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

FORM 10-Q

(Mark One)

x **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended June 30, 2023

or

o **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____________ to _____________

Commission File Number: 001-39799

Certara, Inc.
(Exact name of registrant as specified in its charter)

Delaware	82-2180925
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification Number)**

100 Overlook Center
Suite 101
Princeton, New Jersey 08540
(Address of Principal Executive Offices)
(609) 716-7900
(Registrant's telephone number)

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Trading symbol	Name of Exchange on which registered
Common stock, par value $0.01 per share	**CERT**	**The Nasdaq Stock Market LLC**

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes x No o

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes x No o

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	x	Accelerated filer	o		
Non-accelerated filer	o	Smaller reporting company	o	Emerging growth company	o

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 13(a) of the Exchange Act. o

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes o No x

As of August 01, 2023, the registrant had 159,776,148 shares of common stock, par value $0.01 per share, outstanding.

Certara, Inc.

Unless otherwise indicated, references to the “Company,” “Certara,” “we,” “us,” and “our” refer to Certara, Inc. and its consolidated subsidiaries.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q (this “Quarterly Report”) contains “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), which are subject to the “safe harbor” created by those sections. All statements (other than statements of historical facts) in this Quarterly Report regarding the prospects of the industry and our prospects, plans, financial position and business strategy may constitute forward-looking statements. In addition, forward-looking statements generally can be identified by the use of forward-looking terminology such as “may,” “should,” “expect,” “might,” “intend,” “will,” “estimate,” “anticipate,” “plan,” “believe,” “predict,” “potential,” “continue,” “suggest,” “project” or “target” or the negatives of these terms or variations of them or similar terminology. Although we believe that the expectations reflected in these forward-looking statements are reasonable, we cannot provide any assurance that these expectations will prove to be correct. Such statements reflect the current views of our management with respect to our operations, results of operations and future financial performance. The following factors are among those that may cause actual results to differ materially from the forward-looking statements:

- our ability to compete within our market;
- any deceleration in, or resistance to, the acceptance of model-informed biopharmaceutical discovery and development;
- our ability to retain key personnel or recruit additional qualified personnel;
- 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 research and development (“R&D”) spending, the use of third parties by biopharmaceutical companies and a shift toward more R&D occurring at smaller biotechnology companies;
- our ability to successfully enter new markets, increase our customer base and expand our relationships with existing customers;
- our ability to sustain recent growth rates;
- any future acquisitions and our ability to successfully integrate such acquisitions;
- 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;
- 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;
- risks related to our contracts with government customers, including the ability of third parties to challenge our receipt of such contracts;
- 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;
- 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;
- adverse developments affecting the financial services industry may delay or prevent us or our customers’ ability to access cash, cash equivalents, or investments which could impact the timely payment to vendors and others or timely receipt of payment from customers;
- our ability to realize the anticipated revenue reflected in our bookings;
- 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;
- the occurrence of natural disasters and epidemic diseases, such as the COVID-19 pandemic, which may result in delays or cancellations of customer contracts or decreased utilization by our employees;

- 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 unauthorized access to or use of customer or their proprietary or confidential data or other breach of our cybersecurity measures;
- our ability to comply with applicable privacy and cybersecurity 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;
- 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 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 net operating loss ("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;
- any inability to design, implement, and maintain effective internal controls when required by law, or inability to timely remediate internal controls that are deemed ineffective; and
- the other factors described elsewhere in this Quarterly Report, in our Annual Report on Form 10-K for the fiscal year ended December 31, 2022 ("2022 Annual Report"), and in the other documents and reports we file with the Securities and Exchange Commission (the "SEC").

You should not rely upon forward-looking statements as predictions of future events. The forward-looking statements in this Quarterly Report 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, including those described in the section titled "Risk Factors" and elsewhere in this Quarterly Report and in our 2022 Annual Report, which 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. 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 in this Quarterly Report. Such risk factors may be updated from time to time in our periodic filings with the SEC. Our periodic filings are accessible on the SEC's website at www.sec.gov.

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. The forward-looking statements made in this Quarterly Report relate only to events as of the date on which the statements are made. Except as required by law, we undertake no obligation to update publicly any forward-looking statements for any reason after the date of this Quarterly Report to conform these statements to actual results or to changes in our expectations.

In addition, statements that "we believe" and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this Quarterly Report, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements..

Channels for Disclosure of Information

Investors and others should note that we may announce material information to the public through filings with the SEC, our Investors Relations website (https://ir.certara.com), press releases, public conference calls and public webcasts. We use these channels to communicate with the public about the Company, our products, our services and other matters. We encourage our investors, the media and others to review the information disclosed through these channels as such information could be deemed to be material information. The information on such channels, including on our website, is not incorporated by reference in this Quarterly Report and shall not be deemed to be incorporated by reference into any other filing under the Securities Act or the Exchange Act, except as expressly set forth by specific reference in such a filing. This list of disclosure channels may be updated from time to time.

CERTARA, INC. AND SUBSIDIARIES
FORM 10-Q
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PART I — FINANCIAL INFORMATION

Item 1. Financial Statements

CERTARA, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS
(UNAUDITED)

(IN THOUSANDS, EXCEPT PER SHARE AND SHARE DATA)	JUNE 30, 2023	DECEMBER 31, 2022
Assets		
Current assets:		
Cash and cash equivalents	$ 245,190	$ 236,586
Accounts receivable, net of allowance for credit losses of $460 and $1,250, respectively	83,952	82,584
Restricted cash	3,020	3,102
Prepaid expenses and other current assets	20,882	19,980
Total current assets	353,044	342,252
Other assets:		
Property and equipment, net	2,206	2,400
Operating lease right-of-use assets	12,326	14,427
Goodwill	721,853	717,743
Intangible assets, net of accumulated amortization of $244,974 and $217,705, respectively	473,805	486,782
Deferred income taxes	3,703	3,703
Other long-term assets	5,283	5,615
Total assets	$ 1,572,220	$ 1,572,922
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 3,789	$ 7,533
Accrued expenses	38,654	35,403
Current portion of deferred revenue	52,788	52,209
Current portion of long-term debt	3,020	3,020
Other current liabilities	4,645	4,993
Total current liabilities	102,896	103,158
Long-term liabilities:		
Deferred revenue, net of current portion	2,056	2,815
Deferred income taxes	54,677	65,046
Operating lease liabilities, net of current portion	8,285	10,133
Long-term debt, net of current portion and debt discount	289,104	289,988
Other long-term liabilities	18,028	22,121
Total liabilities	475,046	493,261
Commitments and contingencies		
Stockholders' equity:		
Preferred shares, $0.01 par value, 50,000,000 shares authorized, no shares issued and outstanding as of June 30, 2023 and December 31, 2022, respectively	—	—
Common shares, $0.01 par value, 600,000,000 shares authorized, 160,171,493 and 159,676,150 shares issued as of June 30, 2023 and December 31, 2022, respectively; 159,777,284 and 159,525,943 shares outstanding as of June 30, 2023 and December 31, 2022, respectively	1,601	1,596
Additional paid-in capital	1,162,317	1,150,168
Accumulated deficit	(54,809)	(60,873)
Accumulated other comprehensive loss	(3,173)	(8,230)
Treasury stock at cost, 394,209 and 150,207 shares at June 30, 2023 and December 31, 2022, respectively	(8,762)	(3,000)
Total stockholders' equity	1,097,174	1,079,661
Total liabilities and stockholders' equity	$ 1,572,220	$ 1,572,922

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 SHARE AND SHARE DATA)	THREE MONTHS ENDED JUNE 30, 2023	THREE MONTHS ENDED JUNE 30, 2022	SIX MONTHS ENDED JUNE 30, 2023	SIX MONTHS ENDED JUNE 30, 2022
Revenues	$ 90,450	$ 82,760	$ 180,751	$ 164,311
Cost of revenues	36,224	35,194	71,080	67,983
Operating expenses:				
Sales and marketing	8,111	7,121	16,113	13,232
Research and development	7,888	7,741	17,175	15,289
General and administrative	14,245	17,778	34,017	36,117
Intangible asset amortization	10,582	10,355	21,117	20,504
Depreciation and amortization expense	361	422	772	904
Total operating expenses	41,187	43,417	89,194	86,046
Income from operations	13,039	4,149	20,477	10,282
Other income (expenses):				
Interest expense	(5,668)	(3,879)	(11,143)	(7,107)
Net other income	1,010	2,521	1,516	3,362
Total other expenses	(4,658)	(1,358)	(9,627)	(3,745)
Income before income taxes	8,381	2,791	10,850	6,537
Provision for income taxes	3,675	3,380	4,786	4,916
Net income (loss)	4,706	(589)	6,064	1,621
Other comprehensive income (loss):				
Foreign currency translation adjustment	1,815	(7,520)	4,416	(10,704)
Change in fair value from interest rate swap, net of tax of $762, $362, $174, $422, respectively	2,332	848	641	912
Total other comprehensive income (loss)	4,147	(6,672)	5,057	(9,792)
Comprehensive income (loss)	$ 8,853	$ (7,261)	$ 11,121	$ (8,171)
Net income (loss) per share attributable to common stockholders:				
Basic	$ 0.03	$ 0.00	$ 0.04	$ 0.01
Diluted	$ 0.03	$ 0.00	$ 0.04	$ 0.01
Weighted average common shares outstanding:				
Basic	158,955,822	156,478,724	158,568,575	156,209,335
Diluted	159,906,972	156,478,724	159,817,688	159,293,362

The accompanying notes are an integral part of the condensed consolidated financial statements

CERTARA, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(UNAUDITED)

(IN THOUSANDS, EXCEPT SHARE DATA)	COMMON STOCK		ADDITIONAL PAID-IN CAPITAL	ACCUMULATED DEFICIT	ACCUMULATED OTHER COMPREHENSIVE LOSS	TREASURY STOCK		TOTAL STOCKHOLDERS' EQUITY
	SHARES	AMOUNT				SHARES	AMOUNT	
Balance as of March 31, 2022	159,660,048	$ 1,596	$ 1,127,334	$ (73,394)	$ (7,046)	(2,874)	$ (85)	$ 1,048,405
Equity-based compensation awards			9,501			—	—	9,501
Common shares issued for employee share-based compensation awards	331,309	4	(4)			—	—	—
Restricted stock withheld for tax liability						(106,121)	(2,264)	(2,264)
Change in fair value from interest rate swap, net of tax					848	—	—	848
Net income				(589)		—	—	(589)
Foreign currency translation adjustment					(7,520)	—	—	(7,520)
Balance as of June 30, 2022	159,991,357	$ 1,600	$ 1,136,831	$ (73,983)	$ (13,718)	(108,995)	$ (2,349)	$ 1,048,381
Balance as of December 31, 2021	159,660,048	$ 1,596	$ 1,119,821	$ (75,604)	$ (3,926)	(1,100)	$ (38)	$ 1,041,849
Equity-based compensation awards	—	—	17,014	—	—	—	—	17,014
Common shares issued for employee share-based compensation awards	331,309	4	(4)	—	—	—		—
Restricted stock withheld for tax liability	—	—	—	—	—	(107,895)	(2,311)	(2,311)
Change in fair value from interest rate swap, net of tax	—	—	—	—	912	—	—	912
Net income	—	—	—	1,621	—	—		1,621
Foreign currency translation adjustment	—	—	—	—	(10,704)	—	—	(10,704)
Balance as of June 30, 2022	159,991,357	$ 1,600	$ 1,136,831	$ (73,983)	$ (13,718)	(108,995)	$ (2,349)	$ 1,048,381

The accompanying notes are an integral part of the condensed consolidated financial statements

CERTARA, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(UNAUDITED)

(IN THOUSANDS, EXCEPT SHARE DATA)	COMMON STOCK		ADDITIONAL PAID-IN CAPITAL	ACCUMULATED DEFICIT	ACCUMULATED OTHER COMPREHENSIVE LOSS	TREASURY STOCK		TOTAL STOCKHOLDERS' EQUITY
	SHARES	AMOUNT				SHARES	AMOUNT	
Balance as of March 31, 2023	160,218,109	$ 1,601	$ 1,158,708	$ (59,515)	$ (7,320)	(378,366)	$ (8,419)	$ 1,085,055
Equity-based compensation expense, net of forfeiture	—	—	3,610	—	—	—	—	3,610
Common shares issued for share-based compensation awards and shares withheld for tax	78,327	1	(2)	—	—	(15,843)	(343)	(344)
Restricted stock forfeiture*	(124,943)	(1)	1	—	—	—	—	—
Change in fair value from interest rate swap, net of tax	—	—	—	—	2,332	—	—	2,332
Net income	—	—	—	4,706	—	—	—	4,706
Foreign currency translation adjustment, net of tax	—	—	—	—	1,815	—	—	1,815
Balance as of June 30, 2023	160,171,493	$ 1,601	$ 1,162,317	$ (54,809)	$ (3,173)	(394,209)	$ (8,762)	$ 1,097,174
Balance as of December 31, 2022	159,676,150	$ 1,596	$ 1,150,168	$ (60,873)	$ (8,230)	$ (150,207)	$ (3,000)	$ 1,079,661
Equity-based compensation expense, net of forfeiture	—	—	12,153	—	—	—	—	12,153
Common shares issued for share-based compensation awards and shares withheld for tax	686,506	7	(6)	—	—	(244,002)	(5,762)	(5,761)
Restricted stock forfeiture*	(191,163)	(2)	2	—	—	—	—	—
Change in fair value from interest rate swap, net of tax	—	—	—	—	641	—	—	641
Net income	—	—	—	6,064	—	—	—	6,064
Foreign currency translation adjustment, net of tax	—	—	—	—	4,416	—	—	4,416
Balance as of June 30, 2023	160,171,493	$ 1,601	$ 1,162,317	$ (54,809)	$ (3,173)	(394,209)	$ (8,762)	$ 1,097,174

- Legal forfeiture 66,220 shares occurred in Q1 2023; and the accounting forfeiture occurred in Q3 2022.

The accompanying notes are an integral part of the condensed consolidated financial statements

CERTARA, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(UNAUDITED)

	SIX MONTHS ENDED JUNE 30,	
(IN THOUSANDS)	**2023**	**2022**
Cash flows from operating activities:		
Net income	$ 6,064	$ 1,621
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization of property and equipment	772	904
Amortization of intangible assets	26,286	25,161
Amortization of debt issuance costs	765	771
Provision for credit losses	(172)	217
Loss on retirement of assets	29	7
Equity-based compensation expense	12,153	17,014
Change in fair value of contingent considerations	2,559	—
Deferred income taxes	(10,237)	(5,607)
Changes in assets and liabilities		
Accounts receivable	(272)	(5,706)
Prepaid expenses and other assets	494	4,586
Accounts payable and accrued expenses	(8,343)	(7,934)
Deferred revenue	(2,083)	3,186
Change in other liabilities	—	(1,158)
Net cash provided by operating activities	28,015	33,062
Cash flows from investing activities:		
Capital expenditures	(588)	(859)
Capitalized development costs	(6,270)	(5,172)
Investment in intangible assets	(54)	—
Business acquisitions, net of cash acquired	(7,550)	(5,883)
Net cash used in investing activities	(14,462)	(11,914)
Cash flows from financing activities:		
Payments on long-term debt and finance lease obligations	(1,535)	(1,654)
Payments on financing component of interest rate swap	—	(1,085)
Payment of taxes on shares withheld for employee taxes	(5,735)	(2,312)
Net cash used by financing activities	(7,270)	(5,051)
Effect of foreign exchange rate changes on cash and cash equivalents, and restricted cash	2,239	(4,471)
Net increase in cash and cash equivalents, and restricted cash	8,522	11,626
Cash and cash equivalents, and restricted cash, at beginning of period	239,688	186,624
Cash and cash equivalents, and restricted cash, at end of period	$ 248,210	$ 198,250
Supplemental disclosures of cash flow information		
Cash paid for interest	$ 8,255	$ 7,468
Cash paid for taxes	$ 9,034	$ 5,558
Supplemental schedule of non-cash investing and financing activities		
Contingent liabilities established in connection with business acquisition	$ 790	$ —

The accompanying notes are an integral part of the condensed consolidated financial statements

CERTARA, INC. AND SUBSIDIARIES

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT SHARE AND PER SHARE DATA)
(UNAUDITED)

1. Description of Business

Certara, Inc. and its wholly-owned subsidiaries (together, the "Company") deliver software products and technology-driven services to customers to efficiently carry out and realize the full benefits of biosimulation in drug discovery, preclinical and clinical research, regulatory submissions and market access. The Company is a global leader in biosimulation, and the Company's biosimulation software and technology-driven 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.

The Company has operations in the United States, Australia, Canada, China, France, Germany, India, Italy, Japan, Luxembourg, Netherlands, Philippines, Poland, Portugal, Spain, Switzerland, Egypt, and the United Kingdom.

