated Balance Sheets reasonably approximate the fair values for accounts receivable due to the short-term maturity of these items.

(h) Property and Equipment

Property and equipment are stated at cost, less accumulated depreciation and amortization.

Depreciation and amortization is provided using the straight-line method over the estimated useful lives of the assets, which range from three to ten years for equipment and furniture, the shorter of the useful lives of the improvement or the life of the related lease term for leasehold improvements, and one to three years for purchased software. The Company seeks to match the book useful life of assets to the expected productive lives. Assets deemed to be impaired or no longer productive are written down to their net realizable value. The Company reviews long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying value of the asset may not be recoverable. If such events or changes in circumstances are present, an impairment loss would be recognized if the sum of the expected future net cash flows is less than the carrying amount of the asset. An impairment loss would be recorded for the excess of the carrying value of the asset over the estimated fair value. There was no impairment of property and equipment for the years ended December 31, 2019 and 2018.

(i) Software Development Costs

Software development costs are accounted for in accordance with FASB ASC Subtopic 985-20 if the software is to be sold, leased or otherwise marketed, or by FASB ASC Subtopic 350-40 if the software is for internal use. After the technological feasibility of the software has been established (for software to be marketed), or at the beginning of application development (for internal-use software), software development costs, which include primarily salaries and related payroll costs and costs of independent contractors incurred during development, are capitalized. Research and development ("R&D") costs incurred prior to the establishment of technological feasibility (for software to be marketed), or prior to application development (for internal-use software), are expensed as incurred. Software development costs are amortized on a product-by-product basis commencing on the date of general release of the products (for software to be marketed) or the date placed in service (for internal-use software). During the years ended December 31, 2019 and 2018, costs of $7,410 and $6,727, respectively, were capitalized related to software development activities. Software development costs for software to be marketed are amortized using the straight-line method over its estimated useful life, which is typically three years. The Company reviews capitalized software for impairment whenever events or changes in circumstances indicate that the carrying value of the asset may not be recoverable. If such events or changes in circumstances are present, an impairment loss would be recognized if the sum of the expected future net cash flows is less than the carrying amount of the asset. An impairment loss would be recorded for the

excess of the carrying value of the asset over the estimated fair value. There was no impairment of software development costs for the years ended December 31, 2019 and 2018.

(j) Debt Issuance Costs

Debt issuance costs are capitalized and amortized over the term of the related debt using the effective interest rate method. Amortization of debt issuance costs is included in interest expense within the Consolidated Statements of Operations and Comprehensive Loss. The unamortized amount is included as an offset against long-term debt on the Consolidated Balance Sheets.

(k) Goodwill and Other Intangible Assets

Goodwill is tested for impairment at the reporting unit level, which is one level below or the same as an operating segment. When testing goodwill for impairment, the Company first performs a qualitative assessment to determine whether it is necessary to perform step one of a two-step annual goodwill impairment test for each reporting unit. The Company is required to perform step one only if it concludes that it is more likely than not that a reporting unit's fair value is less than its carrying value. Should this be the case, the first step of the two-step process is to identify whether a potential impairment exists by comparing the estimated fair values of the Company's reporting units with their respective book values, including goodwill. If the estimated fair value of the reporting unit exceeds book value, goodwill is considered not to be impaired, and no additional steps are necessary. If, however, the fair value of the reporting unit is less than book value, then the second step is performed to determine if goodwill is impaired and to measure the amount of impairment loss, if any. The amount of the impairment loss is the excess of the carrying amount of the goodwill over its implied fair value. The estimate of implied fair value of goodwill is primarily based on an estimate of the discounted cash flows expected to result from that reporting unit but may require valuations of certain internally generated and unrecognized intangible assets such as the Company's software, technology, patents and trademarks. If the carrying amount of goodwill exceeds the implied fair value of that goodwill, an impairment loss is recognized in an amount equal to the excess.

For the years ended December 31, 2019 and 2018, the Company performed a quantitative assessment of goodwill and determined that it is not more-likely-than-not that the fair value of its reporting units is less than the carrying amount. Accordingly, no impairment loss was recorded for the years ended December 31, 2019 and 2018.

Other identifiable intangible assets with finite lives, such as software products acquired in acquisitions, non-compete agreements, trade names and customer relationship assets, are amortized over their estimated lives using either a straight-line method or a method based on pattern of expected economic benefit of the asset as follows: acquired software — 3 to 10 years; non-compete agreements — 2 to 5 years; trade names — 20 years; customer relationships — 11 to 16 years; and tradename — 10 to 17 years. The Company evaluates finite intangible assets for impairment whenever events or changes in circumstances indicate that the carrying amount of the asset might not be recoverable. An impairment loss is recognized when estimated undiscounted future cash flows expected to result from the use of the asset are less than its carrying amount.

There were no impairment charges related to intangible assets for the years ended December 31, 2019 and 2018.

(l) Foreign Currency Translation

Generally, the functional currency of the Company's international subsidiaries is the local currency of the country in which they operate. The Company translates the assets and liabilities of its non-U.S. dollar functional currency subsidiaries into U.S. dollars using exchange rates in effect at the end of each reporting period. Revenue and expenses for these subsidiaries are translated using average exchange rates prevailing during the period. Gains and losses from these translations are recognized as a cumulative translation adjustment and included as a separate component in accumulated other comprehensive loss within stockholder's equity.

For transactions that are not denominated in the local functional currency, the Company remeasures monetary assets and liabilities at exchange rates in effect at the end of each reporting period. Foreign currency

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transaction gains and losses are included net within comprehensive loss in the Consolidated Statements of Operations and Comprehensive Loss and resulted in foreign currency losses of $431 and $23 for the years ended December 31, 2019 and 2018, respectively.

(m) Derivative Instruments

In the normal course of business, the Company is subject to risk from adverse fluctuations in interest rates. The Company has chosen to manage this risk through the use of derivative financial instruments that consist of interest rate swap contracts. Counterparties to these contracts are major financial institutions. The Company is exposed to credit loss in the event of nonperformance by these counterparties. The Company does not use derivative instruments for trading or speculative purposes. The objective in managing exposure to market risk is to limit the impact on cash flows. To qualify for hedge accounting, the interest rate cap and swaps must effectively reduce the risk exposure that they are designed to hedge. In addition, at inception of a qualifying cash flow hedging relationship, the underlying transaction or transactions must be, and be expected to remain, probable of occurring in accordance with the related assertions.

FASB ASC 815, “Derivatives and Hedging,” requires the Company to recognize all derivatives on the balance sheet at fair value. The Company may enter into derivative contracts such as interest rate swap contracts that effectively convert portions of the Company’s floating rate debt to a fixed rate, which serves to mitigate interest rate risk. The Company’s objectives in using interest rate swaps are to add stability to interest expense and to manage its exposure to interest rate movements. Interest rate swaps designated as cash flow hedges involve the receipt of variable-rate amounts from a counterparty in exchange for the Company making fixed-rate payments over the life of the agreements without exchange of the underlying notional amount.

As of December 31, 2018, the Company had one outstanding interest rate swap that was designated as a cash flow hedge of interest rate risk for a notional amount of $217,500 that fixed the interest rate at 1.8523%, noninclusive of the fixed credit spread. This interest rate swap has a maturity date of November 30, 2020. On May 22, 2019, the Company entered into a second interest rate swap agreement, which is effective upon the maturity of the interest rate swap agreement, of November 30, 2020. This second interest rate swap was also designated as a cash flow hedge of interest rate risk for a notional amount of $230,000 that fixed the interest rate at 2.1284%, noninclusive of the fixed credit spread through May 31, 2022. The Company recorded the fair value of its interest rate swap in the amount of $2,152 and $2,651, as a derivative liability and asset as of December 31, 2019 and 2018, respectively, in its Consolidated Balance Sheets. The Company’s interest rate swap qualifies for hedge accounting. The fair value of the interest rate swap is recognized in the Consolidated Balance Sheets and the changes in the fair value of the derivatives are recognized in other comprehensive loss.

The following table set forth the assets and liabilities that were measured at fair value on a recurring and non-recurring basis by their levels in the fair value hierarchy at December 31, 2019:

	LEVEL 1	LEVEL 2	LEVEL 3	TOTAL
Liability				
Interest rate swap liability	$ —	$ 2,152	$ —	$2,152
Total	$ —	$ 2,152	$ —	$2,152

The following table set forth the assets and liabilities that were measured at fair value on a recurring and non-recurring basis by their levels in the fair value hierarchy at December 31, 2018:

	LEVEL 1	LEVEL 2	LEVEL 3	TOTAL
Liability				
Interest rate swap asset	$ —	$ 2,651	$ —	$2,651
Total	$ —	$ 2,651	$ —	$2,651

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The net amount of deferred gains (losses) related to derivative instruments designated as cash flow hedges that is expected to be reclassified from accumulated other comprehensive loss into earnings over the next 12 months is insignificant.

(n) Warranty

The Company includes an assurance commitment warranting the application software products will perform in accordance with written user documentation and the agreements negotiated with customers. Since the Company does not customize its applications software, warranty costs are insignificant and expensed as incurred.

(o) Net Loss per Share

Basic net loss per common share is computed by dividing the net loss by the weighted-average number of shares outstanding during the reporting period, without consideration for potentially dilutive securities. Diluted net loss per share is computed by dividing the net loss attributable to stockholders by the weighted-average number of shares and potentially dilutive securities outstanding during the period. The Company had no potentially dilutive securities outstanding during the years ended December 31, 2019 and 2018.

(p) Income Taxes

The Company accounts for income taxes under the asset and liability method. Under this method, the amount of taxes currently payable or refundable is accrued, and deferred tax assets and liabilities are recognized for the estimated future tax consequences attributable to differences between the financial reporting and tax basis of existing assets and liabilities. Deferred tax assets also include realizable tax losses and tax credit carryforwards.

The deferred tax assets may be reduced by a valuation allowance, which is established when it is more likely than not that some portion or all of the deferred tax assets will not be realized. In addition, management is required to evaluate all available evidence, both positive and negative, when making its judgment to determine whether to record a valuation allowance for a portion, or all, of its deferred tax assets. Deferred tax assets and liabilities are measured using enacted income tax rates in effect for the year in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in income tax rate is recognized in the period that includes the enactment date.

Uncertainty in Income Taxes

The Company accounts for uncertainty in income taxes using a two-step approach. The first step requires the Company to conclude that a tax position, based solely on its technical merits, is more likely than not to be sustained upon examination by a tax authority. The second step requires the Company to measure the largest amount of benefit, determined on a cumulative probability basis, that is more likely than not to be realized upon ultimate settlement with the respective tax authority. The Company recognizes the effect of income tax positions only if those positions are more likely than not of being sustained. Changes in recognition or measurement are reflected in the period in which the change in judgment occurs. Further, the benefit to be recorded in the consolidated financial statements is the amount most likely to be realized assuming a review by the tax authorities having all relevant information and applying current conventions. The Company's policy is to recognize interest and penalties related to income tax positions taken as a component of the provision for income taxes.

The Company recorded unrecognized tax benefits of $690 and $592 as of December 31, 2019 and 2018, respectively. For December 31, 2019 and 2018, there were no interest or penalties recorded. The Company does not anticipate any significant changes to its uncertain tax positions during the next 12 months. Audits for federal income tax returns are ongoing for the tax years ended December 31, 2017 and 2016. Additionally, the Internal Revenue Service can audit the NOLs generated in respective years in the years that the NOLs are utilized. State income tax returns are generally subject to examination for a period of three to six years after the filing of the respective tax return. The state impact of any federal changes remains subject to examination

by various states for a period of up to one year after formal notification to the states. Foreign income tax returns are generally subject to examination based on the tax laws of the respective jurisdictions.