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 audited consolidated financial statements included in our 2022 Annual Report. 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, 2022.

(a) Basis of Presentation and Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. generally accepted accounting principles ("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, assumptions used in the allocation of the transaction price to separate performance obligations, estimates towards the measure of progress of completion on fixed-price service contracts, the determination of fair values and useful lives of long-lived assets as well as intangible assets, goodwill, allowance for credit losses for accounts receivable, recoverability of deferred tax assets, recognition of deferred revenue, valuation of interest rate swaps, determination of fair value of equity-based awards, measurement of fair value of contingent consideration, 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.

(b) Unaudited Interim Financial Statements

The accompanying condensed consolidated balance sheet as of June 30, 2023, the condensed consolidated statements of operations and comprehensive income (loss) for the three and six months ended June 30, 2023 and 2022, the condensed consolidated statements of stockholders' equity for the three and six months ended June 30, 2023 and 2022, the condensed consolidated statements of cash flows for the six months ended June 30, 2023 and 2022, and the related interim disclosures are unaudited.

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with U.S. GAAP. These unaudited condensed consolidated financial statements include all adjustments necessary 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. Certain amounts reported in prior periods have been reclassified to conform with the current presentation. 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 2022 audited consolidated financial statements and notes thereto. The information as of December 31, 2022 in the

Company’s condensed consolidated balance sheet included herein is derived from the Company’s audited consolidated financial statements included in the Company’s 2022 Annual Report.

(c) Accounting Pronouncements Not Yet Adopted

In March 2023, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2023-01, “Common Control Arrangements (Topic 842),” which provide private companies and not-for-profit organizations that are not conduit bond obligors with a practical expedient to use the written terms and conditions of a common control arrangement to determine whether a lease exists and, if so, the classification of and accounting for that lease. In addition, the ASU requires all entities including public companies to amortize leasehold improvements associated with common control leases over the useful life to the common control group. This ASU is effective for fiscal years beginning after December 15, 2023, including interim periods within those fiscal years. The Company is currently evaluating the impact of adopting this guidance on its 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) Fair Value Measurements

The Company follows FASB ASC 820 10, “Fair Value Measurements” (“ASC 820-10”), 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.

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 at different levels of the fair value hierarchy, the hierarchy is based on 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.

Contingent liabilities related to acquisitions are measured at fair value using Level 3 unobservable inputs. The Company's estimates of fair value are based upon assumptions believed to be reasonable, but that are uncertain and involve significant judgments by management. Any changes in the fair value of these contingent liabilities are included in the earnings in the condensed consolidated statements of operations and comprehensive income (loss).

To estimate the fair value of the contingent consideration liability for Vyasa Analytics, LLC ("Vyasa"), management utilized a Monte Carlo simulation model to value the earn-outs based on the likelihood of reaching certain eligible revenue thresholds. To measure the fair value of the contingent consideration liability for the Drug Interaction Database ("DIDB"), management utilized present value discounted based on a multiple of eligible revenue over two separate measurement periods. Significant inputs used in the fair value measurement of contingent consideration is the amount and timing of the acquired entity's eligible revenue over certain periods subsequent to the acquisition date. At the acquisition date, the fair value of the contingent consideration liabilities was $19,813 and $790 for the Vyasa acquisition and DIDB, respectively.

The following table sets 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 June 30, 2023:

	LEVEL 1	LEVEL2	LEVEL 3	TOTAL
	(In thousands)			
Assets				
Money market funds	$ 143,679	$ —	$ —	$ 143,679
Interest rate swap assets	—	9,190	—	9,190
Total assets	$ 143,679	$ 9,190	$ —	$ 152,869
Liabilities				
Contingent liabilities	$ —	$ —	$ 23,162	$ 23,162
Total liabilities	$ —	$ —	$ 23,162	$ 23,162

The following table sets 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, 2022:

	LEVEL 1	LEVEL2	LEVEL 3	TOTAL
	(In thousands)			
Assets				
Money market funds	$ 100,999	$ —	$ —	$ 100,999
Interest rate swap assets	—	8,374	—	8,374
Total assets	$ 100,999	$ 8,374	$ —	$ 109,373
Liabilities				
Contingent liabilities	$ —	$ —	$ 19,813	$ 19,813
Total liabilities	$ —	$ —	$ 19,813	$ 19,813

For the period ended June 30, 2023, there were no transfers between the levels within the fair value hierarchy. The Company's Level 3 liabilities are acquisition related contingent consideration liabilities.

The following table summarizes the Level 3 activity of the changes in the contingent consideration liability.

	JUNE 30, 2023
	(In thousands)
Beginning balance at December 31, 2022	$ 19,813
Additions	790
Payments	—
Change in fair value	2,559
Ending balance at June 30, 2023	$ 23,162

For more information regarding fair value measurements and the fair value hierarchy, see Note 2. "Summary of Significant Accounting Policies" in the notes to the consolidated financial statements in the Company's 2022 Annual Report.

(f) Cash and 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 reserved for unexpended restricted grant funds and for a Company's credit card program. The restricted cash balance was $3,020 and $3,102 at June 30, 2023 and December 31, 2022, 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:

	JUNE 30, 2023	DECEMBER 31, 2022
	(In thousands)	
Cash and cash equivalents	$ 245,190	$ 236,586
Restricted cash, current	3,020	3,102
Total cash and cash equivalents and restricted cash	$ 248,210	$ 239,688

(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 the product or upon achievement of billable events for service-based contracts. Unbilled receivables relate to the Company's rights to consideration for performance obligations satisfied but not billed at the reporting date on contracts. Unbilled receivables are billed and transferred to customer accounts receivable when the rights become unconditional. The carrying amount of accounts receivable is reduced by a valuation allowance.

The Company estimates the expected credit losses for accounts receivables using historical loss data adjusted for current economic conditions, including reasonable and supportable forecasts to estimate the relative size of credit losses to be expected. The Company generally writes off a receivable or records a specific allowance for credit losses if the Company determines that the receivable is not collectible. Allowances for credit losses of $460 and $1,250 were provided in the accompanying condensed consolidated financial statements as of June 30, 2023 and December 31, 2022, respectively.

Accounts receivable consists of the following:

	JUNE 30, 2023	DECEMBER 31, 2022
	(In thousands)	
Trade receivables	$ 71,226	$ 72,238
Unbilled receivables	12,792	11,309
Other receivables	394	287
Allowances for credit losses	(460)	(1,250)
Accounts receivable, net	$ 83,952	$ 82,584

The following table presents the information regarding the allowance of accounts receivable:

	JUNE 30, 2023	DECEMBER 31, 2022
	(In thousands)	
Beginning balance	$ 1,250	$ 262
Provision for credit losses	(172)	1,009
Charge-offs, net of recoveries	(618)	(21)
Ending balance	$ 460	$ 1,250

(h) 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 swaps must effectively reduce the risk exposure that they are designed to hedge. In addition, at the 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.

The Company entered into an interest rate swap agreement in May 2022 that pays a fixed interest rate and receives a variable interest rate to modify the interest rate characteristics of term loan debt from variable to fixed in order to reduce the impact of changes in future cash flows due to market interest rate changes. The swap agreement has a notional amount of $230,000, a fixed rate of 2.8% and a termination date of August 31, 2025. At June 30, 2023, the Company and the counter party was in the process to amend the floating rate of the swap agreement from term LIBOR to term SOFR due to LIBOR cessation. At June 30, 2023 and December 31, 2022, the interest swap had a fair value of $9,190 and $8,374, respectively; The fair value recognized in accumulated other comprehensive income was $9,190 and $8,374, respectively, at June 30, 2023 and December 31, 2022.

The Company uses derivatives to manage certain interest exposures and designated all the derivatives as cash flow hedges. The Company records derivatives at fair value on its condensed consolidated balance sheets. Changes in the fair value of derivatives designated as cash flow hedges are recorded as a component of accumulated other comprehensive income (loss). Those amounts are reclassified into interest expense in the same period during which the hedged transactions impact earnings. The amount of derivative gains reclassified from accumulated other comprehensive income on derivative instruments recognized in the Company's condensed consolidated statements of operations and comprehensive income (loss) was $1,276 and $2,262 for the three and six months ended June 30, 2023, respectively.

The notional amounts, fair values, and classification of derivative instruments in the condensed consolidated balance sheets as of June 30, 2023 and December 31, 2022 were as follows:

Interest rate swap derivative designated as cash flow hedging instrument:		**JUNE 30, 2023**		**DECEMBER 31, 2022**
	(In thousands)			
Notional amounts	$	230,000	$	230,000
Prepaid expenses and other current assets	$	5,667	$	4,638
Other long-term assets	$	3,523	$	3,736

The net amount of deferred gains related to derivative instruments designated as cash flow hedges that is expected to be reclassified from accumulated other comprehensive gains into earnings over the next twelve monthS is $5,699.

(i) Revenue Recognition

In accordance with ASC Topic 606, "Revenue from Contracts with Customers", the Company determines revenue recognition through the following steps:

i. Identification of the contract, or contracts, with a customer

ii. Identification of the performance obligations in the contract

iii. Determination of the transaction price

iv. Allocation of the transaction price to the performance obligations in the contract

v. Recognition of revenue when, or as, the Company satisfies a performance obligation

The Company's revenue consists of fees for perpetual and term licenses for its software products, post-contract customer support (referred to as maintenance), software as a service ("SaaS"), and professional services including training and other revenue. 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 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 Revenues

Software license revenue consists primarily of sales of software licenses downloaded and installed by our customers on their own hardware. The license period is generally one year or less and includes an insignificant amount of customer support to assist the customer with the software. Software license performance obligations are generally recognized upfront at the point in time when the software license has been delivered.

Software as a Service (SaaS) Revenues

SaaS revenues consist of subscription fees for access to, and related support for, the Company's cloud-based solutions. The Company typically invoices subscription fees in advance in annual installments. The invoice is initially deferred and revenue is recognized ratably over the life of the contract. The Company's software contracts do not typically include, variable consideration, or options for future purchases that would not be similar to the original goods.

Software Service Revenues

Maintenance services agreements on perpetual software 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. While the 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 insignificant 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.

Consulting Service Revenues

The Company's primary professional services offering includes consulting services, which may be either strategic consulting services, reporting and analysis services, regulatory writing services, or any combination of the three. The Company's professional services contracts are either time-and-materials or fixed fee. Service revenues are generally recognized over time as the services are performed. Generally, these services are delivered to customers electronically. Revenue from time-and-material contracts is recognized on an output basis as labor hours are delivered and/or direct expenses are incurred. Revenues for fixed-price services are generally recognized over time by applying input methods to estimate progress to completion. Accordingly, the number of resources being paid for and the varying lengths of time they are being paid for determine the measure of progress.

Arrangements with Multiple Performance Obligations

For contracts with 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 Company determines if the products or services are distinct and allocates the consideration to each distinct 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. Additionally, any training, implementation, or support and maintenance promises sold 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 less than one year such that there is no significant financing component.

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 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. 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 12 months is recorded as current deferred revenue, and the remaining portion is recorded as deferred revenue in the condensed consolidated balance sheets.

Contract balances at June 30, 2023 and December 31, 2022 were as follows:

	JUNE 30, 2023	DECEMBER 31, 2022
	(In thousands)	
Contract assets	$ 12,792	$ 11,309
Contract liabilities	54,844	55,024

During the six months ended at June 30, 2023, the Company recognized revenue of $38,087 related to contract liabilities at December 31, 2022.

The unsatisfied performance obligations as of June 30, 2023, were approximately $119,407. We expect to recognize approximately $102,781 or 86.1% of this revenue over the next 12 months and the remainder thereafter.

Deferred Contract Acquisition Costs

Under ASC Topic 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 recognizes an asset for the incremental costs of obtaining a contract with a customer if the Company expects the benefit of those costs to be longer than one year. The Company has determined that certain sales incentive programs meet the requirements to be capitalized. The costs capitalized are primarily sales commissions for our sales force personnel. Capitalized costs to obtain a contract are amortized on a straight-line basis over the expected period of benefit. Amortization of capitalized costs is included in sales and marketing expenses in our condensed consolidated statements of operations and comprehensive income (loss).

Capitalized contract acquisition costs were $749 and $981 as of June 30, 2023, and December 31, 2022, respectively, and were included in prepaid expenses and other current assets in the condensed consolidated balance sheets.

Grant Revenue

The Company receives grant funding for certain specific projects from time to time. These grants specify the funds provided are to be used exclusively to satisfy the deliverables outlined in the grant agreements. In these agreements, both involved parties receive and sacrifice approximately commensurate value so these are accounted for as exchange transactions and revenue is recognized according to ASC Topic 606. Grant funding is generally provided near contract inception, so a contract liability is initially recorded and revenue is recognized as the performance obligations are satisfied over time.

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:

	THREE MONTHS ENDED JUNE 30,		SIX MONTHS ENDED JUNE 30,	
	2023	2022	2023	2022
	(In thousands)			
Software licenses transferred at a point in time	$ 14,553	$ 12,131	$ 29,051	$ 25,583
Software licenses transferred over time	19,170	16,593	37,677	32,334
Service revenues earned over time	56,727	54,036	114,023	106,394
Total	$ 90,450	$ 82,760	$ 180,751	$ 164,311

(j) Earnings per Share

Basic earnings per common share is computed by dividing the net earnings by the weighted-average number of shares outstanding during the reporting period, without consideration for potentially dilutive securities. Diluted earnings per share is computed by dividing the net earnings attributable to stockholders by the weighted-average number of shares and dilutive securities outstanding during the period.

3. Public Offerings and Other significant Shareholder Transactions

On December 11, 2020, the Company completed its initial public offering ("IPO"), pursuant to which the Company issued and sold 14,630,000 shares of common stock and certain selling stockholders, including former controlling shareholder, EQT AB ("EQT"), sold 18,783,250 shares of our common stock (representing the full exercise of the underwriters' option to purchase additional shares), at a public offering price of $23.00 per share. The Company received net proceeds of $316,301, after deducting underwriters' discounts and commissions. In addition, $4,408 of legal, accounting and other offering costs, net of the tax effect of $259, were incurred in connection with the sale of the Company's common stock in the IPO, were capitalized and offset against the proceeds received in the IPO.

The Company was party to a registration rights agreement with EQT and its affiliates, Arsenal Capital Partners ("Arsenal"), and certain other stockholders, dated December 8, 2020. That agreement was terminated following the sale of all of EQT's 29,954,521 common shares in the Company to Arsenal on December 8, 2022 (the "Arsenal Transaction"). Arsenal and the Company entered into a new registration rights agreement, dated November 3, 2022 (the "Registration Rights Agreement"), which contains provisions that entitle Arsenal to certain rights to have their securities registered by the Company under the Securities Act. While the Registration Rights Agreement is in effect, Arsenal is entitled to (i) four "demand" registrations, (ii) one underwritten offering in any consecutive 90-day period, and (iii) two underwritten offerings in any consecutive 360-day period, subject in each case to certain limitations. In addition, the Registration Rights Agreement provides that the Company will share certain expenses of Arsenal relating to such registrations and indemnify Arsenal against certain liabilities that may arise under the Securities Act. In connection with the Arsenal Transaction, the Company also entered into a letter agreement, effective December 8, 2022, with Arsenal providing that, subject to certain exceptions, Arsenal is prohibited from transferring the shares from EQT until December 8, 2024. Also in connection with the Arsenal Transaction, the Company entered into a stockholders agreement with Arsenal, effective December 8, 2022, which, among other things, grants certain conditional rights to Arsenal to nominate up to two directors to our Board.

On August 11, 2022, the Company completed a secondary public offering in which certain selling stockholders, including EQT, sold 7,000,000 shares of the Company's common stock. The Company did not offer any common stock in this transaction and did not receive any proceeds from the sale of the shares of common stock by the selling stockholders. The Company incurred costs of $596, recorded in general and administrative expenses, in relation to the secondary public offering.

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 June 30, 2023 and December 31, 2022, the investments were bank deposits, overnight sweep accounts, and money market funds. 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 June 30, 2023 and December 31, 2022, no single customer accounted for more than 10% of the Company's accounts receivable. No single customer accounted for more than 10% of the Company's revenues during the six months ended June 30, 2023 and 2022.

5. Acquisitions

Acquisitions have been accounted for by using the acquisition method of accounting pursuant to FASB ASC 805, "Business Combinations." Amounts allocated to the purchased assets and liabilities assumed 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.

Since its inception, and as of June 30, 2023, the Company has completed 18 acquisitions, of which 13 have included software or technology. Details of acquisitions that have closed since the beginning of fiscal year 2022 are provided below.

Integrated Nonclinical Development Solutions, Inc.

On January 03, 2022, the Company completed the acquisition of Integrated Nonclinical Development Solutions, Inc. (“INDS”), a company that provides the SEND Explorer software and drug development consulting for a total consideration of $8,048. The business combination was not significant to the Company’s condensed consolidated financial statements. Based on the Company’s purchase price allocation, approximately $2,380, $1,040, $100, and $2,910 of the purchase price were assigned to customer relationships, developed technology, non-compete agreements, and goodwill, respectively.

Vyasa Analytics, LLC

On December 28, 2022, the Company completed the acquisition of Vyasa Analytics, LLC (“Vyasa”), a company that provides an artificial intelligence ("AI") powered, scalable deep learning software and analytics platform for organizations within healthcare and life sciences for a total estimated consideration of $29,276. The business combination was not significant to the Company’s condensed consolidated financial statements.

Based on the Company’s purchase price allocation, approximately $11,400, $1,500, $120, $80 and $16,589 of the purchase price were assigned to developed technology, customer relationships, trademarks, non-compete agreements and goodwill, respectively.

The total estimated consideration includes a portion of contingent consideration that is payable over the next three years in a combination of 70% cash and 30% common stock of the Company. Future payments of contingent consideration are based on achieving certain eligible revenue thresholds for each of the twelve-month periods ended at December 31, 2023, 2024, and 2025. Potential payments range from $0 to $60,000 over the three-years period. The fair value of the contingent consideration was estimated to be $19,813 as of the acquisition date.

The contingent consideration was classified as a liability and included in other long term liabilities on the Company’s condensed consolidated balance sheet, which is remeasured on a recurring basis at fair value for each reporting period. Any changes in the fair value of these contingent liabilities are included in the earnings in the condensed consolidated statements of operations and comprehensive income (loss). At June 30, 2023, the contingent consideration was remeasured to $22,372, resulting in a fair value adjustment of $2,559 and recorded in general and administrative (“G&A”) on the accompanying condensed consolidated statement of operations and comprehensive income (loss).

Drug Interaction Solutions, University of Washington ("DIDB")

On June 20, 2023, the Company entered into an asset purchase agreement with the University of Washington and completed the acquisition of Drug Interaction Solutions, including the Drug Interaction Database and related products, from The University of Washington for a total estimated consideration of $8,340. The business combination was not significant to the Company’s condensed consolidated financial statements.

The total estimated consideration includes a portion of contingent consideration that is payable over the next two years in cash, not to exceed $2,000. Future payments of contingent consideration are based on eligible revenue for the period from July 1, 2023 through June 30, 2025. The fair value of the contingent consideration was estimated to be $790 as of the acquisition date.

The current purchase price allocation is preliminary. The primary areas of the preliminary purchase price allocations that are not yet finalized relate to the fair value of certain tangible and intangible assets acquired and liabilities assumed, and residual goodwill. The Company expects to continue to obtain information to assist in determining the fair values of the net assets acquired at the acquisition date during the measurement period. Any adjustments to the preliminary purchase price allocation identified during the measurement period, which will not exceed one year from the acquisition date, will be accounted for prospectively.
Based on the Company’s preliminary purchase price allocation, approximately $330, $5,600, $360, and $2,316 of the purchase price were assigned to trademarks, database content/technology, customer relationships and goodwill, respectively.

The condensed consolidated financial statements include the operating results of each acquisition from the date of acquisition.

6. Prepaid Expenses and Other Current Assets and Other Long-Term Assets

	JUNE 30, 2023	DECEMBER 31, 2022
	(In thousands)	
Prepaid expenses	$ 8,983	$ 8,389
Income tax receivable	955	2,014
Research and development tax credit receivable	4,192	4,207
Current portion of interest rate swap asset	5,667	4,638
Other current assets	1,085	732
Prepaid expenses and other current assets	$ 20,882	$ 19,980

Other long-term assets consisted of the following:

	JUNE 30, 2023	DECEMBER 31, 2022
	(In thousands)	
Long-term deposits	$ 1,170	$ 1,150
Interest rate swap asset - long-term	3,523	3,736
Deferred financing cost	590	729
Total other long-term assets	$ 5,283	$ 5,615

7. Long-Term Debt and Revolving Line of Credit

The Company has been a party to a Credit Agreement since August 2017 that provides for a senior secured term loan and commitments under a revolving credit facility. The agreement was modified several times. The Company and the lenders modified the Credit Agreement on June 17, 2021, which provides for, among other things, (i) the extension of the termination date applicable to the revolving credit commitments to August 2025, (ii) the extension of the maturity date applicable to the term loans under the Credit Agreement to August 2026, and (iii) an increase of approximately $80,000 in commitments available under the revolving line of credit (resulting in an aggregate amount of commitments of $100,000). The term loan under this amendment has substantially the same terms as the existing term loans and revolving credit commitments. The Credit Agreement is collateralized by substantially all U.S. assets and stock pledges for the non-U.S. subsidiaries and contains various financial and nonfinancial covenants.

As of June 30, 2023 and December 31, 2022, available borrowings under the revolving lines of credit were $100,000. Available borrowings under the revolving lines of credit as of June 30, 2023 and December 31, 2022 were reduced by $120 and $120, respectively, of standby letters of credit issued to a landlord in lieu of a security deposit in addition to any outstanding borrowings.

Borrowings under the Credit Agreement were subject to a variable interest rate at LIBOR plus a margin. The applicable margins were based on achieving certain levels of compliance with financial covenants. Due to the cessation of LIBOR, the Company signed a LIBOR transition amendment on June 26 2023, agreeing to replace LIBOR with the Secured Overnight Funding Rate ("SOFR"). In order to make SOFR similar to LIBOR in terms of the overall interest rate being earned by the lenders under the Credit Agreement, a Credit Spread Adjustment ("CSA") is added to the SOFR. The CSA varied depending on the selected interest period.

to adopt a new benchmark interest rate determined in accordance with the Credit Agreement dated June 17, 2021, in order to replace LIBOR, as LIBOR settings are no longer be provided.

The effective interest rate was 8.38% and 3.98% for the six months ended June 30, 2023 and 2022 for the term loan debt. As discussed previously, the Company entered into interest rate swap agreements to mitigate the interest risk.

Interest incurred on the Credit Agreement with respect to the term loan amounted to $6,465, $3,241, $12,439, and $5,978 for the three and six months ended June 30, 2023 and 2022, respectively. Accrued interest payable on the Credit Agreement with respect to the term loan amounted to $2,291 and $130 at June 30, 2023 and December 31, 2022, respectively, and is included in accrued expenses. Interest incurred on the Credit Agreement with respect to the revolving line of credit was $64 and $128 for both the three and six months ended June 30, 2023 and 2022, respectively. There was $1 and $66 accrued interest payable on the revolving line of credit at June 30, 2023 and December 31, 2022, respectively.

Long-term debt consists of the following:

	JUNE 30, 2023	DECEMBER 31, 2022
	(In thousands)	
Term loans	$ 295,960	$ 297,470
Revolving line of credit	—	—
Less: debt issuance costs	(3,836)	(4,462)
Total	292,124	293,008
Current portion of long-term debt	(3,020)	(3,020)
Long-term debt, net of current portion and debt issuance costs	$ 289,104	$ 289,988

The principal amount of long-term debt outstanding as of June 30, 2023 matures in the following years:

	Remainder of 2023	2024	2025	2026	TOTAL
			(In thousands)		
Maturities	$ 1,510	$ 3,020	$ 3,020	$ 288,410	$ 295,960

The Credit Agreement 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, 2022, the Company was not required to make a mandatory prepayment on the term loan. For the Credit Agreement, the Company is required to make a quarterly principal payment of $755 on the term loan each quarter starting September 30, 2021.

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.

8. Leases

The Company leases certain office facilities and equipment under non-cancelable operating and finance leases with remaining terms from one to six years.

Operating lease right-of-use ("ROU") assets are included in other assets while finance lease ROU assets are included in property and equipment, net in the condensed consolidated balance sheets. With respect to operating lease liabilities, current operating lease liabilities are included in other current liabilities and non-current operating lease liabilities are included in long-term liabilities in the condensed consolidated balance sheets. Current finance lease liabilities are included in other current liabilities in the condensed consolidated balance sheets. At June 30, 2023, the weighted average remaining lease terms were 3.61 years for operating and finance leases, respectively; the weighted average discount rate was 3.41% for operating leases. For additional information on the Company's leases, see Note 14 to the condensed consolidated financial statements included in the Company's 2022 Annual Report.

The following table summarizes the lease-related assets and liabilities recorded in the condensed consolidated balance sheets at June 30, 2023 and December 31, 2022:

Lease Position	Balance Sheet Classification	JUNE 30, 2023	DECEMBER 31, 2022
		(In thousands)	
Assets			
Operating lease assets	Operating lease right-of-use assets	$ 12,326	$ 14,427
Finance lease assets	Property and equipment, net	—	24
Total lease assets		$ 12,326	$ 14,451
Liabilities			
Current			
Operating	Other current liabilities	$ 4,645	$ 4,968
Finance	Other current liabilities	—	25
Noncurrent			
Operating	Operating lease liabilities, net of current portion	8,285	10,133
Total lease liabilities		$ 12,930	$ 15,126

The following table summarizes by year the maturities of our minimum lease payments as of June 30, 2023.

	OPERATING LEASES
	(In thousands)
Remainder of 2023	$ 2,820
2024	4,118
2025	3,338
2026	2,133
2027	920
Thereafter	706
Total future lease payments	14,035
Less: imputed interest	(1,105)
Total	$ 12,930

9. Accrued Expenses and Other Liabilities

Accrued expenses consist of the following:

	JUNE 30, 2023	DECEMBER 31, 2022
	(In thousands)	
Accrued compensation	$ 19,239	$ 29,518
Legal and professional accruals	1,150	1,297
Interest payable	2,276	176
Income taxes payable	6,537	2,223
Short-term contingent liabilities	7,479	—
Accrued business acquisition liabilities	700	700
Other	1,273	1,489
Total accrued expenses	$ 38,654	$ 35,403

Other long-term liabilities consist of the following:

	JUNE 30, 2023	DECEMBER 31, 2022
	(In thousands)	
Uncertain tax position liability	$ 2,345	$ 2,308
Contingent consideration	15,683	19,813
Total other long-term liabilities	$ 18,028	$ 22,121

10. Equity-Based Compensation

The Company’s equity-based compensation programs are intended to attract, retain and provide incentives for employees, officers and directors. The Company has the following stock-based compensation plans and programs.

Restricted Stock

The majority of the Company’s restricted stock awarded to its employees was originally issued on December 10, 2020 in exchange for the Class B Profits Interest Unit (the “Class B Units”) of EQT, which was the former parent of the Company.

Share-based compensation for the restricted stock exchanged for the time-based Class B Units is recognized on a straight-line basis over the requisite service period of the award, which is generally five years. Share-based compensation for the restricted stock exchanged for the performance-based Class B Units is recognized using the accelerated attribution approach.

In 2021, the Company granted 87,127 replacement shares of restricted stock in connection with the Pinnacle acquisition under which equity-based awards are outstanding. The fair value of the restricted stock awarded was initially based on the fair value of our common stock on the date of grant, then adjusted for time restrictions due to unregistered shares and lack of marketability. Total grant date fair value was $2,762. The restricted stock issued in 2021 generally has a three-year vesting period except for one holder whose shares vest equally on a monthly basis for two years.

	SHARES	WEIGHTED-AVERAGE GRANT DATE FAIR VALUE
Non-vested restricted stock as of December 31, 2022	1,402,813	$ 23.27
Granted	—	—
Vested*	(412,544)	23.27
Forfeited	(124,943)	23.00
Non-vested restricted stock as of June 30, 2023	865,326	$ 23.31

- The number of the restricted stock vested includes 3,726 shares that were withheld on behalf of employees to satisfy the statutory tax withholding requirements.

Equity-based compensation expenses (income) related to the restricted stock exchanged for performance-based Class B Units were $(491) , $1,957, $164, and $4,077 for the three and six months ended June 30, 2023 and 2022, respectively. At June 30, 2023, the total unrecognized equity-based compensation expense related to outstanding restricted stock recognized using the accelerated attribution approach was $1,694, which is expected to be recognized over a weighted-average period of 17.4 months.

Equity-based compensation expenses related to the restricted stock exchanged for time-based Class B Units were $312 and $766, $810, and $1,531 for the three and six months ended June 30, 2023 and 2022, respectively. At June 30, 2023, the total unrecognized equity-based compensation expense related to outstanding restricted stock recognized using the straight-line attribution approach was $1,694, which is expected to be recognized over a weighted-average period of 22.3 months.

Equity-based employee compensation expense related to the time-based restricted stock for the Pinnacle acquisition was $292, $292, $584, and $584 for the three and six months ended June 30, 2023 and 2022, respectively. At June 30, 2023, the total unrecognized equity-based compensation expenses related to outstanding restricted stock recognized using the straight-line attribution approach was $717, which is expected to be recognized over a weighted-average period of 11.9 months.

2020 Incentive Plan

In order to align the Company's equity compensation program with public company practices, the Company's Board of Directors adopted and stockholders approved the 2020 Incentive Plan. The 2020 Incentive Plan allows for grants of non-qualified stock options, incentive stock options, restricted stock, restricted stock units ("RSUs"), and performance stock units ("PSUs") to employees, directors, officers, and consultants or advisors of the Company. The 2020 Incentive Plan allows for 20,000,000 shares (the "plan share reserve") of common stock to be issued. 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.

Restricted Stock Units ("RSU")

RSUs represent the right to receive shares of the Company's common stock at a specified date in the future. The fair value of the RSUs is based on the fair value of the underlying shares on the date of grant.

A summary of the Company's RSU activity is as follows:

	UNITS	WEIGHTED-AVERAGE GRANT DATE FAIR VALUE
Non-vested RSUs as of December 31, 2022	2,005,095	$ 24.71
Granted*	1,602,648	24.02
Vested**	(677,393)	23.80
Forfeited	(223,230)	23.40
Non-vested RSUs as of June 30, 2023	2,707,120	$ 24.63

* The majority shares granted during 2023 were issued on April 1, 2023 under the 2020 Incentive Plan.

** The number of the RSUs vested includes 240,276 shares that were withheld on behalf of employees to satisfy the statutory tax withholding requirements. The vested shares included 9,324 shares vested but deferred in connection with our director deferral plan.

Equity-based compensation expenses related to the RSUs were $7,325, $5,838, $12,137, and $9,226 for three and six months ended June 30, 2023 and 2022, respectively. At June 30, 2023, the total unrecognized equity-based compensation expense related to outstanding RSUs was $56,259, which is expected to be recognized over a weighted-average period of 26.3 months.

Performance Stock Units ("PSU")

PSUs granted in April 2021, 2022, and 2023 were issued under the 2020 Incentive Plan and represent the right to receive shares of the Company's common stock at a specified date in the future based on the satisfaction of various service conditions and the achievement of certain performance thresholds for individual PSU plans including year over year revenue growth, unlevered free cash flow growth, annual revenue, and annual EBITDA. The PSUs granted in 2023 also contains a market condition.

Share-based compensation for the PSUs is only recognized to the extent a threshold is probable of being achieved and is recognized using the accelerated attribution approach. The Company will continue to assess the probability of each condition being achieved at each reporting period to determine whether and when to recognize compensation cost.

A summary of the Company's PSU activity for the period ended June 30, 2023 is as follows:

	UNITS	WEIGHTED-AVERAGE GRANT DATE FAIR VALUE
Non-vested PSUs as of December 31, 2022	654,308	$ 23.99
Granted	467,264	27.31
Vested	(18,437)	24.83
Forfeited	(94,054)	25.71
Non-vested PSUs as of June 30, 2023	1,009,081	$ 25.35

Equity-based compensation expenses related to the PSUs were $(3,828), $648, $(1,542), and $1,595 for the three and six months ended at June 30, 2023 and 2022, respectively. At June 30, 2023, the total unrecognized equity-based compensation expense related to outstanding PSUs was $1,692, which is expected to be recognized over a weighted-average period of 12.2 months.

The following table summarizes the components of total equity-based compensation expense included in the condensed consolidated statements of operations and comprehensive income (loss) for each period presented:

	THREE MONTHS ENDED JUNE 30,		SIX MONTHS ENDED JUNE 30,	
	2023	2022	2023	2022
	(In thousands)			
Cost of revenues	$ 3,088	$ 2,657	$ 5,130	$ 4,380
Sales and marketing	548	850	929	1,510
Research and development	1,220	1,785	2,870	3,158
General and administrative	(1,246)	4,209	3,224	7,966
Total	$ 3,610	$ 9,501	$ 12,153	$ 17,014

11. Commitments and Contingencies

Contingent consideration

In connection with the Vyasa and DIDB acquisitions, the Company is required to pay additional consideration if the acquired businesses achieve certain eligible revenue thresholds for certain periods. The maximum contingent considerations for Vyasa and DIDB to be earned are $60,000 and $2,000, respectively. The fair value of the contingent consideration was $23,162 and $19,813 at June 30, 2023 and December 31, 2022, respectively.