(q) Revenue Recognition ASC 606

Revenue is recognized upon transfer of control of promised products or services to customers in an amount that reflects the consideration to which the Company expects to be entitled in exchange for promised goods or services. The Company's revenue consists of fees for perpetual and term licenses for the Company's software products, post-contract customer support (referred to as maintenance), software as a service ("SaaS") and professional services including training and other revenue. For contracts with multiple performance obligations, the Company allocates the transaction price of the contract to each performance obligation on a relative standalone selling price basis. The delivery of a particular type of software and each of the user licenses would be one performance obligation. However, any training, implementation, or support and maintenance promises as part of the software license agreement would be considered separate performance obligations, as those promises are distinct and separately identifiable from the software licenses. The payment terms in these arrangements are sufficiently short such that there is no significant financing component to the transaction.

The Company typically recognizes license revenue at a point in time upon delivering the applicable license. The revenue related to the support and maintenance performance obligation will be recognized on an over-time basis using time elapsed methodology. The revenue related to software training and software implementation performance will be recognized at the completion of the service.

The following describes the nature of the Company's primary types of revenues and the revenue recognition policies as they pertain to the types of transactions the Company enters into with its customers.

Software Licenses and Support

License revenue includes perpetual license fees and term license fees, which provide customers with the same functionality and differ mainly in the duration over which the customer benefits from the use of software. Both revenues from perpetual license and term license performance obligations are generally recognized upfront at the point in time when the software license has been delivered.

A source of software license revenue is from term and bundled licenses that are time-based arrangements for one or multiple software products sold together with maintenance and support for the term of the license arrangement. The Company has determined that post customer support and the right to unspecified enhancements and upgrades on a "when-and-if-available" basis included with term licenses is an immaterial component of the transaction price and, therefore, recognized these performance obligation components up front with the license when delivered. Software License contracts do not provide for any non-cash consideration nor is there consideration payable to a customer.

Software Services

For contracts that include multiple performance obligations, such as a software license plus software training, implementation, and/or maintenance/support, or in contracts where there are multiple software licenses, the transaction price is allocated to each of the performance obligations on a pro-rata basis based on the relative standalone selling price ("SSP") of each performance obligation. Maintenance services agreements consist of fees for providing software updates and for providing technical support for software products for a specified term. Revenue allocated to maintenance services is recognized ratably over the contract term beginning on the delivery date of each offering. Maintenance contracts generally have a term of one year. Expenses related to maintenance and subscription are recognized as incurred. While transfer of control of the software training and implementation performance obligations are over time, the services are typically started and completed within a few days. Due to the quick nature of the performance obligation from start to finish and the immaterial amounts, the Company recognizes any software training or implementation revenue at the completion of the service. Any unrecognized portion of amounts paid in advance for licenses and services is recorded as deferred revenue. Certara's software contracts do not typically include discounts, variable consideration, or options for future purchases that would not be similar to the original goods.

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Consortium revenues consist of contractual agreements with customers where the customer receives multiple benefits as part of their contract with the Company, as follows: access to the latest version simulator software, which has at least one new release per year, free access to a preset number of training workshops, a block of consulting hours to be used at the customer's discretion, as well as voting rights at the annual consortium meeting where development priorities for the upcoming year are set. The Company's consortium contracts are generally for three years with annual termination clauses and with annual upfront billings. Consortium revenues are recognized over time as the benefits of the consortium arrangement are realized over the course of the contract. Both the training and consulting services performance obligations will utilize an output method to measure the progress at the end of each reporting period. Revenue from the Company's performance obligation under the simulation license, which provides customers with access to the latest version of the simulation software, is recognized evenly over the contract period.

License revenue and post contract services are combined and reported as software revenue on the Consolidated Statements of Operations and Comprehensive Loss.

Subscription Revenues

Subscription revenues consists of subscription fees for access to, and related support for, our cloud-based solutions. The Company typically invoices subscription fees in advance in annual installments and recognizes subscription revenue ratably over the term of the applicable agreement, usually one to three years which is initially deferred and recognized ratably over the life of the contract. The output method that accurately depicts the transfer of control was determined to be the delivery of accessibility to the customer. Unearned maintenance and subscription revenue are recorded as deferred revenue. The Company's subscription services arrangements are generally non-cancelable and do not contain refund-type provisions. In rare instances that subscription services arrangements are deemed cancelable, the Company will adjust the transaction price and period for revenue recognition accordingly to be reflective of the contract term. The contract transaction price is based on the fixed fee for each subscription.

Services and Other Revenues

Services primarily represent consulting services, which may be either strategic consulting services, reporting and analysis services, regulatory writing services, or any combination of the three. Strategic consulting services consists of consulting, training, and process redesign that enables customers to identify which uncertainties are greatest and matter most and then to design development programs, trial sequences, and individual trials in such a way that those trials systematically reduce the identified uncertainties, in the most rapid and cost-effective manner possible. The Company's professional services contracts are either time-and-materials, fixed fee or prepaid. Services revenues are generally recognized over time as the services are performed. Revenues for fixed price services and prepaid are generally recognized over time applying input methods to estimate progress to completion. Accordingly, the number of resources being paid for and varying lengths of time they are being paid for, determine the measure of progress. Training revenues are recognized as the services are performed over time. However, due to short period over which the transfer of control occurs for a classroom or on-site training course, the revenue related to these performance obligations is recognized at the completion of the course for administrative feasibility purposes. The training services generally do not provide for any non-cash consideration nor is there consideration payable to a customer.

At contract inception, the Company assesses the products and services promised in its contracts with customers and identifies a performance obligation for each promise to transfer to the customer a product or service (or bundle of products or services) that is distinct — i.e., if a product or service is separately identifiable from other items in the bundled package and if a customer can benefit from it on its own or with other resources that are readily available to the customer. Determining whether products and services are considered distinct performance obligations that should be accounted for separately versus together may require significant judgment. The Company has contracts with customers that may have multiple performance obligations, including some or all of the following: software licenses, maintenance, subscriptions, professional services and/or training. For these contracts, the Company accounts for individual performance obligations separately if they are distinct within the context of the contract by allocating the contract's total transaction price to each performance obligation in an amount based on the relative SSP, of each distinct good or service in the contract.

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In order to determine the SSP of its promised goods or services, the Company conducts an annual analysis to determine whether its goods or services have an observable SSP. In determining SSP, the Company requires that a substantial majority of the standalone selling prices for goods or services fall within a reasonably narrow pricing range. If the Company does not have a directly observable SSP for a particular good or service, then the Company estimates a SSP by the Company's overall pricing objectives, taking into consideration market factors, pricing practices including historical discounting, historical standalone sales of similar products, customer demographics, geographic locations, and the number and types of users within the Company's contracts. The determination of SSP is made by the Company's management. Selling prices are analyzed at least on an annual basis to identify if the Company has experienced significant changes in its selling prices.

The Company allocates the transaction price to each performance obligation identified in the contract on a relative SSP basis and recognizes revenue when or as it satisfies a performance obligation by transferring control of a product or service to a customer.

Taxes collected from customers and remitted to governmental authorities are not included in revenue. The Company does not incur shipping and handling for its goods as they are generally delivered to a customer electronically.

The Company does not believe that it currently has any rights to return that would result in a material impact to revenues.

Contract Balances

The timing of revenue recognition, billings and cash collections results in billed accounts receivable, unbilled receivables (contract assets), and customer advances and deposits (deferred revenue, contract liabilities) on the Consolidated Balance Sheets. Amounts are billed as work progresses in accordance with agreed-upon contractual terms, either at periodic intervals (e.g., quarterly or monthly) or upon achievement of contractual milestones.

Contract assets relate to the Company's rights to consideration for performance obligations satisfied but not billed at the reporting date on contracts (i.e., unbilled revenue, a component of accounts receivable in the Consolidated Balance Sheets). Contract assets are billed and transferred to customer accounts receivable when the rights become unconditional. The Company typically invoices customers for term licenses, subscriptions, maintenance and support fees in advance with payment due before the start of the subscription term, ranging from one to three years. The Company records the amounts collected in advance of the satisfaction of performance obligations, usually over time, as a contract liability or deferred revenue. Invoiced amounts for non-cancelable services starting in future periods are included in contract assets and deferred revenue. The portion of deferred revenue that will be recognized within twelve months is recorded as current deferred revenue, and the remaining portion is recorded as non-current deferred revenue in the Consolidated Balance Sheets.

The unsatisfied performance obligation as of December 31, 2019 was approximately $53,167.

Deferred Contract Acquisition Costs

Under ASC 606, sales commissions paid to the sales force and the related employer payroll taxes, collectively "deferred contract acquisition costs", are considered incremental and recoverable costs of obtaining a contract with a customer. The Company has determined that sales commissions paid are an immaterial component of obtaining a customer's contract and has elected to expense sales commissions when paid.

Revenue Recognition Pre ASC 606

The adoption of ASC 606 changed the way the Company recognizes revenue related to term and bundled license agreements. Prior to ASC 606, the Company recognized software licenses and support revenue in accordance with FASB ASC 985, "Software." Revenues from software license agreements are recognized when all of the following criteria are met as set forth in FASB ASC 985: (1) persuasive evidence of an arrangement exists, (2) delivery has occurred, (3) the fee is fixed or determinable, and (4) collectability is probable.

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A source of software license revenue is from term and bundled licenses that are time-based arrangements for one or multiple software products that are sold together with maintenance and support for the term of the license arrangement. The Company does not have vendor specific objective evidence ("VSOE") to determine fair value of the maintenance and support in term arrangements and, therefore, recognizes revenues from these bundled time-based licenses ratably over the license term, which typically ranges from one to three years.

The Company allocates revenues from perpetual software arrangements involving multiple elements to each element based on the relative fair values as determined by the VSOE for each element. The Company limits its assessment of VSOE for each element to the price charged when the same element is sold separately. The Company has analyzed all of the elements included in multiple-element arrangements and determined that the Company has sufficient VSOE to allocate revenues to maintenance and support, deployment, and training. The Company sells training separately and has established VSOE on this basis. VSOE for maintenance and support is determined based upon the renewal rates in contracts themselves, which is based on a fixed percentage of the current perpetual license list price. Deployment services are charged based on standard hourly rates. Accordingly, assuming all other revenue recognition criteria are met, revenues from perpetual licenses are recognized upon delivery of the software using the residual method in accordance with ASC 985.

Software maintenance agreements provide for technical support and the right to unspecified enhancements and upgrades on a "when-and-if-available" basis. Post-contract support ("PCS") revenues on perpetual agreements are recognized ratably over the term of the support period (generally one year). Deployment, training, and other service revenues are recognized as the related services are provided. Any unrecognized portion of amounts paid in advance for licenses and services is recorded as deferred revenue.

For presentation in the Consolidated Statements of Operations and Comprehensive Loss, license revenues and PCS are combined as allowed under U.S. GAAP due to the immaterial amount of revenues obtained from PCS when charged separately in comparison to the total of these two sources.

Sources and Timing of Revenue

The Company's performance obligations are satisfied either over time or at a point in time. The following table presents the Company's revenue by timing of revenue recognition to understand the risks of timing of transfer of control and cash flows:

	DECEMBER 31, 2019
Software licenses transferred at a point in time	$ 35,261
Software licenses transferred over time	33,080
Service revenues earned over time	140,170
Total	$ 208,511

(r) Equity -based compensation

The Company measures Equity-Based Compensation at fair value and recognizes the expense over the vesting period. Compensation costs for units that vest based on continued service requirements are recognized on a straight-line basis. Forfeitures are recognized as they occur.

(s) Comprehensive (Loss) Income

FASB ASC 220, "Comprehensive Income," establishes standards for reporting of comprehensive income and its components (revenue, gains, and losses) in a full set of general purpose financial statements. FASB ASC 220 requires that all components of comprehensive income, including net income, be reported in a financial statement that is displayed with the same prominence as other financial statements. Comprehensive loss is defined as the change in equity during a period from transactions and other events and circumstances from non-owner sources. Net loss and other comprehensive loss, including foreign currency translation adjustments,

and changes in fair value of derivative instruments (interest rate swap agreements) designated as cash flow hedges, shall be reported to arrive at comprehensive loss. Comprehensive loss is displayed in the Consolidated Statements of Operations and Comprehensive Loss.