Legal proceedings

The Company does not have any pending or threatened litigation which, individually or in the aggregate, would have a material adverse effect on its condensed consolidated financial statements as of June 30, 2023.

Assurance-type warranty

The Company includes an assurance commitment warranting that 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 application software, warranty costs have historically been insignificant and expensed as incurred.

For information related to commitments for future minimum lease payments, please see Note 8 – Leases.

12. 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 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 three and six months ended June 30, 2023 and 2022:

	THREE MONTHS ENDED JUNE 30,		SIX MONTHS ENDED JUNE 30,	
	2023	2022	2023	2022
	(In thousands)			
Revenue[(1)]:				
Americas	$ 68,167	$ 62,633	$ 135,190	$ 122,417
EMEA	15,110	13,623	32,025	29,557
Asia Pacific	7,173	6,504	13,536	12,337
Total	$ 90,450	$ 82,760	$ 180,751	$ 164,311

(1) Revenue is attributable to the countries based on the location of the customer.

13. Income Taxes

The Company generally records its interim tax provision based upon a projection of the Company's 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 changes in these factor.

The Company's global ETR for the three and six months ended June 30, 2023 and 2022 were 44%, 121%, 44%, and 75%, respectively, including discrete tax items. The current year decrease in the ETR was principally due to the relative mix of domestic and international earnings.

14. Earnings per Share

Basic earnings per share is computed by dividing net income (loss) attributable to common stockholders by the weighted-average common shares outstanding for the period. 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 dilutive potential common shares during the period.

	THREE MONTHS ENDED JUNE 30,		SIX MONTHS ENDED JUNE 30,	
	2023	2022	2023	2022
Basic earnings per share				
Net income (loss) available to common shareholders	$ 4,706	$ (589)	$ 6,064	$ 1,621
Basic weighted-average common shares outstanding	158,955,822	156,478,724	158,568,575	156,209,335
Basic earnings per common share	$ 0.03	$ 0.00	$ 0.04	$ 0.01
Diluted earnings per share				
Net income (loss) available to common shares	$ 4,706	$ (589)	$ 6,064	$ 1,621
Basic weighted-average common shares outstanding	158,955,822	156,478,724	158,568,575	156,209,335
Dilutive potential common shares	951,150	—	1,249,113	3,084,027
Diluted weighted-average common shares outstanding	159,906,972	156,478,724	159,817,688	159,293,362
Diluted earnings per common share	$ 0.03	$ 0.00	$ 0.04	$ 0.01

Item 2. 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 the unaudited condensed consolidated financial statements and the related notes thereto included elsewhere in this Quarterly Report and our 2022 Annual Report. 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 Quarterly Report, particularly in the sections "Special Note Regarding Forward-Looking Statements" and "Risk Factors" of this Quarterly Report.

We intend the discussion of our financial condition and results of operations that follows to provide information that will assist the reader in understanding our condensed consolidated financial statements, the changes in certain key items in those financial statements from period to period, and the primary factors that accounted for those changes, as well as how certain accounting principles, policies and estimates affect our condensed consolidated financial statements.

Executive Overview

We accelerate medicines to patients using biosimulation software, technology, and services 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 2022 revenue, we provide an integrated, end-to-end platform used by more than 2,300 clients including biopharmaceutical companies, regulatory agencies and academic institutions across 70 countries, including 39 of the top 40 biopharmaceutical companies by research and development spend in 2021. Since 2014, customers who use our biosimulation software and technology-driven services have received 90% of all new drug approvals by the FDA. Moreover, 20 global regulatory authorities license our biosimulation software to independently analyze, verify, and review regulatory submissions, including the FDA, Health Canada, Japan's Pharmaceuticals and Medical Devices Agency, and UK's Medicines and Healthcare Products Regulatory Agency.

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. Many of our solutions are underpinned by artificial intelligence (machine learning) and SaaS-based value communication tools. 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 and market access 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 300 regulatory submissions over the past five years. Our team of regulatory professionals has extensive experience applying industry guidelines and global regulatory requirements.

With continued innovation in and adoption of our biosimulation software, technology, and 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 the safety and efficacy of medicines for all patients.

Public Offerings and Other Key Shareholders Transactions

On August 11, 2022, the Company completed a secondary public offering in which certain selling stockholders, including EQT, sold 7,000,000 shares of the Company's common stock. The Company did not offer any common stock in this transaction and did not receive any proceeds from the sale of the shares of common stock by the selling stockholders. The Company incurred costs of $0.6 million, recorded in general and administrative expenses, in relation to the secondary public offering.

On December 8, 2022, Arsenal acquired an aggregate of 29,954,521 shares of our common stock from EQT at a price of $15.00 per share. In connection with this transaction, we entered into (i) a letter agreement, effective December 8, 2022, with Arsenal providing that, subject to certain exceptions, Arsenal is prohibited from transferring the acquired shares until December 8, 2024; (ii) a stockholders agreement with Arsenal, effective December 8, 2022, which, among other things, grants certain conditional rights to Arsenal to nominate up to two directors to our Board; and (iii) a Registration Rights Agreement, which contains provisions that entitle Arsenal to certain rights to have their securities registered by the Company under the Securities Act.

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 the estimated annual contract value of 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.

- ***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:

	2023		2022	
	Q1	Q2	Q1	Q2
	(in millions)			
Bookings	112.7	85.9	108.5	100.3
Renewal Rate	90 %	93 %	92 %	92 %

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 in (i) scientific talent to expand our ability to deliver solutions across the drug development spectrum; (ii) sales and marketing to promote our solutions to new and existing customers and in existing and expanded geographies; (iii) research and development to support existing solutions and innovate new technology; (iv) other operational and administrative functions to support our expected growth; and (v) complementary business. We expect that our headcount will increase over time and also expect our total operating expenses will continue to increase over time.

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 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-driven 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, who may also offer more traditional methods of drug development and clinical trial design that are used in lieu of biosimulation. 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 a 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.

Macroeconomic challenges

Uncertain macroeconomic conditions, including higher inflation, rising interest rates and instability in the financial system, geopolitical conflicts, and the residual effects of the COVID-19 pandemic, may pose challenges to our business. We believe that any impacts these conditions may have on our business would be transitory and that we are well-equipped to manage them going forward.

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, adjusted net income, and adjusted diluted earnings per share, 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 filing 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. Management also measures operating performance based on adjusted net income defined for a particular period as net income (loss) excluding, equity-based compensation expense, amortization of acquisition-related intangible assets, acquisition and integration expense, and other items not indicative of our ongoing operating performance. Further, management measures operating performance based on adjusted diluted earnings per share defined for a particular period as adjusted net income divided by the weighted-average diluted common shares outstanding.

We believe adjusted EBITDA, adjusted net income, and adjusted diluted earnings per share are helpful to investors, analysts, and other interested parties because they can assist in providing a more consistent and comparable overview of our operations across our historical periods. In addition, these measures are frequently used by analysts, investors, and other interested parties to evaluate and assess performance.

Adjusted EBITDA, adjusted net income, and adjusted diluted earnings per share are non-GAAP measures and are 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, adjusted net income and adjusted diluted earnings per share have certain limitations in that they do not include the impact of certain expenses that are reflected in our condensed consolidated statements of operations and comprehensive income (loss) that are necessary to run our business. Other companies, including other companies in our industry, may not use these measures and may calculate both differently than as presented, limiting the usefulness as a comparative measure.

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

	THREE MONTHS ENDED JUNE 30,		SIX MONTHS ENDED JUNE 30,	
	2023	2022	2023	2022
	(in thousands)			
Net income (loss)(a)	$ 4,706	$ (589)	$ 6,064	$ 1,621
Interest expense(a)	5,668	3,879	11,143	7,107
Interest income(a)	(2,210)	(14)	(3,564)	(25)
Provision for income taxes(a)	3,675	3,380	4,786	4,916
Depreciation and amortization expense(a)	361	422	772	904
Intangible asset amortization(a)	13,173	12,711	26,286	25,161
Currency (gain) loss(a)	1,120	(2,558)	2,014	(3,263)
Equity-based compensation expense(b)	3,610	9,501	12,153	17,014
Change in fair value of contingent consideration(d)	1,298	—	2,559	—
Acquisition-related expenses(e)	692	806	1,884	1,078
Integration expense(f)	55	—	157	—
Transaction-related expenses(g)	—	111	—	128
Loss on disposal of fixed assets(h)	25	2	29	7
Executive recruiting expense(i)	200	—	396	—
First-year Sarbanes-Oxley implementation costs(j)	—	308	—	961
Adjusted EBITDA	$ 32,373	$ 27,959	$ 64,679	$ 55,609

The following table reconciles net income (loss) to adjusted net income:

	THREE MONTHS ENDED JUNE 30,		SIX MONTHS ENDED JUNE 30,	
	2023	2022	2023	2022
	(in thousands)			
Net income (loss) (a)	$ 4,706	$ (589)	$ 6,064	$ 1,621
Currency (gain) loss(a)	1,120	(2,558)	2,014	(3,263)
Equity-based compensation expense(b)	3,610	9,501	12,153	17,014
Amortization of acquisition-related intangible assets(c)	11,259	11,099	22,515	21,979
Change in fair value of contingent consideration(d)	1,298	—	2,559	—
Acquisition-related expenses(e)	692	806	1,884	1,078
Integration expense(f)	55	—	157	—
Transaction-related expenses(g)	—	111	—	128
Loss on disposal of fixed assets(h)	25	2	29	7
Executive recruiting expense(i)	200	—	396	—
First-year Sarbanes-Oxley implementation costs(j)	—	308	—	961
Income tax expense impact of adjustments(k)	(4,602)	(4,063)	(10,097)	(7,979)
Adjusted net income	$ 18,363	$ 14,617	$ 37,674	$ 31,546

The following table reconciles diluted earnings per share to adjusted diluted earnings per share:

	THREE MONTHS ENDED JUNE 30,		SIX MONTHS ENDED JUNE 30,	
	2023	2022	2023	2022
	(in thousands except share and per share data)			
Diluted earnings per share(a)	$ 0.03	$ —	$ 0.04	$ 0.01
Currency (gain) loss(a)	0.01	(0.02)	0.01	(0.02)
Equity-based compensation expense(b)	0.02	0.06	0.08	0.11
Amortization of acquisition-related intangible assets(c)	0.07	0.06	0.14	0.13
Change in fair value of contingent consideration(d)	0.01	—	0.02	—
Acquisition-related expenses(e)	0.01	0.01	0.01	0.01
Integration expense(f)	—	—	—	—
Transaction-related expenses(g)	—	—	—	—
Loss on disposal of fixed assets(h)	—	—	—	—
Executive recruiting expense(i)	—	—	—	—
First-year Sarbanes-Oxley implementation costs(j)	—	0.01	—	0.01
Income tax expense impact of adjustments(k)	(0.03)	(0.03)	(0.06)	(0.05)
Adjusted diluted earnings per share	$ 0.12	$ 0.09	$ 0.24	$ 0.20
Basic weighted average common shares outstanding	158,955,822	156,478,724	158,568,575	156,209,335
Effect of potentially dilutive shares outstanding [l]	951,150	2,946,216	1,249,113	3,084,027
Adjusted diluted weighted average common shares outstanding	159,906,972	159,424,940	159,817,688	159,293,362

(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 amortization costs associated with acquired intangible assets in connection with business acquisitions.

(d) Represents expense associated with remeasuring fair value of contingent consideration of business acquisition.

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

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

(g) Represents costs associated with our public offerings that are not capitalized.

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

(i) Represents recruiting and relocation expenses related to hiring senior executives.

(j) Represents the first-year Sarbanes-Oxley costs for accounting and consulting fees related to the Company's preparation to comply with Section 404 of the Sarbanes-Oxley Act, as well as implementation cost of adopting ASC 842.

(k) Represents the income tax effect of the non-GAAP adjustments calculated using the applicable statutory rate by jurisdiction.

(l) Represents potentially dilutive shares that were included from our GAAP diluted weighted average common shares outstanding.

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 up front, 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 condensed 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-driven 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

Cost of revenues consists primarily of employee related expenses, equity-based compensation, the costs of third-party subcontractors, travel costs, distributor fees, amortization of capitalized software and allocated overhead. We may add or expand computing infrastructure service providers, make additional investments in the availability and security of our solutions, or add resources to support our growth.

Operating Expenses

- ***Sales and Marketing***. Sales and marketing expense consists primarily of employee-related expenses, equity-based compensation, 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 consist primarily of employee-related expenses, equity-based compensation, 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.

- ***Intangible Asset Amortization***. Intangible asset amortization consists primarily of amortization expense related to intangible assets recorded in connection with acquisitions and amortization of capitalized 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 Agreement, including amortization of debt issuance costs and discounts.

- ***Net Other Income (Expense)***. Net other income (expense) consists of miscellaneous non-operating expenses primarily comprised of interest income and 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 more profitable.

Acquisitions

Since our inception, and as of June 30, 2023, we have completed 18 acquisitions, of which 13 have included software or technology. Details of acquisitions that have closed since the beginning of fiscal year 2022 are provided below. 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.

Integrated Nonclinical Development Solutions, Inc.

On January 3, 2022, we completed the acquisition of INDS for a total consideration of $8.0 million, which qualified as a business combination. The business combination was not significant to our consolidated financial statements. Based on the purchase price allocation, approximately $2.4 million, $1.0 million, $0.1 million, and $2.9 million of the purchase price were assigned to customer relationships, developed technology, non-compete agreements, and goodwill, respectively.

Vyasa Analytics, LLC

On December 28, 2022, the Company completed the acquisition of Vyasa, a company that provides an AI-powered, scalable deep learning software and analytics platform for organizations within healthcare and life sciences, higher education and state and local governments for total estimated consideration of $29.3 million. The business combination was not significant to the Company’s condensed consolidated financial statements.

Based on the Company’s purchase price allocation, approximately $11.4 million, $1.5 million, $0.1 million, $0.1 million and $16.6 million of the purchase price were assigned to developed technology, customer relationships, trademarks, non-compete agreements and goodwill, respectively.

The fair value of the contingent consideration was estimated to be $19.8 million as of the acquisition date. The contingent consideration was classified as a liability and included in accrued liabilities and other long-term liabilities on the Company’s condensed consolidated balance sheet, which is remeasured on a recurring basis at fair value for each reporting period. Any changes in the fair value of these contingent liabilities are included in the earnings in the condensed consolidated statements of operations and comprehensive income (loss). At June 30, 2023, the contingent consideration was remeasured to $22.4 million, resulting in $2.6 million adjustment to fair value.

Drug Interaction Solutions, University of Washington ("DIDB")

On June 20, 2023, the Company entered into an asset purchase agreement with the University of Washington and completed the acquisition of Drug Interaction Solutions, including the Drug Interaction Database and related products, from the University of Washington for total estimated consideration of $8.3 million. The business combination was not significant to the Company's condensed consolidated financial statements.

The total estimated consideration includes a portion of contingent consideration that is payable over the next two years in cash, not to exceed $2.0 million. Future payments of contingent consideration are based on eligible revenue for the period from July 1, 2023 through June 30, 2025. The fair value of the contingent consideration was estimated to be $0.8 million as of the acquisition date.
Based on the Company's preliminary purchase price allocation, approximately $0.3 million, $5.6 million, $0.4 million, and $2.3 million of the purchase price were assigned to trademarks, database content/technology, customer relationships and goodwill, respectively. The current purchase price allocation is preliminary. Any adjustments to the preliminary purchase price allocation identified during the measurement period, which will not exceed one year from the acquisition date, will be accounted for prospectively.

For more information about our acquisitions, see Note 5. "Business Combinations" in the notes to the condensed consolidated financial statements.

Results of Operations

We have included the results of operations of acquired companies in our condensed 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 three and six months ended June 30, 2023 to the three and six months ended at June 30, 2022.

Three Months Ended June 30, 2023 Versus Three Months Ended June 30, 2022

The following table summarizes our unaudited statements of operations data for the three months ended June 30, 2023 and 2022:

Revenues

	THREE MONTHS ENDED JUNE 30,		CHANGE	
	2023	2022	$	%
	(in thousands)			
Software	$ 33,723	$ 28,724	$ 4,999	17 %
Services	56,727	54,036	2,691	5 %
Total revenues	$ 90,450	$ 82,760	$ 7,690	9 %

Revenues increased $7.7 million, or 9%, to $90.5 million for the three months ended June 30, 2023 as compared to the same period in 2022. The overall increase in revenues was primarily due to growth in our technology-driven services and software product offerings from strong demand within existing customers, client expansions, and new customers. The increase was partially offset by a decline in regulatory revenue.