The components of other comprehensive income (loss) consisted of foreign currency translation adjustments totaling $433 and $(16,721), respectively, and change in fair value of interest rate swap, net of tax, totaling $(4,283) and $1,079 for the years ended December 31, 2019 and 2018, respectively.

(t) Reclassification

Certain amounts in the 2018 consolidated financial statements have been reclassified to conform with the current year presentation.

(u) Correction of Prior Period Error

In connection with the preparation of its consolidated financial statements for the year ended December 31, 2019, the Company identified a $2,779 understatement of goodwill and corresponding overstatement of accumulated other comprehensive loss, related to the initial application of purchase accounting for the 2018 Analytica Laser acquisition. The Company corrected this immaterial error through revision of their previously reported historical financial statements, which was deemed immaterial to the previously reported periods.

3. Employee Benefit Plan

The Company established a defined contribution 401(k) plan covering all U.S. employees who are at least 21 years of age. Employees may contribute to the plan up to 50% of their compensation, which may be further limited by law. In addition, employees who reached the age of 50 during the calendar years 2019 and 2018 are eligible to make an additional catch up contribution of 6.0%, subject to income limitations. The Company matches employee contributions for an amount up to 50% of the employee's deferral limited to the first 6% of each employee's compensation, with the exception of employees in one division who are matched 100% up to 6%. Contributions made by the Company were $1,400 and $1,366 for the years ended December 31, 2019 and 2018, respectively.

4. Concentrations of Credit Risk

Financial instruments that potentially subject the Company to concentrations of credit risk have consisted principally of cash and cash equivalent investments and trade receivables. The Company invests available cash in bank deposits, investment-grade securities, and short-term interest-producing investments, including government obligations and other money market instruments. At December 31, 2019 and 2018, the investments were bank deposits and overnight sweep accounts. The Company has adopted credit policies and standards to evaluate the risk associated with sales that require collateral, such as letters of credit or bank guarantees, whenever deemed necessary. Management believes that any risk of loss is significantly reduced due to the nature of the customers and distributors with which the Company does business.

As of December 31, 2019 and December 31, 2018, no customer accounted for more than 10% of the Company's accounts receivable or revenues during the periods presented.

5. Business Combinations

Acquisitions have been accounted for using the acquisition method of accounting pursuant to FASB ASC 805, "Business Combinations." Amounts allocated to the purchased assets and liabilities are based upon the total purchase price and the estimated fair values of such assets and liabilities on the effective date of the purchase as determined by an independent third party. The results of operations have been included in the Company's results of operations prospectively from the date of acquisition.

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BaseCase

BaseCase provides Software-as-a-Service (SaaS) in the Life Sciences industry. This acquisition was made to combine its background in health economics with the Company's background in Computer Science and exploit the gap in the market for health economics by accessing the software market in the life sciences industry. The BaseCase acquisition was funded through proceeds of $25,000 received from an additional tranche of term debt and cash on hand. The following table summarizes the estimates of the fair values of the assets acquired and liabilities assumed in the BaseCase acquisition as of the date of acquisition.

	JANUARY 25, 2018
Cash	$ 1,151
Accounts receivable	2,622
Prepaid expenses and other assets	171
Property and equipment	87
Separately identifiable intangible assets	7,580
Total identifiable assets acquired	11,611
Accounts payable	174
Accrued expenses	3,617
Deferred revenue	830
Deferred tax liability	2,927
Total liabilities assumed	7,548
Net identifiable assets acquired	4,063
Goodwill arising in the acquisition	21,260
Purchase price	$ 25,323

The adjustments recorded to reflect the acquired assets at their estimated fair value and liabilities at their estimated fair value or the present value of amounts to be paid included:

a. $7,580 to record the estimated fair market value of the acquired intangible assets consisting of: non-compete agreements $10; non-contractual customer relationships $5,480; acquired software $1,120 and trade name $970

b. Reduction in deferred revenues of $2,121

c. Other miscellaneous adjustments

The fair value of the intangible assets is based on significant inputs that are not observable in the market and, therefore, represent Level 3 measurements under FASB ASC 820-10. The fair value of the non-contractual customer relationships was determined under the income approach, specifically the multi-period excess earnings method. The fair value of the non-compete was determined using the income approach, specifically the comparative business valuation method. The fair value of the trade name and acquired software was determined using the income approach, specifically the relief from royalty method. In addition, goodwill of $21,260 was recorded to reflect the excess of the purchase price over the estimated fair value of the net identifiable assets acquired, which is not deductible for tax purposes.

The Company incurred $2,122 of acquisition costs related to this acquisition, which are included in operating expenses in the Consolidated Statement of Operations and Comprehensive Loss for the year ended December 31, 2018. The Company also incurred costs for the issuance of debt, which was capitalized as a debt issuance costs as of the acquisition date in the amount of $313.

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Analytica Laser

Analytica Laser employs cutting-edge quantitative methodologies and proprietary software to study and predict real-world outcomes for drug value assessment. This acquisition was made so that the Company's complementary approaches allow integration of Health Economics and Outcomes Research ("HEOR") and real-world value assessments with Pharmacometrics data — delivering safety, efficacy and effectiveness insights and providing a unique market advantage for our customers. The Analytica Laser acquisition was funded through proceeds of $40,000 received from an additional tranche of term debt and cash on hand. The following table summarizes the estimates of the fair values of the assets acquired and liabilities assumed in the Analytica Laser acquisition as of the date of acquisition.

	APRIL 3, 2018
Cash	$ 427
Accounts receivable	3,629
Prepaid expenses and other assets	721
Property and equipment	111
Separately identifiable intangible assets	17,630
Total identifiable assets acquired	22,518
Accounts payable	118
Accrued expenses	1,727
Deferred revenue	62
Deferred tax liability	3,350
Total liabilities assumed	5,257
Net identifiable assets acquired	17,261
Goodwill arising in the acquisition	22,739
Purchase price	$ 40,000

The adjustments recorded to reflect the acquired assets at their estimated fair value and liabilities at their estimated fair value or the present value of amounts to be paid included:

a. $17,630 to record the estimated fair market value of the acquired intangible assets consisting of: non-compete agreements $390 and non-contractual customer relationships $17,240

b. Reduction in deferred revenues of $135

c. Other miscellaneous adjustments

The fair value of the intangible assets is based on significant inputs that are not observable in the market and, therefore, represent Level 3 measurements under FASB ASC 820-10. The fair value of the non-contractual customer relationships was determined under the income approach, specifically the multi-period excess earnings method. The fair value of the non-compete was determined using the income approach, specifically the comparative business valuation method.

In addition, goodwill of $22,739 was recorded to reflect the excess of the purchase price over the estimated fair value of the net identifiable assets acquired, which is not deductible for tax purposes.

The Company incurred $1,728 of acquisition costs related to this acquisition, which are included in operating expenses in the Consolidated Statement of Operations and Comprehensive Loss for the year ended December 31, 2018. The Company also incurred costs for the issuance of debt, which was capitalized as a debt issuance cost as of the acquisition date in the amount of $750.

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6. Prepaid Expenses and Other Current Assets

Prepaid and other current assets consisted of the following:

	DECEMBER 31,	
	2019	2018
Prepaid expenses	$3,774	$ 3,543
Income tax receivable	302	3,039
R&D tax credit receivable	2,412	349
Other current assets	1,631	1,832
Prepaid expenses and other current assets	$8,119	$ 8,763

7. Property and Equipment

Property and equipment consisted of the following:

	DECEMBER 31,	
	2019	2018
Computer equipment	$ 3,736	$ 3,768
Furniture	2,776	2,127
Purchased software for internal use	212	79
Leasehold improvements	2,254	2,137
Property and equipment	8,978	8,111
Less: Accumulated depreciation and amortization	(4,355)	(2,710)
Property and equipment, net	$ 4,623	$ 5,401

Depreciation and amortization expense were $2,596 and $2,416 for the years ended December 31, 2019 and 2018, respectively.

8. Goodwill and Other Intangible Assets

The following table presents the Company's intangible assets (other than goodwill) and the related amortization:

	WEIGHTED AVERAGE AMORTIZATION PERIOD (IN YEARS)	DECEMBER 31, 2019			DECEMBER 31, 2018		
		GROSS CARRYING AMOUNT	ACCUMULATED AMORTIZATION	NET	GROSS CARRYING AMOUNT	ACCUMULATED AMORTIZATION	NET
Acquired software	10.65	$ 23,571	$ 5,307	$ 18,264	$ 23,139	$ 2,584	$ 20,555
Capitalized software development costs	1.75	16,566	6,896	9,670	9,023	1,518	7,505
Non-compete agreements	1.74	1,318	977	341	1,324	773	551
Trade names	16.64	40,683	4,810	35,873	40,684	2,776	37,908
Customer relationships	11.63	431,785	67,935	363,850	432,102	38,998	393,104
Total		$ 513,923	$ 85,925	$427,998	$ 506,272	$ 46,649	$459,623

Amortization expense for intangible assets was $38,964 and $34,595 for the years ended December 31, 2019 and 2018, respectively. Amortization expense of $2,723 and $2,970 was recorded in cost of sales for

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the years ended December 31, 2019 and 2018, respectively. The remaining amortization of $36,241 and $31,625 was recorded in operating expenses for the years ended December 31, 2019 and 2018, respectively.

Based on the current amount of intangibles subject to amortization, the estimated annual amortization expense for each of the succeeding five years and thereafter is as follows:

	ACQUIRED SOFTWARE	CAPITALIZED SOFTWARE DEVELOPMENT COSTS	NON-COMPETE AGREEMENTS	TRADE NAMES	CUSTOMER RELATIONSHIPS	TOTAL
2020	$ 2,448	$ 6,055	$ 148	$ 2,034	$ 28,862	$ 39,547
2021	2,381	2,410	102	2,034	28,862	35,789
2022	2,178	1,205	77	2,034	28,862	34,356
2023	1,997	—	14	2,034	28,862	32,907
2024	1,825	—	—	2,034	28,862	32,721
Thereafter	7,436	—	—	25,703	219,539	252,678
Total	$ 18,265	$ 9,670	$ 341	$ 35,873	$ 363,849	$427,998

Goodwill

The Company has not recognized any impairment charges for the years ended December 31, 2019 and 2018. A reconciliation of the change in the carrying value of goodwill is as follows:

Balance, December 31, 2017	**$481,401**
Goodwill addition — BaseCase acquisition	21,260
Goodwill addition — Analytica Laser acquisition	22,739
Goodwill addition — Other acquisitions	1,234
Foreign currency translation	(12,360)
Balance, December 31, 2018	**514,274**
Foreign currency translation	722
Balance, December 31, 2019	**$514,996**

9. Accrued Expenses

Accrued expenses consist of the following:

	DECEMBER 31,	
	2019	2018
Accrued compensation	$ 18,476	$ 11,423
Accrued severance	762	—
Product royalties and distributor fees	102	50
Legal and professional accruals	2,461	2,917
Local sales and VAT taxes	51	39
Interest payable	3,871	3,831
Income taxes payable	—	168
Deferred rent	1,066	561
Other	247	596
Total accrued expenses	$ 27,036	$ 19,585

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10. Long-Term Debt and Revolving Line of Credit

Effective August 14, 2017, the Company entered into a credit agreement with lenders for a $250,000 term loan ("variable interest term loan"). The credit agreement is a syndicated arrangement with various lenders providing the financing. The term loan is due to mature on August 14, 2024. The Company also entered into a $20,000 revolving line of credit with lenders. As of December 31, 2019 and 2018, available borrowings under the $20,000 revolving line of credit are reduced by a $120 standby letter of credit issued to a landlord in lieu of a security deposit. Both loan agreements are collateralized by substantially all U.S. assets and stock pledges for the non-U.S. subsidiaries and contain various financial and nonfinancial covenants. The Company was in compliance with all of these covenants as of December 31, 2019 and 2018. Borrowings under the term loan are subject to a variable interest rate at LIBOR plus a margin. The applicable margins are based on achieving certain levels of compliance with financial covenants. The effective interest rate was 5.89% and 6.30% for the years ended December 31, 2019 and 2018, respectively, for the term loan. As discussed previously, the Company entered into interest rate swap agreements that fixed the interest rate.