Software revenues increased $5.0 million, or 17%, to $33.7 million for the three months ended June 30, 2023 as compared to the same period in 2022, primarily driven by strong demand within existing customers, new product introductions, and expanding relationships with customers.

Services revenues increased $2.7 million, or 5% to $56.7 million for the three months ended June 30, 2023, as compared to the same period in 2022. The growth in overall services revenue is primarily attributable to continued growth in biosimulation. The increase was partially offset by a decline in Regulatory revenue.

Cost of Revenues

	THREE MONTHS ENDED JUNE 30,		CHANGE	
	2023	2022	$	%
	(in thousands)			
Cost of revenues	$ 36,224	$ 35,194	$ 1,030	3 %

Cost of revenues increased by $1.0 million, or 3%, to $36.2 million for the three months ended June 30, 2023 as compared to the same period in 2022. The increase was primarily due to a $0.6 million increase in employee-related costs resulting from billable head count growth, a $0.4 million increase in stock-based compensation costs, a $0.2 million increase in intangible assets amortization, a $0.1 million increase in equipment, and a $0.1 million increase in travel expenses,partially offset by a $0.5 million decrease in professional and consulting costs.

Sales and Marketing Expenses

	THREE MONTHS ENDED JUNE 30,		CHANGE	
	2023	2022	$	%
	(in thousands)			
Sales and marketing	$ 8,111	$ 7,121	$ 990	14 %
% of total revenues	9 %	9 %		

Sales and marketing expenses increased by $1.0 million, or 14%, to $8.1 million for the three months ended June 30, 2023 as compared to the same period in 2022. Sales and marketing expenses increased primarily due to a $0.9 million increase in employee-related costs primarily resulting from head count growth, a $0.2 million increase in marketing, and a $0.1 million increase in travel costs, partially offset by a $0.3 million decrease in stock-based compensation costs.

Research and Development Expenses

	THREE MONTHS ENDED JUNE 30,		CHANGE	
	2023	2022	$	%
	(in thousands)			
Research and development	$ 7,888	$ 7,741	$ 147	2 %
% of total revenues	9 %	9 %		

Research and development expenses increased by $0.1 million, or 2%, to $7.9 million for the three months ended June 30, 2023, as compared to the same period in 2022. The change in research and development expenses was primarily due to a $1.5 million increase in employee-related costs primarily resulting from head count growth, partially offset by a $0.8 million increase in capitalized cost in R&D and a $0.6 million decrease in stock-based compensation cost.

General and Administrative Expenses

	THREE MONTHS ENDED JUNE 30,		CHANGE	
	2023	2022	$	%
	(in thousands)			
General and administrative	$ 14,245	$ 17,778	$ (3,533)	(20)%
% of total revenues	16 %	21 %		

General and administrative expenses decreased by $3.5 million, or 20%, to $14.2 million for the three months ended June 30, 2023 as compared to the same period in 2022. The decrease in general and administrative expenses was primarily due to a $5.5 million decrease in stock-based compensation costs, a $0.3 million decrease in first-year Sarbanes-Oxley implementation costs, and a $0.3 million decrease in insurance expense, partially offset by a $1.3 million increase related to change in the fair value of contingent consideration, a $0.4 increase in equipment expenses, a $0.4 million increase in employee-related costs, a $0.2 increase in travel expenses, and a $0.2 million increase in executive recruiting expense.

Intangible Asset Amortization

	THREE MONTHS ENDED JUNE 30,		CHANGE	
	2023	2022	$	%
	(in thousands)			
Intangible asset amortization	$ 10,582	$ 10,355	$ 227	2 %
% of total revenues	12 %	13 %		

Intangible asset amortization expense increased by $0.2 million, or 2%, to $10.6 million for the three months ended June 30, 2023, as compared to the same period in 2022. The increase in intangible asset amortization expense was primarily due to higher amortization expense from capitalized software.

Depreciation and Amortization Expense

	THREE MONTHS ENDED JUNE 30,		CHANGE	
	2023	2022	$	%
	(in thousands)			
Depreciation and amortization	$ 361	$ 422	$ (61)	(14)%
% of total revenues	— %	1 %		

Depreciation and amortization expense of $0.4 million was relatively flat for the three months ended June 30, 2023, as compared to the same period in 2022.

Interest Expense

	THREE MONTHS ENDED JUNE 30,		CHANGE	
	2023	2022	$	%
	(in thousands)			
Interest expense	$ 5,668	$ 3,879	$ 1,789	46 %
% of total revenues	6 %	5 %		

Interest expense increased by $1.8 million, or 46%, to $5.7 million for the three months ended June 30, 20232 as compared to the same period in 2022. The increase in interest expense was primarily due to an increase in market interest rates reflected on our term loan floating rate debt. The increase in interest expense was partially offset by a $1.3 million gain from interest swap hedge activities.

Net other income

	THREE MONTHS ENDED JUNE 30,		CHANGE	
	2023	2022	$	%
	(in thousands)			
Net other income	$ (1,010)	$ (2,521)	$ 1,511	(60)%
% of total revenues	(1)%	(3)%		

Net other income decreased by $1.5 million, to $1.0 million for the three months ended June 30, 2023 as compared to the same period in 2022. The decrease in net other income was primarily due to a $3.7 million increase in remeasurement losses related to the fluctuation of foreign currency exchange rates. The decrease in net other income was partially offset by a $2.2 million increase in interest income primarily from cash investments.

Provision for Income Taxes

	THREE MONTHS ENDED JUNE 30,		CHANGE	
	2023	2022	$	%
	(in thousands)			
Provision for income taxes	$ 3,675	$ 3,380	$ 295	9 %
Effective income tax rate	44 %	121 %		

Income tax expense was $3.7 million, resulting in an effective income tax rate of 44% for the three months ended June 30, 2023 as compared to an income tax expense of $3.4 million, or an effective income tax rate of 121%, for the same period in 2022. Our income tax expense for the three months ended June 30, 2023 and 2022 was primarily due to the tax effects of U.S. pre-tax income, the relative mix of domestic and international earnings, the impact of non-deductible items, adjustments to the valuation allowances, the effects of tax elections made for U.K. earnings, and discrete tax items.

Net Income (loss)

	THREE MONTHS ENDED JUNE 30,		CHANGE	
	2023	2022	$	%
	(in thousands)			
Net income (loss)	$ 4,706	$ (589)	$ 5,295	899 %

Net income was $4.7 million representing a $5.3 million increase in net income for the three months ended June 30, 2023 as compared to a net loss of $0.6 million in the same period of 2022. The increase in net income was primarily due to a $7.7 million increase in total revenue, a $2.2 million increase in interest income, and a $2.2 million decrease in operating expense, partially offset by a $3.7 million increase in remeasurement losses related to the fluctuation of foreign currency exchange rates, $1.8 million increase in interest expense, a $1.0 million increase in cost of revenue, and a $0.3 million increase in tax expense.

Six Months Ended June 30, 2023 Versus Six Months Ended June 30, 2022

The following table summarizes our unaudited statements of operations data for the six months ended June 30, 2023 and 2022:

Revenues

	SIX MONTHS ENDED JUNE 30,		CHANGE	
	2023	2022	$	%
	(in thousands)			
Software	$ 66,728	$ 57,917	$ 8,811	15 %
Services	114,023	106,394	7,629	7 %
Total revenues	$ 180,751	$ 164,311	$ 16,440	10 %

Revenues increased $16.4 million, or 10%, to $180.8 million for the six months ended June 30, 2023 as compared to the same period in 2022. The increase in revenues was primarily due to growth in our technology-driven services and software product offerings from strong demand within existing customers, client expansions, and new customers. The increase was partially offset by the negative impact on our revenue from the fluctuation of the foreign currency exchange rates and a decline in Regulatory revenue.

Software revenues increased $8.8 million, or 15%, to $66.7 million for the six months ended June 30, 2023 as compared to the same period in 2022. The overall growth is primarily attributable to growth in strong demand within existing customers, new product introductions, and expanding relationships with customers. The increase was partially offset by the negative impact on our revenue from the fluctuation of the foreign currency exchange rates.

Services revenues increased $7.6 million, or 7%, to $114.0 million for the six months ended June 30, 2023 as compared to the same period in 2022. The growth in overall services revenue is primarily attributable to continued growth in biosimulation. The increase was partially offset by the negative impact on our revenue from the fluctuation of the foreign currency exchange rates and a decline in Regulatory revenue.

Cost of Revenues

	SIX MONTHS ENDED JUNE 30,		CHANGE	
	2023	2022	$	%
	(in thousands)			
Cost of revenues	$ 71,080	$ 67,983	$ 3,097	5 %

Cost of revenues increased by $3.1 million, or 5%, to $71.1 million for the six months ended June 30, 2023 as compared to the same period in 2022. The increase was primarily due to a $1.9 million increase in employee-related costs resulting from billable head count growth, a $0.7 million increase in stock-based compensation costs, a $0.5 million increase in intangible assets amortization, a $0.4 million increase in travel, and a $0.2 million increase in equipment, partially offset by a $0.6 million decrease in expenses of consulting and professional services and other miscellaneous operation expenses.

Sales and Marketing Expenses

	SIX MONTHS ENDED JUNE 30,		CHANGE	
	2023	2022	$	%
	(in thousands)			
Sales and marketing	$ 16,113	$ 13,232	$ 2,881	22 %
% of total revenues	9 %	8 %		

Sales and marketing expenses increased by $2.9 million, or 22%, to $16.1 million for the six months ended June 30, 2023 as compared to the same period in 2022. Sales and marketing expenses increased primarily due to a $2.5 million increase in employee-related costs resulting from head count growth, a $0.5 million increase in travel, a $0.3 million increase in marketing, and a $0.1 million increase in consulting and professional services, partially offset by a $0.6 million decrease in stock-based compensation cost.

Research and Development Expenses

	SIX MONTHS ENDED JUNE 30,		CHANGE	
	2023	2022	$	%
	(in thousands)			
Research and development	$ 17,175	$ 15,289	$ 1,886	12 %
% of total revenues	10 %	9 %		

Research and development expenses increased by $1.9 million, or 12%, to $17.2 million for the six months ended June 30, 2023 as compared to the same period in 2022. The increase in research and development expenses was primarily due to a $3.0 million increase in employee-related costs primarily resulting from headcount growth, partially offset by a $0.9 million increase in capitalized cost in R&D, and a $0.3 million decrease in stock-based compensation cost.

General and Administrative Expenses

	SIX MONTHS ENDED JUNE 30,		CHANGE	
	2023	2022	$	%
	(in thousands)			
General and administrative	$ 34,017	$ 36,117	$ (2,100)	(6)%
% of total revenues	19 %	22 %		

General and administrative expenses decreased by $2.1 million, or 6%, to $34.0 million for the six months ended June 30, 2023, as compared to the same period in 2022. The decrease in general and administrative expenses was primarily due to a $4.7 million decrease in stock-based compensation costs, a $1.0 million decrease in first-year Sarbanes-Oxley implementation costs, a $0.6 million decrease in insurance expense, a $0.4 decrease in AR the allowance provision, and a $0.3 million decrease in facility and lease related expenses, partially offset by a $2.6 million increase related to the change in fair value of contingent consideration, a $0.6 million increase in employee-related costs resulting from head count growth, a $0.6 million increase in professional services expense, a $0.5 million increase in equipment expenses, a $0.4 million increase in executive recruiting expense, and a $0.3 million increase in travel expenses.

Intangible Asset Amortization

	SIX MONTHS ENDED JUNE 30,		CHANGE	
	2023	2022	$	%
	(in thousands)			
Intangible asset amortization	$ 21,117	$ 20,504	$ 613	3 %
% of total revenues	12 %	12 %		

Intangible asset amortization expense increased by $0.6 million, or 3%, to $21.1 million for the six months ended June 30, 2023 as compared to the same period in 2022. The increase in intangible asset amortization expense is primarily due to increased amortization expenses from capitalized software.

Depreciation and Amortization Expense

	SIX MONTHS ENDED JUNE 30,		CHANGE	
	2023	2022	$	%
	(in thousands)			
Depreciation and amortization	$ 772	$ 904	$ (132)	(15)%
% of total revenues	— %	1 %		

Depreciation and amortization expense decreased by $0.1 million, or 15%, to $0.8 million for the six months ended June 30, 2023, as compared to the same period in 2022. The decrease was primarily due to a decrease in depreciation and amortization from financing lease and furniture for the six months ended June 30, 2023 as compared to the same period in 2022.

Interest Expense

	SIX MONTHS ENDED JUNE 30,		CHANGE	
	2023	2022	$	%
	(in thousands)			
Interest expense	$ 11,143	$ 7,107	$ 4,036	57 %
% of total revenues	6 %	4 %		

Interest expense increased by $4.0 million, or 57%, to $11.1 million for the six months ended June 30, 2023 as compared to the same period in 2022. The increase in interest expense was primarily due to an increase in market interest rates reflected on our term loan floating rate debt. The increase in interest expense was partially offset by a $2.3 million gain from interest swap hedge activities.

Net other income

	SIX MONTHS ENDED JUNE 30,		CHANGE	
	2023	2022	$	%
	(in thousands)			
Net other income	$ (1,516)	$ (3,362)	$ 1,846	(55)%
% of total revenues	(1)%	(2)%		

Net other income decreased by $1.8 million to $1.5 million for the six months ended June 30, 2023 as compared to the same period in 2022. The decrease in net other income was primarily due to a $5.3 million increase in remeasurement losses related to the fluctuation of foreign currency exchange rates. The decrease in net other income was partially offset by a $3.5 million increase in interest income.

Provision for Income Taxes

	SIX MONTHS ENDED JUNE 30,		CHANGE	
	2023	2022	$	%
	(in thousands)			
Provision for income taxes	$ 4,786	$ 4,916	$ (130)	(3)%
Effective income tax rate	44 %	75 %		

Income tax expense was $4.8 million, resulting in an effective income tax rate of 44% for the six months ended June 30, 2023 as compared to an income tax expense of $4.9 million, or an effective income tax rate of 75%, for the same period in 2022. Our income tax expense for the six months ended June 30, 2023 and 2022 was primarily due to the tax effects of U.S. pre-tax income, the relative mix of domestic and international earnings, the impact of non-deductible items, adjustments to the valuation allowances, the effects of tax elections made for U.K. earnings, and discrete tax items.

Net Income

	SIX MONTHS ENDED JUNE 30,		CHANGE	
	2023	2022	$	%
	(in thousands)			
Net income	$ 6,064	$ 1,621	$ 4,443	274 %

Net income increased by a $4.4 million, or 274%, to $6.1 million for the six months ended June 30, 2023, as compared to a net income of $1.6 million in the same period of 2022. The $4.4 million increase in net income was primarily due to a $16.4 million increase in total revenue, a $3.5 million increase in interest income, partially offset by a $5.3 million increase in remeasurement losses related to the fluctuation of foreign currency exchange rates, a $4.0 million increase in interest expense, a $3.1 million increase in operating expenses, and a $3.1 million increase in cost of revenue,

Liquidity and Capital Resources

We have consistently generated positive cash flow from operations, providing $28.0 million and $33.1 million as a source of funds for the six months ended June 30, 2023 and 2022, respectively. Our additional liquidity comes from several sources: maintaining adequate balances of cash and cash equivalents, issuing common stock, and accessing credit facilities and revolving lines of credit. The following table provides a summary of the major sources of liquidity for the six and twelve months periods ended at June 30, 2023 and December 31, 2022 and as of June 30, 2023 and December 31, 2022.

	June 30, 2023	December 31, 2022
	(in thousands)	
Net cash from operating activities[(a)]	28,015	92,543
Cash and cash equivalents[(b)]	245,190	236,586
Term loan credit facilities	295,960	297,470
Revolving line of credit [(c)]	100,000	100,000

(a) Net cash from operating activities for six months ended at June 30, 2023 and twelve months ended at December 31, 2022.

(b) Cash balance as of June 30, 2023 and December 31, 2022 included $66.3 million and $56.4 million cash and cash equivalents, respectively, held outside of the United States.

(c) Available borrowings under the revolving lines of credits as of June 30, 2023 and December 31, 2022 were reduced by $0.1 million and $0.1 million standby letters of credit issued to a landlord in lieu of a security deposit in addition to any outstanding borrowings.

Our material cash requirements from known contractual obligations are principal and interest payments of long-term debt. We also have future cash obligations of $14.0 million for lease contracts, which have remaining terms of one to six years.

The principal amount of long-term debt outstanding as of June 30, 2023 matures in the following years:

	Remainder of 2023	2024	2025	2026	TOTAL
Maturities	$ 1,510	$ 3,020	$ 3,020	$ 288,410	$ 295,960

We assess our liquidity in terms of our ability to generate adequate amounts of cash to meet current and future needs. We believe our existing sources of liquidity will be sufficient to meet our working capital, capital expenditures, and contractual obligations for the foreseeable future. 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 believe we will meet short and longer-term expected future cash requirements and obligations through a combination of cash flows from operating activities, available cash balances, and potential future equity or debt transactions.

Our future capital requirements, however, will depend on many factors, including funding for potential acquisitions, investments, and other growth and strategic opportunities, which could increase our cash requirements. While we believe we have, and will be able to generate, sufficient liquidity to fund our operations for the foreseeable future, our sources of liquidity could be affected by factors described under “Risk Factors” in our 2022 Annual Report.

Cash Flows

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

	SIX MONTHS ENDED JUNE 30,	
	2023	2022
	(in thousands)	
Net cash provided by operating activities	$ 28,015	$ 33,062
Net cash used in investing activities	(14,462)	(11,914)
Net cash used in financing activities	(7,270)	(5,051)
Effect of foreign exchange rate changes on cash and cash equivalents, and restricted cash	2,239	(4,471)
Net increase in cash and cash equivalents, and restricted cash	$ 8,522	$ 11,626
Cash paid for interest	$ 8,255	$ 7,468
Cash paid for income taxes	$ 9,034	$ 5,558

Operating Activities

Our cash flows from operating activities primarily include net income adjusted for (i) non-cash items included in net income, such as provisions for credit losses, depreciation and amortization, stock-based compensation, deferred taxes and other non-cash items and (ii) changes in the balances of operating assets and liabilities. Net cash provided by operating activities in the first six months of 2023 was $28.0 million, compared to $33.1 million in the same period of 2022. The $5.0 million decrease in cash from operating activities was primarily due to more cash being utilized to obtain prepaid and other assets, less cash received from deferred revenues, and lower cash based net income, partially offset by higher cash collected from accounts receivable.

Investing Activities

Net cash used by investing activities in the first six months of 2023 was $14.5 million, an increase of $2.5 million, compared to $11.9 million in the same period of 2022. The change in investing activities was primarily due to a $1.7 million increase in cash payments in connection with business acquisitions, and a $1.1 million increase in cash utilized in capitalized development costs, partially offset by a $0.3 million decrease in cash utilized in capital expenditures to support our growth.

Financing Activities

Net cash used by financing activities in the first six months of 2023 was $7.3 million, compared to $5.1 million cash used in the same period of 2022. The $2.2 million decrease in cash flow in financing activities was primarily due to a $3.4 million increase in cash payments in connection with share awards vested and withheld for payroll tax, partially offset by a $1.1 million decrease in cash payments on the financing component of the interest rate swap.

Indebtedness

We have been a party to a Credit Agreement since August 2017 that provided for a senior secured term loan and commitments under a revolving credit facility. The agreement has been modified several times. The Company and the lenders modified the Credit Agreement on June 17, 2021, which provides for, among other things, (i) the extension of the termination date applicable to the revolving credit commitments under the Credit Agreement to August 2025, (ii) the extension of the maturity date applicable to the term loans under the Credit Agreement to August 2026, and (iii) an increase of approximately $80,000 in commitments available under the revolving line of credit (resulting in an aggregate amount of commitments of $100,000). The term loan under the modified Credit Agreement has substantially the same terms as the existing term loans and revolving credit commitments. The Credit Agreement is collateralized by substantially all U.S. assets and stock pledges for the non-U.S. subsidiaries and contains various financial and nonfinancial covenants.

Borrowings under the Credit Agreement were subject to a variable interest rate at LIBOR plus a margin. The applicable margins were based on achieving certain levels of compliance with financial covenants. We signed a LIBOR transition amendment in June 26, 2023, agreeing to adopt a new benchmark interest rate, SOFR, determined in accordance with the Credit Agreement, in order to replace LIBOR. In order to make SOFR similar to LIBOR in terms of the overall interest rate being earned by the lenders under the Credit Agreement, a Credit Spread Adjustment (“CSA”) is added to the SOFR. The CSA varied depending on the selected interest period.

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.

All obligations under the Credit Agreement are unconditionally guaranteed by our wholly owned direct and indirect 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 our assets and the assets of the other guarantors.

As of June 30, 2023, we had $296.0 million of outstanding borrowings on the term loan, and $100.0 million of availability under the revolving credit facility under the Credit Agreement, and outstanding letters of credit of $0.1 million under the Credit Agreement.

As of June 30, 2023, we were in compliance with the covenants of the Credit Agreement.

Contractual Obligations and Commercial Commitments

There have been no material changes to our contractual obligations during the six months ended June 30, 2023 from those disclosed in our 2022 Annual Report, except for payments made in the ordinary course of business.

Income Taxes

We recorded income tax expense of $4.8 million for the six months ended June 30, 2023 and income tax expense of $4.9 million for the six months ended June 30, 2022.

As of June 30, 2023, we had federal and state NOLs of approximately $1.8 million and $0.05 million, respectively, which are available to reduce future taxable income and expire between 2024 and 2036 and 2029 and 2040, respectively. We had federal and state R&D tax credit carryforwards of approximately $0.4 million and $0.1 million, respectively, to offset future income taxes, which expire between 2025 and 2042. We also had foreign tax credits of approximately $10.6 million, which will start to expire in 2027. 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 $65.8 million which will start to expire in 2023, foreign research and development credits of $0.3 million which expire in 2029, and Canadian investment tax credits of approximately $3.5 million which expire between 2030 and 2040. Our carryforwards are subject to review and possible adjustment by the appropriate taxing authorities.

As required by 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, Section 174 carryforwards, investment tax credit 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. At the foreign subsidiaries, management has determined that it is more likely than not that we will not realize the benefits of certain NOL carryforwards. As a result, a valuation allowance of $25.7 million is recorded at December 31, 2022. As of June 30, 2023, the valuation allowance remained unchanged from December 31, 2022.

Off-Balance Sheet Arrangements

During the periods presented, we did not have, and currently do not have, any off-balance sheet arrangements, as defined under the rules and regulations of the SEC, that have, or are reasonably likely to have, a material effect on our current or future financial condition, results of operations, liquidity, capital expenditures or capital resources.

Critical Accounting Estimates

Our accounting policies are more fully described in Note 2, "Summary of Significant Accounting Policies," in our audited consolidated financial statements included in our 2022 Annual Report. The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. We monitor estimates and assumptions on a continuous basis and update these estimates and assumptions as facts and circumstances change and new information is obtained. Actual results could differ materially from those estimates and assumptions. We discussed the accounting policies that we believe are most critical to the portrayal of our results of operations and financial condition and require management's most difficult, subjective and complex judgments in Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," in our 2022 Annual Report. There were no significant changes to our critical accounting estimates during the three months ended June 30, 2023.

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 condensed consolidated financial statements appearing elsewhere in this Quarterly Report, such standards will not have a material impact on our condensed consolidated financial statements or do not otherwise apply to our operations.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

For information regarding our exposure to certain market risks, see "Quantitative and Qualitative Disclosures about Market Risk," in Part II, Item 7A of the Company's 2022 Annual Report. There were no material changes to the Company's market risk exposure during the six months ended June 30, 2023.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we evaluated the effectiveness of the design and operation of our disclosure controls and procedures pursuant to Rule 13a-15(e) and 15d-15(e) under the Exchange Act as of the end of the period covered by this report. Our disclosure controls and procedures are designed to ensure that information required to be disclosed in the reports we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including the Chief Executive Officer and the Chief Financial Officer, to allow timely decisions regarding required disclosures. Any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objective and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures were effective at a reasonable assurance level as of June 30, 2023.

Changes in Internal Control over Financial Reporting

During the period ended June 30, 2023, there were no changes in our internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II — OTHER INFORMATION

Item 1. Legal Proceedings

There have been no material changes to our legal proceedings as previously disclosed in our 2022 Annual Report.

Item 1A. Risk Factors

Except as described below, there have been no significant changes to the risk factors previously disclosed in our 2022 Annual Report that we believe are material to our business, financial condition, results of operations, cash flows or growth prospects.

Adverse developments affecting the financial services industry, including events or concerns involving liquidity, defaults or non-performance by financial institutions or transactional counterparties, could impair our ability or our customers' ability to access existing cash, cash equivalents and investments, which could negatively impact the timely payment to key vendors and others or timely receipt of accounts payable from customers.

Events involving limited liquidity, defaults, non-performance or other adverse developments that affect financial institutions, transactional counterparties or other companies in the financial services industry or the financial services industry generally or concerns or rumors about any events of these kinds or other similar risks, have in the past and may in the future lead to market-wide liquidity problems. For example, on March 10, 2023, Silicon Valley Bank ("SVB") was placed into receivership with the Federal Deposit Insurance Corporation ("FDIC"), which resulted in all funds held at SVB being temporarily inaccessible by SVB's customers. Although the Company did not hold cash deposits or securities at SVB if other banks and financial institutions with which we have banking relationships are placed into receivership or go bankrupt in the future, we may not be able to access our current cash, cash equivalents, and investments and we may lose some or all of them, to the extent that those funds are not insured or otherwise protected by the FDIC. We maintain substantially all of our cash and cash equivalents in accounts with U.S. and multi-national financial institutions, and our deposits at these institutions exceed insured limits. In addition, investor concerns regarding the U.S. or international financial systems could result in less favorable commercial financing terms, including higher interest rates or costs and tighter financial and operating covenants, or systemic limitations on access to credit and liquidity sources, thereby making it more difficult for us to acquire financing on acceptable terms or at all. Our customers are also exposed to this same risk, and any delay in our customer's ability to access their cash and cash equivalents to make timely payments to us could have a materially negative impact on our operations and necessitate the need for additional capital sooner than anticipated. Any of these the foregoing could have material adverse impacts on our liquidity and our business, financial condition or results of operations.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

Following is the activities of equity security repurchases during the three months ended at June 30, 2023.

	Total Number of Shares Purchased(a)	Weighted Average Price Paid per Share	Total Number of Shares Purchased Under Announced Programs	Approximate Dollar Value of Shares That May Yet be Purchased Under Announced Programs
4/1/2023 to 4/30/2023	714	$ 24.19	—	$ —
5/1/2023 to 5/31/2023	1,786	$ 23.98	—	$ —
6/1/2023 to 6/30/2023	13,343	$ 21.39	—	$ —
Total	15,843	$ 21.81	—	$ —

(a) Shares purchased were due to shares delivered by employees to the Company for the payment of taxes resulting from issuance of common stock upon the vesting of restricted stock or RSUs relating to stock-based compensation plans.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

None

Item 6. Exhibits

See Exhibit Index.

EXHIBIT INDEX

		Incorporated by Reference			
Exhibit Number	**Exhibit Title**	**Form**	**File No.**	**Exhibit**	**Filing Date**
10.1*	Certara - LIBOR Transition Amendment				
31.1	Certification of Principal Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002				
31.2	Certification of Principal Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002				
32.1	Certification of Principal Executive Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002+				
32.2	Certification of Principal Financial Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002+				
101.INS	XBRL Instance Document –the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document				
101.SCH	XBRL Taxonomy Extension Schema Document				
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document				
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document				
101.LAB	XBRL Taxonomy Extension Label Linkbase Document				
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document				
104	Cover Page Interactive Data File (formatted in Inline XBRL and contained in Exhibit 101)				

+ This certification is deemed not filed for purposes of Section 18 of the Exchange Act, or otherwise subject to the liability of that section, nor shall it be deemed incorporated by reference into any filing under the Securities Act or the Exchange Act.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, duly authorized.

CERTARA, INC.

Date: August 9, 2023	By:	/s/ William F. Feehery
	Name:	William F. Feehery
	Title:	Chief Executive Officer (Principal Executive Officer)
Date: August 9, 2023	By:	/s/ John Gallagher
	Name:	John Gallagher
	Title:	Chief Financial Officer (Principal Financial Officer)

Exhibit 10.1

[EXECUTION VERSION]

LIBOR TRANSITION AMENDMENT

THIS LIBOR TRANSITION AMENDMENT (this "Agreement"), dated as of June 26, 2023 (the "Amendment Effective Date"), is entered into among CERTARA HOLDCO, INC., a Delaware corporation (the "Parent Borrower"), CERTARA USA, INC., a Delaware corporation ("Certara USA" and, together with the Parent Borrower, the "Co-Borrowers"), and BANK OF AMERICA, N.A., as administrative agent (the "Administrative Agent").

RECITALS

WHEREAS, Certara Holdings Inc. (formerly EQT Avatar Holdings, Inc.), a Delaware corporation, the Co-Borrowers, Certara Intermediate, Inc. (formerly EQT Avatar Intermediate, Inc.), a Delaware corporation, the lenders from time to time party thereto (the "Lenders"), the issuing banks from time to time party thereto, and Bank of America, N.A. (as replacement for Jefferies Finance LLC), as Administrative Agent, have entered into that certain Credit Agreement dated as of August 15, 2017 (as amended by the First Amendment thereto, dated as of January 24, 2018, by the Second Amendment thereto, dated as of April 3, 2018, and by the Third Amendment thereto, dated as of June 17, 2021, and as further amended, modified, extended, restated, replaced, or supplemented from time to time, the "Credit Agreement");

WHEREAS, certain loans and/or other extensions of credit (the "Loans") under the Credit Agreement denominated in Dollars (the "Impacted Currency") incur or are permitted to incur interest, fees, commissions or other amounts based on the London Interbank Offered Rate as administered by the ICE Benchmark Administration ("LIBOR") in accordance with the terms of the Credit Agreement;

WHEREAS, at least five syndicated loans for similarly situated companies that include language to that contained in Section 2.14 of the Credit Agreement are being executed or amended, as applicable, to incorporate or adopt a new benchmark interest rate to replace LIBOR, namely the following: (1) Parexel International, Inc., (2) First Transit Parent Inc., (3) Covanta Holding Corporation, (4) Zayo Group Holdings, Inc. and (5) Waystar Technologies, Inc.; and

WHEREAS, applicable parties under the Credit Agreement have determined in accordance with Section 2.14(b) of the Credit Agreement that LIBOR for the Impacted Currency should be replaced with a successor rate in accordance with the Credit Agreement and, in connection therewith, the Administrative Agent has determined that certain conforming changes are necessary or advisable.

NOW, THEREFORE, in consideration of the premises and the mutual covenants contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

1. Defined Terms. Capitalized terms used herein but not otherwise defined herein (including on any Appendix attached hereto) shall have the meanings provided to such terms in the Credit Agreement, as amended by this Agreement.

2. Agreement. Notwithstanding any provision of the Credit Agreement or any other document related thereto (the "Loan Documents") to the contrary, the parties hereto hereby agree that the terms set forth on Appendix A shall apply to the Impacted Currency. For the avoidance of doubt, to the extent provisions in the Credit Agreement apply to the Impacted Currency and such provisions are not specifically addressed by Appendix A, the provisions in the Credit Agreement shall continue to apply to the Impacted Currency.

3. Conflict with Loan Documents. In the event of any conflict between the terms of this Agreement and the terms of the Credit Agreement or the other Loan Documents, the terms hereof shall control.

4. Conditions Precedent. This Agreement shall become effective upon receipt by the Administrative Agent of counterparts of this Agreement, properly executed by each Co-Borrower, the Administrative Agent and each Revolving Credit Lender; provided that the Administrative Agent shall not have received, by 5:00 p.m. on the fifth Business Day after the Administrative Agent shall have posted this Agreement to the Lenders and the Parent Borrower, written notice from Lenders comprising the Required Lenders objecting to the Term SOFR Adjustment (as defined in Appendix A).

5. Payment of Expenses. The Parent Borrower agrees to reimburse the Administrative Agent for all reasonable fees, charges and disbursements of the Administrative Agent in connection with the preparation, execution and delivery of this Agreement, including all reasonable fees, charges and disbursements of counsel to the Administrative Agent (paid directly to such counsel if requested by the Administrative Agent).

6. Miscellaneous.

(a) The Loan Documents, and the obligations of the Co-Borrowers and the Loan Guarantors under the Loan Documents, are hereby ratified and confirmed and shall remain in full force and effect according to their terms. This Agreement is a Loan Document.

(b) Each Co-Borrower (i) acknowledges and consents to all of the terms and conditions of this Agreement, (ii) agrees that this Agreement and all documents executed in connection herewith do not operate to reduce or discharge its obligations under the Loan Documents, (iii) agrees that the Collateral Documents continue to be in full force and effect and are not impaired or adversely affected in any manner whatsoever, (iv) confirms, on behalf of itself and each Loan Guarantor, its grant of security interests pursuant to the Collateral Documents to which it is a party as Collateral for the Secured Obligations, and (v) acknowledges that all Liens granted (or purported to be granted) pursuant to the Collateral Documents remain and continue in full force and effect in respect of, and to secure, the Secured Obligations. Each Co-Borrower hereby reaffirms the obligations of each Loan Guarantor under the Loan Guaranty and agrees that each Loan Guarantor's obligation to guarantee the Secured Obligations is in full force and effect as of the date hereof.