The Company and lenders entered into a restated and amended loan agreement on January 25, 2018 where an additional tranche of $25,000 was added to the term loan. The amortization schedule of the new tranche was made coterminous with the rest of the term loan. There were no other changes to the terms of the agreement.

The Company and lenders entered into a second restated and amended loan agreement on April 3, 2018 where an additional tranche of $40,000 was added to the term loan. The amortization schedule of the new tranche was made coterminous with the rest of the term loan. There were no other changes to the terms of the agreement.

Effective August 14, 2017, the Company entered into an unsecured credit agreement with another lender for a $100,000 term loan ("fixed rate term loan"). The loan bears interest at 8.25% which is payable in semi-annual installments on January and July 15 through August 14, 2025, at which time all outstanding principal and interest are due. Interest paid on the loan amounted to $8,365 and $7,654 for the years ended December 31, 2019 and 2018, respectively. Accrued interest payable on the loan amounting to $3,896 and $3,743 at December 31, 2019 and 2018, respectively, is included in accrued expenses.

Long-term debt consists of the following:

	DECEMBER 31,	
	2019	2018
Term loans	$ 408,170	$ 411,323
Revolving line of credit	—	5,000
Less: debt issuance costs	(6,839)	(8,375)
Total	401,331	407,948
Current portion of long-term debt	(4,210)	(3,153)
Long-term debt, net of current portion and debt issuance costs	$ 397,121	$ 404,795

The principal amount of long-term debt outstanding as of December 31, 2019, matures in the following years:

	2020	2021	2022	2023	2024	THEREAFTER	TOTAL
Maturities	$4,210	$3,153	$3,153	$3,153	$294,501	$ 100,000	$408,170

The variable interest term loan agreement dated August 14, 2017 requires the Company to make an annual mandatory prepayment as it relates to the Company's Excess Cash Flow calculation. For the year ended December 31, 2019, the Company was required to make a mandatory prepayment on the term loan of

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approximately $1,057 on or before April 29, 2020. The prepayment is included in the current portion of long-term debt on the Consolidated Balance Sheet at December 31, 2019.

The fair values of the Company's variable interest term loan and revolving line of credit are not significantly different than their carrying value because the interest rates on these instruments are subject to change with market interest rates. The fair value of the Company's fixed rate term loan is approximately $113,286 and $110,286 as of December 31, 2019 and 2018, respectively.

11. Commitments and Contingencies

Leases

The Company leases certain office facilities and equipment under non-cancelable operating and capital leases with remaining terms from one to eight years. The gross amounts of assets under capital leases were $663 and $656 at December 31, 2019 and 2018, respectively. The total accumulated amortization associated with equipment under capital leases was approximately $659 and $379 at December 31, 2019 and 2018, respectively. The related amortization expense is included in depreciation expense. Rent expense under the operating leases was $6,038 and $5,587 for the years ended December 31, 2019 and 2018, respectively.

Non-cancelable future minimum lease commitments as of December 31, 2019 are:

	OPERATING LEASES	CAPITAL LEASES
Year ending December 31,		
2020	$ 6,286	$ 56
2021	5,377	—
2022	4,128	—
2023	3,092	—
2024	2,497	—
Thereafter	4,390	—
Non-cancelable future minimum lease payments	25,770	56
Less amount representing interest	—	(8)
Net non-cancelable future minimum lease payments	$ 25,770	$ 48

12. Equity-Based Compensation

Class B Incentive Units

The Company, through its affiliation with its parent, entered into a 2017 Class B Profits Interest Unit Incentive Plan (the "Class B Plan") whereby it was authorized to issue a total of 6,253,196 Profit Interest Units ("Class B Units"), representing the right to share a portion of the value appreciation in the Company's parent. As of December 31, 2019, 5,436,299 of the Class B Units were issued and outstanding to the Company employees.

The majority of the grant agreements for the Class B Units are comprised of a 50% time-based vesting component which vests over a five-year period ("time-based"); upon vesting, the holder receives a right to a fractional portion of the profits and distributions of the parent in excess of a "participation threshold" determined in accordance with the parent's operating agreement. The remaining 50% is subject to performance-based vesting whereby the units will vest upon a change in control, initial public offering or a sponsor distribution if the investors have achieved specified levels of return on investment ("performance-based"). There are also certain grant agreements for the Class B Units that are entirely comprised of a time-based vesting component. The Class B Units are in a secondary position to the Class A units in the parent, in that in any event in

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which the equity is valued and paid out, holders of the Class B Units are only paid if an amount at least equal to the applicable participation threshold is first allocated to all of the outstanding classes of units under the parent's operating agreement. In addition, the parent has the right, but not the obligation to repurchase units at fair market value. During the years ended December 31, 2019 and 2018, the Company's parent repurchased 176,511 and 100,000 units at a value of $703 and $1,100 respectively. This repurchase was funded through dividends paid by the Company to its parent. These units do not have a maximum contractual life, as such these units do not expire.

The fair value of the Class B "time-based" units that vest solely upon continued employment is measured at the grant date and is recognized as expense over the employee's requisite service period. The expense related to the vesting of the units is recorded on the Company's books because the Company directly benefits from the services provided by unit holders. The grant date fair values were determined based on the following pricing models and inputs:

	DECEMBER 31,	
	2019	2018
Pricing model	Monte Carlo	Black-Scholes
Risk-free interest rate[1]	1.6%	2.2%
Expected stock price volatility[2]	55%	50%
Expected exercise term (in years)[3]	2.0	6.7

(1) Based on the U.S. Treasury constant maturity interest rate whose term is consistent with the expected exercise term of our incentive units

(2) In projecting expected stock price volatility, we consider the historical volatility of the stock prices of comparable public companies.

(3) The Company estimates the expected life of incentive units based upon historical experience and the timing of a potential liquidity event.

Equity-based compensation expense related to the Class B "time-based" units was $1,691 and $1,711 for the years ended December 31, 2019 and 2018, respectively. Equity-based compensation expense has been recorded within costs of revenues, sales and marketing, research and development and general and administrative expenses within the Consolidated Statements of Operations and Comprehensive Loss.

	DECEMBER 31,	
	2019	2018
Cost of revenues	$ 156	$ 138
Sales and marketing	110	95
Research and development	121	121
General and administrative expenses	1,304	1,357
Total	$1,691	$ 1,711

The "performance-based" units were not probable of vesting at this time; as such, no expense was recorded for these units.

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A summary of the Class B Units activity for the period is presented below (dollar amounts are not in thousands):

	UNITS	WEIGHTED AVERAGE GRANT-DATE FAIR VALUE PER UNIT
Outstanding, January 1, 2018	4,424,413	$ 3.27
Granted	682,169	3.27
Forfeited	(565,632)	3.27
Outstanding, December 31, 2018	4,540,950	3.30
Granted	2,501,290	3.82
Exercised	(176,511)	3.55
Forfeited	(1,429,430)	3.19
Outstanding, December 31, 2019	5,436,299	3.53
Vested, December 31, 2019	952,166	3.60
Unvested, December 31, 2019	4,484,133	$ 3.51

A summary of the weighted-average exercise price is shown below:

Outstanding, January 1, 2019	$ 9.76
Granted	12.86
Exercised	10.00
Forfeited	10.03
Outstanding, December 31, 2019	$ 11.43

Outstanding units represents the total of vested units and those expected to vest, including “time-based” awards for which the requisite service period has not yet been rendered. Of those units that were vested and exercisable at December 31, 2019, the weighted-average exercise price was $10.16.

The aggregate intrinsic value of incentive units (the amount by which the market price of the stock on the date of exercise exceeded the exercise price of the unit) exercised during 2019 and 2018 was $1,500 and $0, respectively. The aggregate intrinsic value of shares outstanding, vested and exercisable at December 31, 2019 and 2018 was $38,440 and $5,499, respectively. The Company did not realize a tax benefit from share-based compensation expense in 2019 or 2018.

The total fair value of shares vested and exercisable during 2019 and 2018 was $1,872 and $1,509, respectively. As of December 31, 2019, there was total unrecognized compensation costs related to the units of $7,845 that will be recognized over a weighted-average period of 2.38 years.

13. Segment data

Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision maker (“CODM”), in deciding how to allocate resources and in assessing performance.

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The Company has determined that its chief executive officer ("CEO") is its CODM. The Company manages its operations as a single segment for the purpose of assessing and making operating decisions. The Company's CODM allocates resources and assesses performance based upon financial information at the consolidated level. Since the Company operates in one operating segment, all required financial segment information can be found in the consolidated financial statements.

The following table summarizes revenue by geographic area for the years ended December 31, 2019 and 2018:

	DECEMBER 31,	
	2019	2018
Revenue[1]:		
United States	$ 152,368	$ 116,765
EMEA	40,299	34,259
Others	15,844	12,695
Total	$ 208,511	$ 163,719

(1) Revenue is attributable to the countries based on the location of the customer

The following table summarizes property, plant and equipment, net by geographic area as of December 31, 2019 and 2018:

	DECEMBER 31,	
	2019	2018
Property, plant and equipment, net:		
United States	$2,825	$ 2,721
EMEA	1,243	1,507
Others	555	1,173
Total	$4,623	$ 5,401

14. Income Taxes

The components of loss before income taxes were as follows:

	DECEMBER 31,	
	2019	2018
Domestic	$ (12,995)	$ (35,318)
Foreign	3,844	2,757
Total	$ (9,151)	$ (32,561)

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The components of income tax expense (benefit) were as follows:

	DECEMBER 31,	
	2019	2018
Current tax expense (benefit)		
Federal	$ 483	$ (300)
State and local	1,692	312
Foreign	4,303	4,233
Total current	6,478	4,245
Deferred tax expense (benefit)		
Federal	3,137	(3,207)
State and local	(5,431)	(603)
Foreign	(4,409)	262
Total deferred	(6,703)	(3,548)
Total (benefit) provision	$ (225)	$ 697

The effective income tax rate was 2.46% and (2.14)% for the years ended December 31, 2019 and 2018, respectively. The primary reconciling items between the statutory income tax rate of 21% and the effective income tax rate were as a result of the following:

	DECEMBER 31, 2019		DECEMBER 31, 2018	
Tax at U.S. federal statutory rate	$ (1,919)	21.00%	$ (6,833)	21.00%
State taxes, net of federal benefit	(3,852)	42.14%	(357)	1.10%
Foreign rate differential	1,654	(18.09)%	5,170	(15.89)%
Permanent items	806	(8.82)%	1,296	(3.99)%
Tax credits	(4,264)	46.65%	(2,625)	8.07%
Other adjustments	813	(8.90)%	548	(1.68)%
Return to provision adjustments	(139)	1.52%	—	0.00%
Valuation allowance	6,676	(73.04)%	3,498	(10.75)%
Effective tax rate	$ (225)	2.46%	$ 697	(2.14)%

A portion of the Company's income was attributable to Madeira, Portugal, which qualified for special tax programs authorized by the European Union. The Company was subject to Madeira's income tax rate of 0%, 4% and 5% for the period of 2008-2011, 2012, and 2013-2020, respectively.

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The tax effects of temporary differences that gave rise to deferred tax assets and liabilities are summarized as follows:

	DECEMBER 31,	
	2019	2018
Deferred tax assets		
Accounts receivable	$ 23	$ 42
Accrued compensation	2,868	1,061
Accrued expenses	810	251
Net operating loss carryforwards	5,807	8,778
R&D credit carryforward	4,005	3,859
Foreign tax credits	8,513	5,154
Interest rate hedge	520	—
Other assets	242	479
Interest expense	5,406	3,158
Deferred revenue	—	305
Total gross deferred tax asset	28,194	23,087
Less: Valuation allowance	(20,546)	(13,107)
Net deferred tax asset	7,648	9,980
Deferred tax liabilities		
Property, equipment, and other long-lived assets	(307)	(108)
Goodwill and intangible assets	(85,664)	(94,065)
Prepaid expenses	(786)	(637)
Deferred revenue	(2,218)	—
Total gross deferred tax liability	(88,975)	(94,810)
Net deferred tax liability	$ (81,327)	$ (84,830)

The net change in the total valuation allowance resulted in an increase of $7,439 and $3,325 in 2019 and 2018, respectively. The valuation allowance was determined separately for each jurisdiction. A U.S. valuation allowance was required against the Section 163(j) interest expense limitation carryforward, foreign tax credit carryforward, and certain R&D credits. A valuation allowance was also required for a portion of federal net operating losses due to limitations pursuant to Internal Revenue Code Section 382. At the foreign subsidiaries, the valuation allowance at December 31, 2019 and 2018 was primarily related to foreign net operating losses and investment tax credits that, in the judgment of management, are not more likely than not to be realized.

In assessing the realizability of deferred tax assets, management considered whether it was more likely than not that some portion or all of the deferred tax assets would not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible and carryforward attributes can be utilized. Management considered the reversal of deferred tax liabilities in making their assessment. Management believed it was more likely than not that the Company would realize the benefits of the deferred tax assets, net of the existing valuation allowance, at December 31, 2019 and 2018.

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At December 31, 2019, the Company had net operating loss carryforwards for federal income tax purposes of approximately $5,540, the majority of which would expire if unused in years 2024 through 2036. The Company had net operating loss carryforwards for state income tax purposes of approximately $2,952, which would expire if unused in years 2028 through 2038. The Company had foreign net operating loss carryforwards of $18,610, which would expire if unused starting in 2023.

At December 31, 2018, the Company had net operating loss carryforwards for federal income tax purposes of approximately $19,422, which would expire if unused in years 2023 through 2037. The Company had net operating loss carryforwards for state income tax purposes of approximately $11,839, which would expire if unused in years 2020 through 2038. The Company had foreign net operating loss carryforwards of $44,723, which would expire if unused starting in 2019.

The Company had net operating losses and tax credits that were subject to limitation under Internal Revenue Code Section 382 and Section 383 due to changes in ownership. The Company analyzed the realizability of these tax attributes carried forward and recorded deferred tax assets for the attributes that meet the more-likely-than-not realizability threshold.

At December 31, 2019, the Company had $2,202 of federal research and development credits that would expire if unused in years 2020 through 2039 and has $811 of California research and development credits with an indefinite carryover period. The Company also had foreign tax credits of $8,513 that would start to expire in 2025, and Canadian investment tax credits of $1,832, which would expire between 2030 and 2036.

At December 31, 2018, the Company had $1,785 of federal research and development credits that would expire if unused in years 2020 through 2039 and $837 of California research and development credits that would expire ratably between 2019 and 2038. The Company also had foreign tax credits of $5,154 that would begin to expire in 2024, and Canadian research and development credits of $2,003, which would expire between 2028 and 2034.

Foreign undistributed earnings were considered permanently reinvested, therefore, no provision for U.S. income taxes was accrued as of December 31, 2019 and 2018, with the exception of the withholding tax liability of $168 on the potential repatriation from Certara Canada Corporation.

The Company assessed its uncertain tax positions and determined that a liability of $690 and $592 was required to be recorded for uncertain tax positions as of December 31, 2019 and 2018, respectively. Uncertain tax positions relate solely to federal and state R&D credits. The Company's policy is to recognize interest and penalties as a component of the provision for income taxes. For December 31, 2019 and 2018, there were no interest or penalties recorded. The Company does not anticipate any significant changes to its uncertain tax positions during the next twelve months.

A reconciliation of the beginning and ending balance of unrecognized tax benefits is as follows:

Balance at December 31, 2017	**$ 460**
Additions for tax positions related to the current year	50
Additions for tax positions of prior years	82
Balance at December 31, 2018	**592**
Additions for tax positions related to the current year	68
Additions for tax positions of prior years	30
Balance at December 31, 2019	**$ 690**

The uncertain tax positions, exclusive of interest and penalties, were $690 and $592 as of December 31, 2019 and 2018, respectively, which also represents potential tax benefits that if recognized, would impact the effective tax rate.

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Audits for federal income tax returns are ongoing for the tax years ended December 31, 2017 and December 31, 2016. Additionally, the Internal Revenue Service can audit the NOLs generated in respective years in the years that the NOLs are utilized. State income tax returns are generally subject to examination for a period of three to six years after the filing of the respective tax return. The state impact of any federal changes remains subject to examination by various states for a period of up to one year after formal notification to the states. Foreign income tax returns are generally subject to examination based on the tax laws of the respective jurisdictions.

The Company is subject to tax on Global Intangible Low-Taxed Income ("GILTI") and has elected to account for GILTI as a current period expense.

On March 27, 2020, the Coronavirus Aid, Relief, and Economic Security ("CARES") Act was enacted and implements certain tax legislation, including modifying the carryback period and limitation on the utilization of net operating losses and temporarily increasing the interest expense limitation pursuant to Section 163(j). The Company will evaluate the impact of the CARES Act on its financial statements in subsequent periods.

15. Net Loss per Share

Basic and diluted loss per share is computed by dividing net loss by the weighted-average shares outstanding:

	DECEMBER 31,	
	2019	2018
Numerator:		
Net loss	$ (8,926)	$ (33,258)
Denominator:		
Weighted average common shares outstanding, basic and diluted	100	100
Net loss per common share, basic and diluted	$ (89,260)	$ (332,580)

16. Subsequent Events

In December 2019 and early 2020, the coronavirus was reported to have surfaced in China. The spread of this virus globally in early 2020 has caused business disruption domestically in the United States, the area in which the Company primarily operates. While the disruption is currently expected to be temporary, there is considerable uncertainty around the duration of this uncertainty. Therefore, while the Company expects that this matter may impact the Company's financial condition, results of operations, or cash flows, the extent of the financial impact and duration cannot be reasonably estimated at this time. On March 19, 2020, the Company borrowed $19,880 on the revolving credit facility as a precautionary measure. On July 15, 2020, the Company paid $20,000, using cash on hand, towards the fixed rate term loan bearing a fixed interest rate of 8.25%. In September 2020, the Company paid off the outstanding balance of $19,880 on the revolving credit facility.

CERTARA, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED BALANCE SHEETS (UNAUDITED)

(IN THOUSANDS, EXCEPT PER COMMON SHARE AND SHARE DATA)	SEPTEMBER 30, 2020	DECEMBER 31, 2019
Assets		
Current assets:		
Cash and cash equivalents	$ 29,937	$ 29,256
Accounts receivable, net of allowance for doubtful accounts of $216 and $185, respectively	48,830	49,642
Restricted cash	1,812	506
Prepaid expenses and other current assets	12,219	8,119
Total current assets	92,798	87,523
Other assets:		
Property and equipment, net	4,355	4,623
Long-term deposits	1,140	1,096
Goodwill	515,587	514,996
Intangible assets, net of accumulated amortization of $115,595 and $85,925, respectively	404,255	427,998
Deferred offering costs	1,430	—
Deferred income taxes	815	833
Total assets	$ 1,020,380	$ 1,037,069
Liabilities and stockholder's equity		
Current liabilities:		
Accounts payable	$ 5,436	$ 4,917
Accrued expenses	23,888	27,036
Due to affiliate	237	—
Current portion of deferred revenue	24,900	26,240
Current portion of interest rate swap liability	2,475	551
Current portion of long-term debt	3,153	4,210
Current portion of capital lease obligations	252	48
Total current liabilities	60,341	63,002
Long-term liabilities:		
Capital lease obligations, net of current portion	399	—
Deferred revenue, net of current portion	885	1,137
Deferred income taxes	83,485	82,160
Long-term portion of interest rate swap liability	1,695	1,601
Long-term debt, net of current portion and debt discount	376,037	397,121
Total liabilities	522,842	545,021
Commitments and contingencies (Note 6)		
Stockholder's equity		
Common shares, 0.01 par value, 1,000 shares authorized, 100 shares issued and outstanding	—	—
Additional paid-in capital	511,943	510,486
Accumulated deficit	(7,891)	(12,941)
Accumulated other comprehensive loss	(6,514)	(5,497)
Total stockholder's equity	497,538	492,048
Total liabilities and stockholder's equity	$ 1,020,380	$ 1,037,069

The accompanying notes are an integral part of the condensed consolidated financial statements

CERTARA, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME (LOSS)

(UNAUDITED)

(IN THOUSANDS, EXCEPT PER COMMON SHARE AND SHARE DATA)	NINE MONTHS ENDED SEPTEMBER 30, 2020	2019
Revenues:		
Software	$ 55,925	$ 51,453
Services	122,964	103,201
Total revenues	178,889	154,654
Cost of revenues:		
Software	9,806	8,786
Services	56,054	49,031
Total cost of revenues	65,860	57,817
Operating expenses:		
Sales and marketing	8,773	7,946
Research and development	9,139	8,651
General and administrative	36,125	35,630
Intangible asset amortization	28,056	26,908
Depreciation and amortization expense	1,836	2,140
Total operating expenses	83,929	81,275
Income from operations	29,100	15,562
Other expenses:		
Interest expense	(19,810)	(21,011)
Miscellaneous, net	456	(163)
Total other expenses	(19,354)	(21,174)
Income (loss) before income taxes	9,746	(5,612)
Provision for (benefit) from income taxes	4,696	(2,701)
Net income (loss)	5,050	(2,911)
Other comprehensive income (loss)		
Foreign currency translation adjustment	513	(3,383)
Change in fair value from interest rate swap, net of taxes of $488 and $607, respectively	(1,530)	(4,441)
Total other comprehensive loss	(1,017)	(7,824)
Comprehensive income (loss)	$ 4,033	$ (10,735)
Net income (loss) per common shares — basic and diluted	$ 50,500	$ (29,110)
Basic and diluted weighted average common shares outstanding	100	100

The accompanying notes are an integral part of the condensed consolidated financial statements

CERTARA, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDER'S EQUITY (UNAUDITED)

(IN THOUSANDS, EXCEPT SHARE DATA)	COMMON STOCK SHARES	COMMON STOCK AMOUNT	ADDITIONAL PAID-IN CAPITAL	ACCUMULATED DEFICIT	ACCUMULATED OTHER COMPREHENSIVE LOSS	TOTAL STOCKHOLDER'S EQUITY
Balance as of December 31, 2018	100	$—	$ 508,848	$ (14,432)	$ (1,647)	$ 492,769
Cumulative effect adjustment upon adoption of Topic 606	—	—	—	10,417	—	10,417
Equity compensation	—	—	1,141	—	—	1,141
Repurchase of Parent Class B units	—	—	(703)	—	—	(703)
Capital contribution	—	—	650	—	—	650
Change in fair value of interest rate swap, net of tax of $607	—	—	—	—	(4,441)	(4,441)
Net loss	—	—	—	(2,911)	—	(2,911)
Foreign currency translation adjustment	—	—	—	—	(3,383)	(3,383)
Balance as of September 30, 2019	100	$—	$ 509,936	$ (6,926)	$ (9,471)	$ 493,539

The accompanying notes are an integral part of the condensed consolidated financial statements

CERTARA, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDER'S EQUITY (UNAUDITED)