(c) Each Co-Borrower represents and warrants that:

(i) The execution, delivery and performance by such Person of this Agreement is within such Person's organizational powers and has been duly authorized by all necessary organizational, partnership, member or other action, as applicable, as may be necessary or required.

(ii) This Agreement has been duly executed and delivered by such Person, and constitutes a valid and binding obligation of such Person, enforceable against it in accordance with the terms hereof, except as may be limited by applicable bankruptcy, insolvency, reorganization, moratorium, or similar laws affecting the enforcement of creditors' rights generally and by general principles of equity.

(iii) The execution and delivery by such Person of this Agreement do not and will not (a) contravene the terms of its certificate or articles of incorporation or organization or other applicable constitutive documents, (b) conflict with or result in any breach or contravention of, or the creation of any lien under, or require any payment to be made under (x) any contractual obligation to which such Person is a party or affecting such Person or the properties of such Person or any subsidiary thereof or (y) any order, injunction, writ or decree of any governmental authority or any arbitral award to which such Person or any subsidiary thereof or its property is subject or (c) violate any law.

(iv) Before and after giving effect to this Agreement, (A) all representations and warranties of such Person set forth in the Loan Documents are true and correct in all material respects (and in all respects if any such representation or warranty is already qualified by materiality (after giving effect to such materiality qualification)) on and as of the Amendment Effective Date (except to the extent that such representations and warranties specifically refer to an earlier date, in which case they were true and correct in all material respects (and in all respects if any such representation or warranty is already qualified by materiality (after giving effect to such materiality qualification)) as of such earlier date), and (B) no Event of Default exists.

(d) This Agreement may be in the form of an electronic record (in ".pdf" form or otherwise) and may be executed using electronic signatures, which shall be considered as originals and shall have the same legal effect, validity and enforceability as a paper record. This Agreement may be executed in as many counterparts as necessary or convenient, including both paper and electronic counterparts, but all such counterparts shall be one and the same Agreement. For the avoidance of doubt, the authorization under this paragraph may include, without limitation, use or acceptance by the Administrative Agent of a manually signed Agreement which has been converted into electronic form (such as scanned into ".pdf" format), or an electronically signed Agreement converted into another format, for transmission, delivery and/or retention. The words "execution", "signed", "signature" and words of like import in this Agreement shall be deemed to include electronic signatures or the keeping of records in electronic form, each of which shall be of the same legal effect, validity or enforceability as a manually executed signature or the use of a paper-based recordkeeping system, as the case may be, to the extent and as provided for in any applicable law, including the Federal Electronic Signatures in Global and National Commerce Act, the New York State Electronic Signatures and Records Act or any other similar state laws based on the Uniform Electronic Transactions Act.

(e) Any provision of this Agreement held to be illegal, invalid or unenforceable in any jurisdiction, shall, as to such jurisdiction, be ineffective to the extent of such illegality, invalidity or unenforceability without affecting the legality, validity or enforceability of the remaining provisions hereof and the illegality, invalidity or unenforceability of a particular provision in a particular jurisdiction shall not invalidate or render unenforceable such provision in any other jurisdiction.

(f) The terms of the Credit Agreement with respect to governing law, submission to jurisdiction, waiver of venue and waiver of jury trial are incorporated herein by reference, *mutatis mutandis*, and the parties hereto agree to such terms.

[remainder of page intentionally left blank]

Each of the parties hereto has caused a counterpart of this Agreement to be duly executed and delivered as of the date first above written.

CO-BORROWERS:

CERTARA HOLDCO, INC.

By: ______________________________
Name: Richard Traynor
Title: President

CERTARA USA, INC.

By: ______________________________
Name: Richard Traynor
Title: President

ADMINISTRATIVE AGENT: BANK OF AMERICA, N.A.,

as Administrative Agent

By: ________________________
Name: Paley Chen
Title: Vice President

SIGNATURE PAGE TO LIBOR TRANSITION AMENDMENT, AMONG CERTARA HOLDCO, INC., CERTARA USA, INC., THE REVOLVING LENDERS PARTY THERETO AND BANK OF AMERICA, N.A., AS ADMINISTRATIVE AGENT

Bank of America, N.A.
Name of Revolving Lender

By: ______________________________
Name: Stefanie Tanwar
Title: Director

SIGNATURE PAGE TO LIBOR TRANSITION AMENDMENT, AMONG CERTARA HOLDCO, INC., CERTARA USA, INC., THE REVOLVING LENDERS PARTY THERETO AND BANK OF AMERICA, N.A., AS ADMINISTRATIVE AGENT

____
Barclays Bank PLC

DocuSigned by:
Warren Veech III
By: 83E1FC31F95447D...
Name: Warren Veech III
Title: Vice President

SIGNATURE PAGE TO LIBOR TRANSITION AMENDMENT, AMONG CERTARA HOLDCO, INC., CERTARA USA, INC. AND BANK OF AMERICA, N.A., AS ADMINISTRATIVE AGENT

Capital One National Association
Name of Revolving Lender

By: ______________________________
Name: Alaina Powers
Title: Duly Authorized Signatory

SIGNATURE PAGE TO LIBOR TRANSITION AMENDMENT, AMONG CERTARA HOLDCO, INC., CERTARA USA, INC. AND BANK OF AMERICA, N.A., AS ADMINISTRATIVE AGENT

CREDIT SUISSE AG, CAYMAN ISLANDS BRANCH
Name of Revolving Lender

By:____
Name: D. Andrew Maletta
Title: Authorized Signatory

NSafi

By:____
Name: Nawshaer Safi
Title: Authorized Signatory

SIGNATURE PAGE TO LIBOR TRANSITION AMENDMENT, AMONG CERTARA HOLDCO, INC., CERTARA USA, INC., THE REVOLVING LENDERS PARTY THERETO AND BANK OF AMERICA, N.A., AS ADMINISTRATIVE AGENT

JEFFERIES FINANCE LLC, as a Revolving Lender

By: J.R. Young

Name: JR Young

Title: Managing Director

SIGNATURE PAGE TO LIBOR TRANSITION AMENDMENT, AMONG CERTARA HOLDCO, INC., CERTARA USA, INC., THE REVOLVING LENDERS PARTY THERETO AND BANK OF AMERICA, N.A., AS ADMINISTRATIVE AGENT

Morgan Stanley Senior Funding, Inc.,
as a Revolving Credit Lender.

Signature: DocuSigned by: Tayo Lapite BD0A31C37ADE44C...

Name: Tayo Lapite

Title: Vice President

Date: 6/21/2023

Appendix A

TERMS APPLICABLE TO ADJUSTED TERM SOFR LOANS

1. Defined Terms. The following terms shall have the meanings set forth below:

"Adjusted Term SOFR Loan" means a Loan that bears interest at a rate based on clause (a) of the definition of Term SOFR.

"Administrative Agent's Office" means, with respect to Dollars, the Administrative Agent's address and, as appropriate, account specified in the Credit Agreement with respect to Dollars, or such other address or account with respect to Dollars as the Administrative Agent may from time to time notify the Parent Borrower and the Lenders.

"Applicable Rate" means the Applicable Rate, Applicable Margin or any similar or analogous definition in the Credit Agreement.

"Base Rate" means the Base Rate, Alternative Base Rate, ABR or any similar or analogous definition in the Credit Agreement.

"Base Rate Loans" means a Loan that bears interest at a rate based on the Base Rate.

"Borrowing" means a Committed Borrowing, Borrowing, or any similar or analogous definition in the Credit Agreement.

"Business Day" means any day other than a Saturday, Sunday or other day on which commercial banks are authorized to close under the laws of, or are in fact closed in, the state where the Administrative Agent's Office is located.

"CME" means CME Group Benchmark Administration Limited.

"Committed Loan Notice" means a Committed Loan Notice, Loan Notice, Borrowing Request, Continuation/Conversion Notice, Interest Election Request or any similar or analogous definition in the Credit Agreement, and such term shall be deemed to include the Borrowing Request attached hereto as Exhibit A and the Interest Election Request attached hereto as Exhibit B.

"Conforming Changes" means, with respect to the use, administration of or any conventions associated with SOFR or any proposed Successor Rate or Term SOFR, as applicable, any conforming changes to the definitions of "Base Rate", "SOFR", "Term SOFR" and "Interest Period", timing and frequency of determining rates and making payments of interest and other technical, administrative or operational matters (including, for the avoidance of doubt, the definitions of "Business Day" and "U.S. Government Securities Business Day", timing of borrowing requests or prepayment, conversion or continuation notices and length of lookback periods) as may be appropriate, in the discretion of the Administrative Agent, in consultation with the Parent Borrower, to reflect the adoption and implementation of such applicable rate(s) and to permit the administration thereof by the Administrative Agent in a manner substantially consistent with market practice (or, if the Administrative Agent determines that adoption of any portion of such market practice is not administratively feasible or that no market practice for the administration of such rate exists, in such other manner of administration as the Administrative

Agent determines is reasonably necessary in connection with the administration of this Agreement and any other Loan Document).

"Dollar" and "$" mean lawful money of the United States.

"Eurocurrency Rate" means Eurocurrency Rate, LIBOR, Adjusted LIBOR Rate, LIBOR Rate or any similar or analogous definition in the Credit Agreement.

"Eurocurrency Rate Loans" means a Loan that bears interest at a rate based on the Eurocurrency Rate.

"Interest Payment Date" means, as to any Adjusted Term SOFR Loan, the last day of each Interest Period applicable to such Loan and the applicable maturity date set forth in the Credit Agreement; provided, however, that if any Interest Period for a Adjusted Term SOFR Loan exceeds three months, the respective dates that fall every three months after the beginning of such Interest Period shall also be Interest Payment Dates.

"Interest Period" means as to each Adjusted Term SOFR Loan, the period commencing on the date such Adjusted Term SOFR Loan is disbursed or converted to or continued as a Adjusted Term SOFR Loan and ending on the date one, three or six months thereafter, as selected by the Parent Borrower in its Committed Loan Notice, or such other period that is twelve months or less requested by the Parent Borrower and consented to by all the affected Lenders and the Administrative Agent (in the case of each requested Interest Period, subject to availability); provided that:

(a) any Interest Period that would otherwise end on a day that is not a Business Day shall be extended to the next succeeding Business Day unless, in the case of a Adjusted Term SOFR Loan, such Business Day falls in another calendar month, in which case such Interest Period shall end on the next preceding Business Day;

(b) any Interest Period pertaining to a Adjusted Term SOFR Loan that begins on the last Business Day of a calendar month (or on a day for which there is no numerically corresponding day in the calendar month at the end of such Interest Period) shall end on the last Business Day of the calendar month at the end of such Interest Period; and

(c) no Interest Period shall extend beyond the Maturity Date.

"SOFR" means the Secured Overnight Financing Rate as administered by the Federal Reserve Bank of New York (or a successor administrator).

"Term SOFR Adjustment" means (i) with respect to all Term Loans, a percentage equal to 0.11448% (11.448 basis points) for an Interest Period of one-month's duration, 0.26161% (26.161 basis points) for an Interest Period of three-month's duration, 0.42826% (42.826 basis points) for an Interest Period of six-months' duration, and 0.71513% (71.513 basis points) for an Interest Period of twelve–months' duration and (ii) with respect to all Revolving Loans, a percentage equal to 0.00%.

"Successor Rate" means the Successor Rate, LIBOR Successor Rate or any similar or analogous definition in the Credit Agreement.

"Term SOFR" means:

(a) for any Interest Period with respect to an Adjusted Term SOFR Loan, the rate per annum equal to the Term SOFR Screen Rate two U.S. Government Securities Business Days prior to the commencement of such Interest Period with a term equivalent to such Interest Period; provided that if the rate is not published prior to 11:00 a.m. on such determination date then Term SOFR means the Term SOFR Screen Rate on the first U.S. Government Securities Business Day immediately prior thereto, in each case, plus the Term SOFR Adjustment for such Interest Period; and

(b) for any interest calculation with respect to a Base Rate Loan on any date, the rate per annum equal to the Term SOFR Screen Rate two U.S. Government Securities Business Days prior to such date with a term of one month commencing that day; provided that if the rate is not published prior to 11:00 a.m. on such determination date then Term SOFR means the Term SOFR Screen Rate on the first U.S. Government Securities Business Day immediately prior thereto, in each case, plus the Term SOFR Adjustment for such term;

provided that if Term SOFR determined in accordance with either of the foregoing provisions (a) or (b) of this definition would otherwise be less than zero, Term SOFR shall be deemed zero for purposes of this Agreement.

"Term SOFR Screen Rate" means the forward-looking SOFR term rate administered by CME (or any successor administrator satisfactory to the Administrative Agent) and published on the applicable Reuters screen page (or such other commercially available source providing such quotations as may be designated by the Administrative Agent from time to time).

"Type" means, with respect to a Loan, its character as a Base Rate Loan or an Adjusted Term SOFR Loan.

"U.S. Government Securities Business Day" means any Business Day, except any Business Day on which any of the Securities Industry and Financial Markets Association, the New York Stock Exchange or the Federal Reserve Bank of New York is not open for business because such day is a legal holiday under the federal laws of the United States or the laws of the State of New York, as applicable.

2. Terms Applicable to Adjusted Term SOFR Loans. From and after the Amendment Effective Date, the parties hereto agree as follows:

(a) Impacted Currency. (i) Dollars shall not be considered a currency for which there is a published LIBOR rate and (ii) any request for a new Eurocurrency Rate Loan denominated in Dollars, or to continue an existing Eurocurrency Rate Loan denominated in Dollars, shall be deemed to be a request for a new Loan bearing interest at Term SOFR; provided that, to the extent any Loan bearing interest at the Eurocurrency Rate is outstanding on the Amendment Effective Date, such Loan shall (a) remain subject to the terms of the Credit Agreement in existence prior to this Agreement and (b) continue to bear interest at the Eurocurrency Rate until the end of the current Interest Period or payment period applicable to such Loan. Each Loan described in (b) above shall, unless otherwise instructed by the Parent Borrower, at the end of the then current Interest Period for such Loans, automatically be converted to an Adjusted Term SOFR Loan with an Interest Period of 3 months.

(b) References to Eurocurrency Rate and Eurocurrency Rate Loans in the Credit Agreement and Loan Documents.

(i) References to the Eurocurrency Rate and Eurocurrency Rate Loans in provisions of the Credit Agreement and the other Loan Documents that are not specifically addressed herein (other than the definitions of Eurocurrency Rate and Eurocurrency Rate Loan) shall be deemed to include Term SOFR and Adjusted Term SOFR Loans, as applicable. In addition, references to the Eurocurrency Rate in the definition of Base Rate in the Credit Agreement shall be deemed to refer to Term SOFR.

(ii) For purposes of any requirement for any Co-Borrower to compensate Lenders for losses in the Credit Agreement resulting from any continuation, conversion, payment or prepayment of any Loan on a day other than the last day of any Interest Period (as defined in the Credit Agreement), references to the Interest Period (as defined in the Credit Agreement) shall be deemed to include any relevant interest payment date or payment period for an Adjusted Term SOFR Loan.

(c) Interest Rates. The Administrative Agent does not warrant, nor accept responsibility, nor shall the Administrative Agent have any liability with respect to the administration, submission or any other matter related to any reference rate referred to herein or with respect to any rate (including, for the avoidance of doubt, the selection of such rate and any related spread or other adjustment) that is an alternative or replacement for or successor to any such rate (including, without limitation, any Successor Rate) (or any component of any of the foregoing) or the effect of any of the foregoing, or of any Conforming Changes. The Administrative Agent and its affiliates or other related entities may engage in transactions or other activities that affect any reference rate referred to herein, or any alternative, successor or replacement rate (including, without limitation, any Successor Rate) (or any component of any of the foregoing) or any related spread or other adjustments thereto, in each case, in a manner adverse to the Parent Borrower. The Administrative Agent may select information sources or services in its reasonable discretion to ascertain any reference rate referred to herein or any alternative, successor or replacement rate (including, without limitation, any Successor Rate) (or any component of any of the foregoing), in each case pursuant to the terms of this Agreement, and shall have no liability to the Parent Borrower, any Lender or any other Person for damages of any kind, including direct or indirect, special, punitive, incidental or consequential damages, costs, losses or expenses (whether in tort, contract or otherwise and whether at law or in equity), for any error or other action or omission related to or affecting the selection, determination, or calculation of any rate (or component thereof) provided by any such information source or service.