(IN THOUSANDS, EXCEPT SHARE DATA)	COMMON STOCK SHARES	COMMON STOCK AMOUNT	ADDITIONAL PAID-IN CAPITAL	ACCUMULATED DEFICIT	ACCUMULATED OTHER COMPREHENSIVE LOSS	TOTAL STOCKHOLDER'S EQUITY
Balance as of December 31, 2019	100	$—	$ 510,486	$ (12,941)	$ (5,497)	$ 492,048
Equity compensation	—	—	2,286	—	—	2,286
Repurchase of Parent Class B units	—	—	(1,079)	—	—	(1,079)
Capital contribution	—	—	250			250
Change in fair value of interest rate swap, net of tax of $488	—	—	—	—	(1,530)	(1,530)
Net income	—	—	—	5,050	—	5,050
Foreign currency translation adjustment	—	—	—	—	513	513
Balance as of September 30, 2020	100	$—	$ 511,943	$ (7,891)	$ (6,514)	$ 497,538

The accompanying notes are an integral part of the condensed consolidated financial statements

CERTARA, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (UNAUDITED)

(IN THOUSANDS)	NINE MONTHS ENDED SEPTEMBER 30, 2020	2019
Cash flows from operating activities:		
Net income (loss)	$ 5,050	$ (2,911)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Depreciation and amortization of property and equipment	1,836	2,140
Amortization of intangible assets	29,804	28,505
Amortization of debt issuance costs	1,142	1,536
Provision for doubtful accounts	31	—
Loss on retirement of assets	9	10
Equity compensation expense	2,286	1,141
Deferred income taxes	1,263	(6,605)
Changes in assets and liabilities:		
Accounts receivable	1,565	2,416
Prepaid expenses and other assets	(8,610)	(1,716)
Accounts payable and accrued expenses	(1,658)	(2,004)
Deferred revenue	(589)	(6,729)
Net cash provided by operating activities	32,129	15,783
Cash flows from investing activities:		
Capital expenditures	(782)	(1,335)
Capitalized software development costs	(5,752)	(5,531)
Business acquisitions, net of cash acquired	(675)	—
Net cash used in investing activities	(7,209)	(6,866)
Cash flows from financing activities:		
Capital contributions	250	650
Unit repurchase	(1,079)	(703)
Proceeds from borrowings on line of credit	19,880	—
Proceeds from borrowings from affiliate	237	—
Payments on long-term debt and capital lease obligations	(23,511)	(2,587)
Payment on line of credit	(19,880)	(5,000)
Net cash used in financing activities	(24,103)	(7,640)
Effect due to foreign exchange rate changes on cash, cash equivalents, and restricted cash	1,170	1,546
Net increase in cash, cash equivalents, and restricted cash	1,987	2,823
Cash, cash equivalents, and restricted cash, at beginning of period	29,762	12,187
Cash, cash equivalents, and restricted cash, at end of period	$ 31,749	$ 15,010
Supplemental disclosures of cash flow information		
Cash paid for interest	$ 21,077	$ 21,407
Cash paid for taxes	$ 6,675	$ 3,149
Supplemental schedule of noncash investing and financing activities		
Capital leases	$ 831	$ —
Deferred offering costs	$ 1,430	$ —

The accompanying notes are an integral part of the condensed consolidated financial statements

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
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1. Description of Business

Certara, Inc. and its wholly-owned subsidiaries (together, the "Company") deliver software products and technology-enabled services to customers to efficiently carry out and realize the full benefits of biosimulation in drug discovery, preclinincal and clinical research, regulatory submissions and market access. The Company is a global leader in biosimulation, and the Company's biosimulation software and technology-enabled services help optimize, streamline, or even waive certain clinical trials to accelerate programs, reduce costs, and increase the probability of success. The Company's regulatory science and market access software and services are underpinned by technologies such as regulatory submissions software, natural language processing, and Bayesian analytics. When combined, these solutions allow the Company to offer customers end-to-end support across the entire product life cycle. On October 1, 2020, the Company amended its certificate of incorporation of EQT Avatar Topco, Inc. to change the name of the Company to Certara, Inc.

The Company has operations in the United States, Canada, Spain, Luxembourg, Portugal, United Kingdom, Germany, France, Netherlands, Denmark, Switzerland, Italy, Poland, Japan, Philippines, India, and Australia.

2. Summary of Significant Accounting Policies

There have been no changes other than what is discussed herein to the Company's significant accounting policies as compared to the significant accounting policies described in Note 2 to the Company's consolidated financial statements as of and for the year ended December 31, 2019. These unaudited condensed consolidated financial statements should be read in conjunction with the consolidated financial statements and related notes as of and for the year ended December 31, 2019.

(a) Basis of Presentation and Use of Estimates

The preparation of condensed consolidated financial statements in conformity with U.S. generally accepted accounting principles ("U.S. GAAP") requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, disclosure of contingent assets and liabilities at the date of the condensed consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Significant estimates include, among other estimates, the determination of fair values and useful lives of long-lived assets as well as intangible assets, goodwill, allowance for doubtful accounts receivable, recoverability of deferred tax assets, recognition of deferred revenue (including at the date of business combinations), value of interest rate swap agreements, determination of fair value of equity-based awards and assumptions used in testing for impairment of long-lived assets. Actual results could differ from those estimates, and such differences may be material to the condensed consolidated financial statements.

The Company is an Emerging Growth Company, as defined in the Jumpstart Our Business Startups Act of 2012 (the "JOBS Act"). Under the JOBS Act, Emerging Growth Companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until those standards apply to private companies. The Company has elected to use this extended transition period for complying with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date that it (i) is no longer an Emerging Growth Company or (ii) it affirmatively and irrevocably opts out of the extended transition period provided in the JOBS Act. As a result, these condensed consolidated financial statements may not be comparable to companies that comply with the new or revised accounting pronouncements as of public company effective dates. The adoption dates discussed below reflect this election.

(b) Unaudited Interim Financial Statements

The accompanying condensed consolidated balance sheet as of September 30, 2020, the condensed consolidated statements of operations and comprehensive income (loss) for the nine months ended September 30, 2020 and 2019, the condensed consolidated statements of stockholder's equity for the nine months ended September 30, 2020 and 2019, the condensed consolidated statements of cash flows for the nine months ended September 30, 2020 and 2019, and the related interim disclosures are unaudited.

CERTARA, INC. AND SUBSIDIARIES
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In management's opinion, the accompanying unaudited condensed financial statements have been prepared in accordance with U.S. GAAP for interim financial information. These unaudited condensed consolidated financial statements include all adjustments necessary, consisting of only normal recurring adjustments, to fairly state the financial position and the results of the Company's operations and cash flows for interim periods in accordance with U.S. GAAP. Interim period results are not necessarily indicative of results of operations or cash flows for a full year or any subsequent interim period. The accompanying condensed consolidated financial statements should be read in conjunction with the Company's 2019 and 2018 audited consolidated financial statements and notes thereto.

(c) Recently Adopted Accounting Pronouncements

In August 2018, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2018-15, "Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement that is a Service Contract", which included updated guidance on ASC 350-40, "Intangibles — Goodwill and Other — Internal-Use Software". The new guidance requires a customer in a cloud computing arrangement that is a service contract to follow the internal-use software guidance in ASC 350-40 to determine which implementation costs to capitalize as assets or expense as incurred. ASU 2018-15 is effective for calendar-year public business entities in 2020. For all other calendar-year entities, it is effective for annual periods beginning in 2021 and interim periods in 2022. Early adoption is permitted. The Company has adopted ASU 2018-15 during the year beginning January 1, 2020. The adoption of ASU 2018-15 did not materially impact the condensed consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-13, "Changes to Disclosure Requirements for Fair Value Measurements (Topic 820)", which improved the effectiveness of disclosure requirements for recurring and nonrecurring fair value measurements. The standard removes, modifies, and adds certain disclosure requirements. The amendments in this Update are effective for all entities for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. Early adoption is permitted. The Company has adopted ASU 2018-13 during the year beginning January 1, 2020. The adoption of ASU 2018-13 did not materially impact the condensed consolidated financial statements.

(d) Principles of Consolidation

The accompanying condensed consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. All intercompany balances and transactions have been eliminated in consolidation.

(e) Cash, Cash Equivalents and Restricted Cash

Cash equivalents include highly liquid investments with maturities of three months or less from the date purchased.

Restricted cash represents cash that is used as collateral to support an unsecured Company credit card program through a major bank and a grant funding. The restricted cash balance was $1,812 and $506 at September 30, 2020 and December 31, 2019, respectively.

The following table provides a reconciliation of cash and cash equivalents and restricted cash to the amounts presented in the condensed consolidated statements of cash flows:

	SEPTEMBER 30, 2020	DECEMBER 31, 2019
Cash and cash equivalents	$ 29,937	$ 29,256
Restricted cash, current	1,812	506
Total cash and cash equivalents, and restricted cash	$ 31,749	$ 29,762

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
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(f) Deferred Offering Costs

The Company capitalizes certain legal, accounting and other third-party fees that are directly associated with in-process equity financing as deferred offering costs until such financings are consummated. After consummation of the equity financing, these costs will be reclassified to stockholder's equity as a reduction of additional paid-in capital generated as a result of the offering. Should the equity financing for which those costs relate no longer be considered probable of being consummated, all deferred offering costs will be charged to operating expenses in the condensed consolidated statements of operations and comprehensive income (loss) at such time. As of September 30, 2020, $1,430 of deferred offering costs are capitalize in the condensed consolidated balance sheet.

(g) Derivative Instruments

The Company has an interest rate swap agreement that is designated as a cash flow hedge of interest rate risk for a notional amount of $217,500 that fixed the interest rate at 1.8523%. This interest rate swap has a maturity date of November 30, 2020. On May 22, 2019, the Company entered into a second interest rate swap agreement, which is effective upon the maturity of the interest rate swap agreement, of November 30, 2020. This second interest rate swap was also designated as a cash flow hedge of interest rate risk for a notional amount of $230,000 with an effective date as of November 30, 2020 that fixed the interest rate of 2.1284%, non-inclusive of the fixed credit spread through May 31, 2022. The Company recorded the fair value of its interest rate swaps in the amount of $4,170 and $2,152, as a derivative liability as of September 30, 2020 and December 31, 2019, respectively, in its condensed consolidated balance sheets. The Company's interest rate swaps qualify for hedge accounting. The fair value of the interest rate swaps is recognized in the condensed consolidated balance sheets and the changes in the fair value of the derivatives are recognized in other comprehensive loss.

The following table sets forth the liability that is measured at fair value on a recurring basis by the levels in the fair value hierarchy at September 30, 2020:

	LEVEL 1	LEVEL 2	LEVEL 3	TOTAL
Liability				
Interest rate swap liability	$ —	$ 4,170	$ —	$ 4,170
Total	$ —	$ 4,170	$ —	$ 4,170

The following table sets forth the liability that is measured at fair value on a recurring basis by the levels in the fair value hierarchy at December 31, 2019:

	LEVEL 1	LEVEL 2	LEVEL 3	TOTAL
Liability				
Interest rate swap liability	$ —	$ 2,152	$ —	$ 2,152
Total	$ —	$ 2,152	$ —	$ 2,152

The net amount of deferred gains/(losses) related to derivative instruments designated as cash flow hedges that is expected to be reclassified from Accumulated other comprehensive loss into earnings over the next twelve months is $1,695.

(h) Revenue Recognition ASC 606

Revenue is recognized upon transfer of control of promised products or services to customers in an amount that reflects the consideration to which the Company expects to be entitled in exchange for promised goods or services. The Company's revenue consists of fees for perpetual and term licenses for the Company's software products, post-contract customer support (referred to as maintenance), software as a service ("SaaS") and

(IN THOUSANDS, EXCEPT PER SHARE, SHARE AND UNIT DATA)

professional services including training and other revenue. For contracts with multiple performance obligations, the Company allocates the transaction price of the contract to each performance obligation on a relative standalone selling price basis. The delivery of a particular type of software and each of the user licenses would be one performance obligation. However, any training, implementation, or support and maintenance promises as part of the software license agreement would be considered separate performance obligations, as those promises are distinct and separately identifiable from the software licenses. The payment terms in these arrangements are sufficiently short such that there is no significant financing component to the transaction.

The Company typically recognizes license revenue at a point in time upon delivering the applicable license. The revenue related to the support and maintenance performance obligation will be recognized on an over time basis using time elapsed methodology. The revenue related to software training and software implementation performance will be recognized at the completion of the service.

Contract Balances

The timing of revenue recognition, billings and cash collections results in billed accounts receivable, unbilled receivables (contract assets), and customer advances and deposits (deferred revenue) on the condensed consolidated balance sheets. Amounts are billed as work progresses in accordance with agreed-upon contractual terms, either at periodic intervals (e.g., quarterly or monthly) or upon achievement of contractual milestones.

Contract assets relate to the Company's rights to consideration for performance obligations satisfied but not billed at the reporting date on contracts (i.e., unbilled revenue, a component of accounts receivable in the condensed consolidated balance sheets). Contract assets are billed and transferred to customer accounts receivable when the rights become unconditional. The Company typically invoices customers for term licenses, subscriptions, maintenance and support fees in advance with payment due before the start of the subscription term, ranging from one to three years. The Company records the amounts collected in advance of the satisfaction of performance obligations, usually over time, as a contract liability or deferred revenue. Invoice amounts for non-cancelable services starting in future periods are included in contract assets and deferred revenue. The portion of deferred revenue that will be recognized within twelve months is recorded as current deferred revenue, and the remaining portion is recorded as non-current deferred revenue in the condensed consolidated balance sheets.

The unsatisfied performance obligations as of September 30, 2020 was approximately $70,000.

Sources and Timing of Revenue

The Company's performance obligations are satisfied either over time or at a point in time. The following table presents the Company's revenue by timing of revenue recognition to understand the risks of timing of transfer of control and cash flows:

	NINE MONTHS ENDED SEPTEMBER 30,	
	2020	2019
Software licenses transferred at a point in time	$ 28,652	$ 25,168
Software licenses transferred over time	27,273	26,285
Service revenues earned over time	122,964	103,201
Total	$ 178,889	$ 154,654

(i) Net Income (Loss) per Share

Basic net income (loss) per common share is computed by dividing the net income (loss) by the weighted-average number of shares outstanding during the reporting period, without consideration for potentially dilutive securities. Diluted net income (loss) per share is computed by dividing the net income (loss) attributable to

stockholders by the weighted-average number of shares and potentially dilutive securities outstanding during the period. The Company had no potentially dilutive securities outstanding as of September 30, 2020 and 2019.

(j) Coronavirus

In December 2019 and early 2020, the coronavirus was reported to have surfaced in China. The spread of this virus globally in early 2020 has caused business disruption domestically in the United States, the area in which the Company primarily operates. While the disruption is currently expected to be temporary, there is considerable uncertainty around the duration of this uncertainty. Therefore, while the Company expects that this matter may impact the Company's financial condition, results of operations, or cash flows, the extent of the financial impact and duration cannot be reasonably estimated at this time.

3. Concentrations of Credit Risk

Financial instruments that potentially subject the Company to concentrations of credit risk have consisted principally of cash and cash equivalent investments and trade receivables. The Company invests available cash in bank deposits, investment-grade securities, and short-term interest-producing investments, including government obligations and other money market instruments. At September 30, 2020 and December 31, 2019, the investments were bank deposits and overnight sweep accounts. The Company has adopted credit policies and standards to evaluate the risk associated with sales that require collateral, such as letters of credit or bank guarantees, whenever deemed necessary. Management believes that any risk of loss is significantly reduced due to the nature of the customers and distributors with which the Company does business.

As of September 30, 2020 and December 31, 2019, no customer accounted for more than 10% of the Company's accounts receivable or revenues during the periods presented.

4. Long-Term Debt and Revolving Line of Credit

Effective August 14, 2017, the Company entered into a credit agreement with lenders for a $250,000 term loan ("variable interest term loan"). The credit agreement is a syndicated arrangement with various lenders providing the financing. The term loan is due to mature on August 14, 2024. The Company also entered into a $20,000 revolving line of credit with lenders. As of September 30, 2020 and December 31, 2019, available borrowings under the $20,000 revolving line of credit are reduced by a $120 standby letter of credit issued to a landlord in lieu of a security deposit in addition to any outstanding borrowings. Both loan agreements are collateralized by substantially all U.S. assets and stock pledges for the non-U.S. subsidiaries and contain various financial and nonfinancial covenants. The Company was in compliance with all of these covenants as of September 30, 2020 and December 31, 2019. Borrowings under the term loan are subject to a variable interest rate at LIBOR plus a margin. The applicable margins are based on achieving certain levels of compliance with financial covenants. The effective interest rate was 4.79% and 5.89% for the nine months ended September 30, 2020 and year ended December 31, 2019, respectively, for the term loan. As discussed previously, the Company entered into interest rate swap agreements that fixed the interest rate.

The Company and lenders entered into a restated and amended loan agreement on January 25, 2018 where an additional tranche of $25,000 was added to the term loan. The amortization schedule of the new tranche was made coterminous with the rest of the term loan. There were no other changes to the terms of the agreement.

The Company and lenders entered into a second restated and amended loan agreement on April 3, 2018 where an additional tranche of $40,000 was added to the term loan. The amortization schedule of the new tranche was made coterminous with the rest of the term loan. There were no other changes to the terms of the agreement.

Effective August 14, 2017, the Company, entered into an unsecured credit agreement with another lender for a $100,000 term loan ("fixed rate term loan"). The loan bears interest at 8.25% which is payable in

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semi-annual installments on January and July 15 through August 14, 2025, at which time all outstanding principal and interest are due. Interest paid on the loan amounted to $8,388 and $8,365 for the nine months ended September 30, 2020 and 2019, respectively, and $8,365 for the year ended December 31, 2019. Accrued interest payable on the loan amounting to $1,430 and $3,896 at September 30, 2020 and December 31, 2019, respectively, is included in accrued expenses. On July 15, 2020, the Company made a $20,000 prepayment on the loan, which reduced the amount outstanding to $80,000.

Long-term debt consists of the following:

	SEPTEMBER 30, 2020	DECEMBER 31, 2019
Term loans	$ 384,888	$ 408,170
Revolving line of credit	—	—
Less: debt issuance costs	(5,698)	(6,839)
Total	379,190	401,331
Current portion of long-term debt	(3,153)	(4,210)
Long-term debt, net of current portion and debt issuance costs	$ 376,037	$ 397,121

The principal amount of long-term debt outstanding as of September 30, 2020, matures in the following years:

	2020	2021	2022	2023	2024	THEREAFTER	TOTAL
Maturities	$ 789	$ 3,153	$ 3,153	$ 3,153	$294,640	$ 80,000	$384,888

The variable interest term loan agreement dated August 14, 2017 requires the Company to make an annual mandatory prepayment as it relates to the Company's Excess Cash Flow calculation. For the year ended December 31, 2019, the Company was required to make a mandatory prepayment on the term loan of approximately $1,057 on or before April 29, 2020. The prepayment is included in the current portion of long-term debt on the condensed consolidated balance sheet at December 31, 2019.

On March 19, 2020, the Company borrowed $19,880 on the revolving credit facility as a precautionary measure during the COVID-19 pandemic. As of September 30, 2020, the Company has repaid the outstanding borrowings on the revolving credit facility.

5. Related Party

On September 18, 2020, a limited partnership, an affiliate and limited partner of the Company's parent, entered into an unsecured, interest free loan agreement with the Company for $237. The loan has a maturity date of September 18, 2021.

6. Commitments and Contingencies

Leases

The Company leases certain office facilities and equipment under non-cancelable operating and capital leases with remaining terms from one to eight years. The gross amounts of assets under capital leases were $1,489 and $663 at September 30, 2020 and December 31, 2019, respectively. The total accumulated amortization associated with equipment under capital leases was $866 and $659 at September 30, 2020 and December 31, 2019, respectively. The related amortization expense is included in depreciation expense. Rent expense under the operating leases was $4,929 and $4,644 for the nine months ended September 30, 2020 and 2019, respectively.

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Non-cancelable future minimum lease commitments as of September 30, 2020 are:

	OPERATING LEASE	CAPITAL LEASES
Remainder of 2020	$ 1,547	$ 76
2021	5,779	304
2022	4,538	304
2023	3,054	25
2024	2,459	—
Thereafter	4,287	—
Non-cancelable future minimum lease payments	21,664	709
Less amount representing interest	—	(58)
Net non-cancelable future minimum lease payments	$ 21,664	651
Current portion of net non-cancelable future minimum lease payments		252
Net long-term non-cancelable future minimum lease payments		$ 399

7. Equity-Based Compensation

Class B Incentive Units

The Company, through its affiliation with its parent, entered into a 2017 Class B Profits Interest Unit Incentive Plan (the "Class B Plan") whereby it was authorized to issue a total of 6,366,891 Class B profits interest units, representing the right to share a portion of the value appreciation in the Company's parent. As of September 30, 2020, 6,328,153 Class B Profits Interest Units ("Class B Units") were issued and outstanding to the Company employees. The fair value of the Class B units is measured at the grant date and is recognized as expense over the employee's requisite service period. The expense related to the vesting of the units is recorded on the Company's books because the Company directly benefits from the services provided by unit holders. The grant date fair value for the units granted in 2020 and 2019 was determined using a Monte Carlo simulation analysis utilizing the Black-Scholes option pricing framework. As the performance-based units are not probable of vesting at this time, no expense has been recorded for the performance-based vesting units.

The Company recorded compensation expense related to the Class B Units of $2,286 and $1,141 for the nine months ended September 30, 2020 and 2019, respectively. Class B Unit compensation expense was recorded within cost of revenues, sales and marketing, research and development and general and administrative expenses within the condensed consolidated statements of operations and comprehensive income (loss):

	NINE MONTHS ENDED SEPTEMBER 30,	
	2020	2019
Cost of revenues	$ 151	$ 103
Sales and marketing	99	82
Research and development	97	91
General and administrative expenses	1,939	865
Total	$ 2,286	$ 1,141

The Company granted 1,357,404 and 2,174,414 units during the nine months ended September 30, 2020 and 2019, respectively. The Company recorded actual forfeitures of 377,626 and 1,323,121 during the

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nine months ended September 30, 2020 and 2019, respectively. During the nine months ended September 30, 2020 and 2019, the Company funded the repurchase of 87,930 units and 157,751 units for $1,079 and $703, respectively, on behalf of its parent.

8. Segment data

Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision maker ("CODM"), in deciding how to allocate resources and in assessing performance.

The Company has determined that its chief executive officer ("CEO") is its CODM. The Company manages its operations as a single segment for the purposes of assessing and making operating decisions. The Company's CODM allocates resources and assesses performance based upon financial information at the consolidated level. Since the Company operates in one operating segment, all required financial segment information can be found in the condensed consolidated financial statements.

The following table summarizes revenue by geographic area for the nine months ended September 30, 2020 and 2019:

	NINE MONTHS ENDED SEPTEMBER 30,	
	2020	2019
Revenue[(1)]:		
United States	$ 134,053	$ 112,707
EMEA	30,601	29,975
Others	14,235	11,972
Total	$ 178,889	$ 154,654

(1) Revenue is attributable to the countries based on the location of the customer

9. Income Taxes

The Company generally records its interim tax provision based upon a projection of its estimated annual effective tax rate ("EAETR"). This EAETR is applied to the year-to-date consolidated pre-tax income to determine the interim provisions for income taxes before discrete items. The effective tax rate ("ETR") each period is impacted by a number of factors, including the relative mix of domestic and international earnings, adjustments to the valuation allowances, and discrete items. The currently forecasted ETR may vary from the actual year-end due to the changes in these factors. The Company's global ETR for the nine months ended September 30, 2020 and 2019 was 48% and 48%, respectively, including discrete tax items. The ETR remained consistent year over year and is susceptible to changes in the mix of domestic and international earnings.