(d) Borrowings, Conversions, Continuations and Prepayments of Adjusted Term SOFR Loans. In addition to any other borrowing or prepayment requirements set forth in the Credit Agreement:

(i) Adjusted Term SOFR Loans. Each Borrowing, each conversion of Loans from one Type to the other, and each continuation of Adjusted Term SOFR Loans shall be made upon the Parent Borrower's irrevocable notice to the Administrative Agent, which may be given by (A) telephone or (B) a Committed Loan Notice; provided that any telephonic notice must be confirmed immediately by delivery to the Administrative Agent of a Committed Loan Notice. Each such Committed Loan Notice must be received by the Administrative Agent not later than 11:00 a.m. (Eastern time) two Business Days prior to the requested date of any Borrowing of, conversion to or continuation of

Adjusted Term SOFR Loans or of any conversion of Adjusted Term SOFR Loans to Base Rate Loans; provided, however, that if a Co-Borrower wishes to request Adjusted Term SOFR Loans having an Interest Period other than one, three or six months in duration as provided in the definition of "Interest Period," the applicable notice must be received by the Administrative Agent not later than 11:00 a.m. (Eastern time) four Business Days prior to the requested date of such Borrowing, conversion or continuation, whereupon the Administrative Agent shall give prompt notice to the applicable Lenders of such request and determine whether the requested Interest Period is acceptable to all of them. Not later than 11:00 a.m. (Eastern time) three Business Days before the requested date of such Borrowing, conversion or continuation, the Administrative Agent shall notify the Parent Borrower (which notice may be by telephone) whether or not the requested Interest Period has been consented to by all the Lenders and the Administrative Agent. Each Borrowing of, conversion to or continuation of Adjusted Term SOFR Loans shall be in a principal amount of $5,000,000 or a whole multiple of $1,000,000 in excess thereof. Each Committed Loan Notice shall specify (i) whether the applicable Co-Borrower is requesting a Borrowing, a conversion of Loans from one Type to the other, or a continuation of Adjusted Term SOFR Loans, (ii) the requested date of the Borrowing, conversion or continuation, as the case may be (which shall be a Business Day), (iii) the principal amount of Loans to be borrowed, converted or continued, (iv) the Type of Loans to be borrowed or to which existing Loans are to be converted, and (v) if applicable, the duration of the Interest Period with respect thereto. If the applicable Co-Borrower fails to specify a Type of Loan in a Committed Loan Notice or if the applicable Co-Borrower fails to give a timely notice requesting a conversion or continuation, then the applicable Loans shall be made as, or converted to, Base Rate Loans. Any such automatic conversion to Base Rate Loans shall be effective as of the last day of the Interest Period then in effect with respect to the applicable Adjusted Term SOFR Loans. If the applicable Co-Borrower requests a Borrowing of, conversion to, or continuation of Adjusted Term SOFR Loans in any such Committed Loan Notice, but fails to specify an Interest Period, it will be deemed to have specified an Interest Period of one month.

(ii) Conforming Changes. With respect to SOFR or Term SOFR, the Administrative Agent, in consultation with the Parent Borrower, will have the right to make Conforming Changes from time to time and, notwithstanding anything to the contrary herein or in any other Loan Document, any amendments implementing such Conforming Changes will become effective without any further action or consent of any other party to this Agreement or any other Loan Document; provided that, with respect to any such amendment effected, the Administrative Agent shall post each such amendment implementing such Conforming Changes to the Parent Borrower and the Lenders reasonably promptly after such amendment becomes effective.

(iii) Committed Loan Notice. For purposes of a Borrowing of Adjusted Term SOFR Loans, or a continuation of a Adjusted Term SOFR Loan, the Borrower shall use the Borrowing Request attached hereto as Exhibit A or the Interest Election Request attached hereto as Exhibit B, respectively.

(iv) Voluntary Prepayments of Adjusted Term SOFR Loans. The Co-Borrowers may, upon notice to the Administrative Agent pursuant to delivery to the Administrative Agent of a notice of prepayment (satisfying the requirements of Section 2.11(a)(iii) of the Credit Agreement), at any time or from time to time voluntarily prepay the Adjusted Term SOFR Loans in whole or in part without premium or penalty (except as otherwise specified in the Credit Agreement); provided that such notice must be received by the Administrative Agent not later than 11:00 a.m. (Eastern time) two Business Days prior to any date of prepayment of Adjusted Term SOFR Loans.

(e) Interest.

(i) Subject to the provisions of the Credit Agreement with respect to default interest, each Adjusted Term SOFR Loan shall bear interest on the outstanding principal amount thereof from the applicable borrowing date at a rate per annum equal to the sum of Term SOFR plus the Applicable Rate.

(ii) Interest on each Adjusted Term SOFR Loan shall be due and payable in arrears on each Interest Payment Date applicable thereto and at such other times as may be specified in the Credit Agreement; provided, that any prepayment of any Adjusted Term SOFR Loan shall be accompanied by all accrued interest on the amount prepaid, together with any additional amounts required pursuant to Section 2.16 of the Credit Agreement. Interest hereunder shall be due and payable in accordance with the terms hereof before and after judgment, and before and after the commencement of any proceeding under any Debtor Relief Law.

(f) Computations. All computations of interest for Base Rate Loans (including Base Rate Loans determined by reference to Term SOFR) shall be made on the basis of a year of 365 or 366 days, as the case may be, and actual days elapsed. All other computations of fees and interest with respect to Adjusted Term SOFR Loans shall be made on the basis of a 360-day year and actual days elapsed (which results in more fees or interest, as applicable, being paid than if computed on the basis of a 365-day year). Interest shall accrue on each Loan for the day on which the Loan is made, and shall not accrue on a Loan, or any portion thereof, for the day on which the Loan or such portion is paid, provided that any Loan that is repaid on the same day on which it is made shall, subject to the provisions in the Credit Agreement addressing payments generally, bear interest for one day. Each determination by the Administrative Agent of an interest rate or fee hereunder shall be conclusive and binding for all purposes, absent manifest error.

(g) Successor Rates. The provisions in the Credit Agreement addressing the replacement of a current Successor Rate for Dollars shall be deemed to apply to Adjusted Term SOFR Loans and Term SOFR, as applicable, and the related defined terms shall be deemed to include Adjusted Term SOFR Loans and Term SOFR, as applicable.

Exhibit A

FORM OF BORROWING REQUEST

EXHIBIT A

[FORM OF]
BORROWING REQUEST

Bank of America, N.A.,
as Administrative Agent for the Lenders
party to the Credit Agreement referred to below

Bank of America, N.A.
Building B
7105 Corporate Drive
Mail Code: TX2-981-02-29
Plano, TX 75024
Attention: Katlyn Tran
Email: Katlyn.Tran@bofa.com
Telephone: (469) 201-4056

[•] [•], 20[•][1]

Ladies and Gentlemen:

Reference is hereby made to that certain Credit Agreement dated as of August 15, 2017 (as amended by the First Amendment thereto, dated as of January 14, 2018, by the Second Amendment thereto, dated as of April 3, 2018, by the Third Amendment thereto, dated as of June 17, 2021, and by the LIBOR Transition Amendment thereto, dated as of June 26, 2023 (the "LIBOR Transition Amendment"), and as further amended, restated, amended and restated, supplemented or otherwise modified from time to time), by and among Certara Intermediate, Inc. (formerly EQT Avatar Intermediate, Inc.), a Delaware corporation, Certara Holdings, Inc. (formerly EQT Avatar Holdings, Inc.), a Delaware corporation, and each of (i) Certara Holdco, Inc., a Delaware corporation and the direct wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (as defined therein) (the "Parent Borrower"), and (ii) Certara USA, Inc., a Delaware corporation and the indirect wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (the "Co-Borrower" and, together with the Parent Borrower, each a "Borrower" and collectively the "Borrowers"), the Lenders from time to time party thereto, Bank of America, N.A., in its capacities as administrative agent and collateral agent for the Lenders (the "Administrative Agent"), and Bank of America, N.A. and Jefferies Finance LLC as Issuing Banks. Terms defined in the Credit Agreement or the LIBOR Transition Amendment, as the context may require, are used herein with the same meanings unless otherwise defined herein.

The Borrowers identified in item A below hereby give you notice pursuant to Section 2.03 of the Credit Agreement that they request the Borrowings under the Credit Agreement to be made on [•] [•], 20[•], and in that connection set forth below the terms on which the Borrowings are requested to be made:

[1] The Administrative Agent must be notified in writing or by telephone (with such telephonic notification to be promptly confirmed in writing), which must be received by the Administrative Agent (by hand delivery, fax or other electronic transmission (including ".pdf" or ".tif")) not later than (i) 11:00 a.m. two Business Days prior to the requested day of any Borrowing and (ii) 12:00 p.m. on the requested date of any Borrowing of ABR Loans (or, in each case, such later time as is acceptable to the Administrative Agent); provided, however, that if the applicable Borrower wishes to request Term SOFR Loans having an Interest Period of other than one, three or six months in duration as provided in the definition of "Interest Period," (A) the applicable notice from the Parent Borrower must be received by the Administrative Agent not later than 11:00 a.m. four Business Days prior to the requested date of the relevant Borrowing (or such later time as is acceptable to the Administrative Agent), whereupon the Administrative Agent shall give prompt notice to the appropriate Lenders of such request and determine whether the requested Interest Period is available to them and (B) not later than 11:00 a.m. three Business Days before the requested date of the relevant Borrowing, the Administrative Agent shall notify the Parent Borrower whether or not the requested Interest Period is available to the appropriate Lenders.

(A)	Borrowers:	Certara Holdco, Inc. and Certara USA, Inc.	
(B)	Date of Borrowing (which shall be a Business Day)		[●]
(C)	Aggregate Amount of Borrowing		[●]
(D)	Type of Borrowing[2]		[●]
(E)	Class of Borrowing		[●]
(F)	[Interest Period[3] (in the case of a Term SOFR Borrowing)]	[●]	
(G)	Amount, Account Number and Location		

Wire Transfer Instructions:	
Amount	$[●]
Bank:	[●]
ABA No.:	[●]
Account No.:	[●]
Account Name:	[●]

[The undersigned hereby certifies that the following statements are true on the date hereof, and will be true on the date of the Borrowing:

(A) The representations and warranties of the Loan Parties set forth in the Credit Agreement and the other Loan Documents are true and correct in all material respects on and as of the date of the Borrowing with the same effect as though such representations and warranties had been made on and as of the date of such Borrowing; provided that to the extent that any representation and warranty specifically refers to an earlier date or period, it is true and correct in all material respects as of such earlier date or period.

(B) At the time of and immediately after giving effect to the Borrowing, no Default or Event of Default has occurred and is continuing.][4]

[Signature Page Follows]

[2] State whether a Term SOFR Borrowing or ABR Borrowing. If no Type of Borrowing is specified, then the requested Borrowing shall be an ABR Borrowing.

[3] Must be a period contemplated by the definition of "Interest Period". If no Interest Period is specified, then the Interest Period shall be of one-month's duration.

[4] Include bracketed language only for Borrowings after Closing Date other than (A) Incremental Loans made in connection with any acquisition or similar investment and/or (B) any Credit Extension under any Refinancing Amendment and/or Extension Amendment unless the lenders in respect thereof have required satisfaction of such conditions in the applicable Incremental Amendment, Refinancing Amendment or Extension Amendment.

CERTARA HOLDCO, INC., as the Parent Borrower

By: ____
Name:
Title:

Exhibit B

FORM OF INTEREST ELECTION REQUEST

EXHIBIT B

[FORM OF]
INTEREST ELECTION REQUEST

Bank of America, N.A.
as Administrative Agent for the Lenders referred to below

Bank of America, N.A.
Building B
7105 Performance Drive
Mail Code: TX2-981-02-29
Plano, TX 75024
Attention: Katlyn Tran
Email: Katlyn.Tran@bofa.com
Telephone: (469) 201-4056

[•] [•], 20[•][5]

Ladies and Gentlemen:

Reference is hereby made to that that certain Credit Agreement dated as of August 15, 2017 (as amended by the First Amendment thereto, dated as of January 14, 2018, by the Second Amendment thereto, dated as of April 3, 2018, by the Third Amendment thereto, dated as of June 17, 2021, and by the LIBOR Transition Amendment thereto, dated as of June 26, 2023 (the "LIBOR Transition Amendment"), and as further amended, restated, amended and restated, supplemented or otherwise modified from time to time), by and among Certara Intermediate, Inc. (formerly EQT Avatar Intermediate, Inc.), a Delaware corporation, Certara Holdings, Inc. (formerly EQT Avatar Holdings, Inc.), a Delaware corporation, and each of (i) Certara Holdco, Inc., a Delaware corporation and the direct wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (as defined therein) (the "Parent Borrower"), and (ii) Certara USA, Inc., a Delaware corporation and the indirect wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (the "Co-Borrower" and, together with the Parent Borrower, each a "Borrower" and collectively the "Borrowers"), the Lenders from time to time party thereto, Bank of America, N.A., in its capacities as administrative agent and collateral agent for the Lenders (the "Administrative Agent"), and Bank of America, N.A. and Jefferies Finance LLC as Issuing Banks. Terms defined in the Credit Agreement or the LIBOR Transition Amendment, as the context may require, are used herein with the same meanings unless otherwise defined herein.

The undersigned hereby gives you notice pursuant to Section 2.08 of the Credit Agreement of an interest rate election, and in that connection sets forth below the terms thereof:

[5] The Administrative Agent must be notified in writing or by telephone (with such telephonic notification to be promptly confirmed in writing), which must be received by the Administrative Agent (by hand delivery, fax or other electronic transmission (including ".pdf" or ".tif")) not later than (i) 11:00 a.m. two Business Days prior to the requested day of any continuation of Term SOFR Loans or any conversion of ABR Loans to Term SOFR Loans and (iii) 12:00 p.m. on the requested date of any conversion to ABR Loans (or, in each case, such later time as is acceptable to the Administrative Agent); provided, however, that if the applicable Borrower wishes to request Term SOFR Loans having an Interest Period of other than one, three or six months in duration as provided in the definition of "Interest Period," (A) the applicable notice from the Parent Borrower must be received by the Administrative Agent not later than 11:00 a.m. four Business Days prior to the requested date of the relevant conversion or continuation (or such later time as is acceptable to the Administrative Agent), whereupon the Administrative Agent shall give prompt notice to the appropriate Lenders of such request and determine whether the requested Interest Period is available to them and (B) not later than 11:00 a.m. three Business Days before the requested date of the relevant conversion or continuation, the Administrative Agent shall notify the Parent Borrower whether or not the requested Interest Period is available to the appropriate Lenders.

(A) [on **[insert applicable date]** (which is a Business Day), the undersigned will convert $[●][6] of the aggregate outstanding principal amount of the [**Term**][**Revolving]** Loans, bearing interest at the **[ABR Rate][Term SOFR]**, into a **[Term SOFR][ABR]** Loan **[and, in the case of a Term SOFR Loan, having an Interest Period of [●] month(s)][7][; and][.]]**

(B) [on **[insert applicable date]** (which is a Business Day), the undersigned will continue [$] [●] of the aggregate outstanding principal amount of the **[Term][Revolving]** Loans bearing interest at the Term SOFR, as Term SOFR Loans having an Interest Period of [●] month(s)[8]**.**

[Signature Page Follows]

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[6] Subject to <u>Section 2.02(c)</u> of the Credit Agreement.

[7] Must be a period contemplated by the definition of "Interest Period".

[8] Must be a period contemplated by the definition of "Interest Period".

CERTARA HOLDCO, INC., as the Parent Borrower

By: ______________________________
Name:
Title:

[[6072852]]

Exhibit 31.1

RULE 13a-14(a) CERTIFICATION
CERTARA, INC.

CERTIFICATION OF CHIEF EXECUTIVE OFFICER (Principal Executive Officer)

I, William F. Feehery, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Certara, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's Board of Directors:

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 9, 2023

/s/ William F. Feehery
William F. Feehery
Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

RULE 13a-14(a) CERTIFICATION
CERTARA, INC.

CERTIFICATION OF CHIEF FINANCIAL OFFICER (Principal Financial Officer)
I, John Gallagher, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Certara, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's Board of Directors:

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 9, 2023

/s/ John Gallagher
John Gallagher
Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

STATEMENT PURSUANT TO
18 U.S.C. SECTION 1350
AS REQUIRED BY
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Certara, Inc. (the "Company") on Form 10-Q for the quarterly period ended June 30, 2023, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, the undersigned, hereby certify that to the best of my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

August 9, 2023	*/s/ William Feehery*
	William Feehery
	Chief Executive Officer
	(Principal Executive Officer)

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

Exhibit 32.2

STATEMENT PURSUANT TO
18 U.S.C. SECTION 1350
AS REQUIRED BY
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Certara, Inc. (the "Company") on Form 10-Q for the quarterly period ended June 30, 2023, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, the undersigned, hereby certify that to the best of my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

August 9, 2023	*/s/ John Gallagher*
	John Gallagher
	Chief Financial Officer
	(Principal Financial Officer)

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.