On March 27, 2020, the President of the United States signed the Coronavirus Aid, Relief, and Economic Security Act ("CARES Act") into law providing certain relief as a result of the COVID-19 pandemic. The CARES Act, among other things, includes provisions relating to net operating loss carryback periods, alternative minimum tax credit refunds, modification to the net interest deduction limitations and technical corrections to tax depreciation methods for qualified improvement property. The Company quantified the impact of the interest deduction limitation provision on its valuation allowance and reflected the benefit as a component of income tax expense for the period ended September 30, 2020.

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10. Net Income (Loss) per Share

Basic and diluted income (loss) per share is computed by dividing net income (loss) by the weighted-average common shares outstanding:

	NINE MONTHS ENDED SEPTEMBER 30,	
	2020	2019
Numerator:		
Net income (loss)	$ 5,050	$ (2,911)
Denominator:		
Weighted average common shares outstanding, basic and diluted	100	100
Net income (loss) per common share, basic and diluted	$ 50,500	$ (29,110)

11. Subsequent Events

The Company evaluated subsequent events through November 10, 2020, the date the accompanying condensed consolidated financial statements were available to be issued. No material subsequent events have occurred through that date which would require recognition or disclosure in these condensed consolidated financial statements.

Through and including , 2021, (the 25th day after the date of this prospectus), all dealers effecting transactions in the common stock, whether or not participating in this offering, may be required to deliver a prospectus. This delivery requirement is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

Shares

COMMON STOCK

PROSPECTUS

Jefferies

Morgan Stanley

BofA Securities

Barclays

Credit Suisse

William Blair

, 2020

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution

The following table sets forth the costs and expenses, other than the underwriting discount, payable by the registrant in connection with the sale and distribution of the securities being registered. All amounts are estimated except the Securities and Exchange Commission (the "SEC") registration fee, the Financial Industry Regulatory Authority ("FINRA") filing fee and The Nasdaq Global Select Market (the "Nasdaq") listing fee.

	AMOUNT TO BE PAID
SEC Registration Fee	$ *
FINRA Filing Fee	*
Initial Nasdaq Listing Fee	*
Legal Fees and Expenses	*
Accounting Fees and Expenses	*
Printing Fees and Expenses	*
Blue Sky Fees and Expenses	*
Transfer Agent and Registrar Fees	*
Miscellaneous Expenses	*
Total	$ *

* To be provided by amendment.

Item 14. Indemnification of Directors and Officers

Section 102(b)(7) of the Delaware General Corporation Law (the "DGCL") allows a corporation to provide in its certificate of incorporation that a director of the corporation will not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except where the director breached the duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit. Our amended and restated certificate of incorporation will provide for this limitation of liability.

Section 145 of the DGCL, provides, among other things, that a Delaware corporation may indemnify any person who was, is or is threatened to be made, party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of such corporation), by reason of the fact that such person is or was an officer, director, employee or agent of such corporation or is or was serving at the request of such corporation as a director, officer, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding, provided such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the corporation's best interests and, with respect to any criminal action or proceeding, had no reasonable cause to believe that his or her conduct was unlawful. A Delaware corporation may indemnify any persons who were or are a party to any threatened, pending or completed action or suit by or in the right of the corporation by reason of the fact that such person is or was a director, officer, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit, provided such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the corporation's best interests, provided further that no indemnification is permitted without judicial approval if the officer, director, employee or agent is adjudged to be liable to the corporation. Where an officer or director is successful on the merits or otherwise in the defense of any action referred to above, the corporation must indemnify him or her against the expenses (including attorneys' fees) which such officer or director has actually and reasonably incurred.

Section 145 further authorizes a corporation to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation or enterprise, against any liability asserted against such person and incurred by such person in any such capacity, or arising out of his or her status as such, whether or not the corporation would otherwise have the power to indemnify such person under Section 145.

Our amended and restated bylaws will provide that we must indemnify and advance expenses to our directors and officers to the full extent authorized by the DGCL.

Further, prior to the completion of the offering, we expect to enter into indemnification agreements with each of our directors and executive officers that may be broader than the specific indemnification provisions contained in our amended and restated bylaws or the DGCL. Such agreements may require us, among other things, to advance expenses and otherwise indemnify our executive officers and directors against certain liabilities that may arise by reason of their status or service as executive officers or directors, to the fullest extent permitted by law. We intend to enter into indemnification agreements with any new directors and executive officers in the future.

The indemnification rights set forth above shall not be exclusive of any other right which an indemnified person may have or hereafter acquire under any statute, any provision of our amended and restated certificate of incorporation, our bylaws, agreement, vote of stockholders or disinterested directors or otherwise. Notwithstanding the foregoing, we shall not be obligated to indemnify a director or officer in respect of a proceeding (or part thereof) instituted by such director or officer, unless such proceeding (or part thereof) has been authorized by the board of directors pursuant to the applicable procedure outlined in the bylaws.

Section 174 of the DGCL provides, among other things, that a director, who willfully or negligently approves of an unlawful payment of dividends or an unlawful stock purchase or redemption, may be held jointly and severally liable for such actions. A director who was either absent when the unlawful actions were approved or dissented at the time may avoid liability by causing his or her dissent to such actions to be entered in the books containing the minutes of the meetings of the board of directors at the time such action occurred or immediately after such absent director receives notice of the unlawful acts.

We expect to maintain standard policies of insurance that provide coverage (1) to our directors and officers against loss rising from claims made by reason of breach of duty or other wrongful act and (2) to us with respect to indemnification payments that we may make to such directors and officers.

The underwriting agreement provides for indemnification by the underwriters of us and our officers and directors, and by us of the underwriters, for certain liabilities arising under the Securities Act or otherwise in connection with this offering.

Item 15. Recent Sales of Unregistered Securities

None.

Item 16. Exhibits and Financial Statement Schedules

(a) *Exhibits*. See Exhibit Index immediately preceding the signature pages hereto, which is incorporated by reference as if fully set forth herein.

Item 17. Undertakings

(1) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate

jurisdiction the question of whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

(2) The undersigned registrant hereby undertakes that:

(a) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus as filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(b) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

EXHIBIT INDEX

EXHIBIT NUMBER	DESCRIPTION
1.1†	Form of Underwriting Agreement
3.1†	Form of Amended and Restated Certificate of Incorporation of Certara, Inc.
3.2†	Form of Amended and Restated Bylaws of Certara, Inc.
4.1†	Form of Stock Certificate for Common Stock
5.1†	Form of Opinion of Simpson Thacher & Bartlett LLP
10.1†	Form of Stockholders Agreement by and among Certara, Inc. and the other parties named therein
10.2†	Form of Amended and Restated Registration Rights Agreement by and among Certara, Inc. and the other parties named therein
10.3†	Credit Agreement, dated as of August 15, 2017, among Certara Holdings, Inc. (f/k/a EQT Avatar Holdings, Inc.), Certara Holdco, Inc., Certara USA, Inc., EQT Avatar Intermediate, Inc., Jefferies Finance LLC, as Administrative Agent and Issuing Bank, Golub Capital LLC as Issuing Bank and each lender from time to time party thereto
10.4†	First Amendment, dated as of January 24, 2018, to the Credit Agreement, among Certara Holdings, Inc. (f/k/a EQT Avatar Holdings, Inc.), Certara Holdco, Inc., Certara USA, Inc., EQT Avatar Intermediate, Inc., Jefferies Finance LLC, as Administrative Agent and Issuing Bank, Golub Capital LLC as Issuing Bank and each lender from time to time party thereto
10.5†	Second Amendment, dated as of April 3, 2018, to the Credit Agreement, among Certara Holdings, Inc. (f/k/a EQT Avatar Holdings, Inc.), Certara Holdco, Inc., Certara USA, Inc., Certara Intermediate, Inc. (f/k/a EQT Avatar Intermediate, Inc.), Jefferies Finance LLC, as Administrative Agent and Issuing Bank, Golub Capital LLC as Issuing Bank and each lender from time to time party thereto
10.6†	Loan Guaranty, dated as of August 15, 2017, by and among the Loan Guarantors, as defined therein, and Jefferies Finance LLC, as Administrative Agent
10.7†	Pledge and Security Agreement, dated as of August 15, 2017, by and among the Grantors, as defined therein, and Jefferies Finance LLC, as Agent
10.8†	Loan Agreement, dated as of July 6, 2017, between Santo Holding (Deutschland) GmbH and Certara, Inc. (f/k/a EQT Avatar Topco, Inc.)
10.9†*	Form of Indemnification Agreement between Certara, Inc. and directors and executive officers of Certara, Inc.
10.10†*	Employment Agreement, dated as of May 14, 2019, by and among EQT Avatar Parent L.P., Certara USA, Inc. and William Feehery
10.11†*	Employment Agreement, dated as of May 15, 2014, by and between Certara Holdco, Inc. (as successor in interest to Arsenal MBDD Holding, L.P.) and Edmundo Muniz
10.12†*	Amendment to Employment Agreement of Edmond Muniz, dated as of February 21, 2019, by and between Certara Holdco, Inc. and Edmundo Muniz
10.13†*	Employment Agreement, dated as of September 2, 2016, by and between Certara Australia Pty Ltd. and Craig Rayner
10.14†*	Employment Agreement, dated as of January 23, 2019, by and between EQT Certara USA, Inc. and Justin Edge
10.15†*	Contract of Employment, dated as of June 20, 2014, by and between Quantitative Solutions B.V. and Thomas Kerbusch
10.16†*	Addendum to the Contract of Employment of Thomas Kerbusch, dated as of June 20, 2014, by and between Quantitative Solutions B.V. and Thomas Kerbusch
10.17†*	Certara, Inc. 2020 Incentive Plan

EXHIBIT NUMBER	DESCRIPTION
10.18†*	Form of Exchange Acknowledgement and Agreement under the Certara, Inc. 2020 Incentive Plan
10.19†*	Form of Restricted Stock Agreement under the Certara, Inc. 2020 Incentive Plan
10.20†*	Certara, Inc. 2020 Employee Stock Purchase Plan
21.1†	Subsidiaries of the Registrant
23.1†	Consent of Simpson Thacher & Bartlett LLP (included in Exhibit 5.1)
23.2†	Consent of CohnReznick LLP
24.1†	Power of Attorney (included in the signature page to the Registration Statement)

† To be filed by amendment.

* Management contract or compensatory plan or arrangement.

SIGNATURES

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

Certara, Inc.

By: _____

Name: William F. Feehery
Title: Chief Executive Officer

The undersigned directors and officers of Certara, Inc. hereby constitute and appoint William F. Feehery, M. Andrew Schemick and Richard M. Traynor and each of them, any of whom may act without joinder of the other, the individual's true and lawful attorneys in fact and agents, with full power of substitution and resubstitution, for the person and in his or her name, place and stead, in any and all capacities, to sign this registration statement and any or all amendments, including post effective amendments to the Registration Statement, including a prospectus or an amended prospectus therein and any registration statement for the same offering that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act, and all other documents in connection therewith to be filed with the SEC, granting unto said attorneys in fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys in fact as agents or any of them, or their substitute or substitutes, may lawfully do or cause to be done by virtue hereto.

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

SIGNATURE	TITLE
William F. Feehery	Chief Executive Officer (Principal Executive Officer)
M. Andrew Schemick	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)
Sherilyn S. McCoy	Chairman
James E. Cashman III	Director
Eric C. Liu	Director
Stephen M. McLean	Director

SIGNATURE	TITLE
Mason P. Slaine	Director
Matthew Walsh	Director
Ethan Waxman	Director