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

FORM 10-Q

(Mark One)

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

For the quarterly period ended March 31, 2023

OR

☐ **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 000-30713

Intuitive Surgical, Inc.
(Exact name of Registrant as specified in its Charter)

Delaware	**77-0416458**
(State or Other Jurisdiction of Incorporation or Organization)	**(I.R.S. Employer Identification No.)**

1020 Kifer Road
Sunnyvale, California 94086
(Address of principal executive offices) (Zip Code)

(408) 523-2100
(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.001 per share	ISRG	The Nasdaq Global Select Market

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 ☒ No ☐

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 ☒ No ☐

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 definition of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

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

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

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

The Registrant had 350,398,068 shares of Common Stock, $0.001 par value per share, outstanding as of April 17, 2023.

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PART I – FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

INTUITIVE SURGICAL, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(UNAUDITED)

in millions (except par values)	March 31, 2023	December 31, 2022
ASSETS		
Current assets:		
Cash and cash equivalents	$ 2,143.0	$ 1,581.2
Short-term investments	2,549.2	2,536.7
Accounts receivable, net	925.3	942.1
Inventory	946.6	893.2
Prepaids and other current assets	312.9	299.8
Total current assets	6,877.0	6,253.0
Property, plant, and equipment, net	2,580.2	2,374.2
Long-term investments	1,886.4	2,623.6
Deferred tax assets	644.7	664.6
Intangible and other assets, net	716.3	710.1
Goodwill	348.6	348.5
Total assets	$ 13,053.2	$ 12,974.0
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 164.1	$ 147.0
Accrued compensation and employee benefits	260.9	401.6
Deferred revenue	417.8	397.3
Other accrued liabilities	464.6	476.2
Total current liabilities	1,307.4	1,422.1
Other long-term liabilities	451.6	439.3
Total liabilities	1,759.0	1,861.4
Contingencies (Note 8)		
Stockholders' equity:		
Preferred stock, 2.5 shares authorized, $0.001 par value, issuable in series; zero shares issued and outstanding as of March 31, 2023, and December 31, 2022	—	—
Common stock, 600.0 shares authorized, $0.001 par value, 350.4 shares and 350.0 shares issued and outstanding as of March 31, 2023, and December 31, 2022, respectively	0.4	0.4
Additional paid-in capital	7,928.4	7,703.9
Retained earnings	3,397.4	3,500.1
Accumulated other comprehensive loss	(108.5)	(162.5)
Total Intuitive Surgical, Inc. stockholders' equity	11,217.7	11,041.9
Noncontrolling interest in joint venture	76.5	70.7
Total stockholders' equity	11,294.2	11,112.6
Total liabilities and stockholders' equity	$ 13,053.2	$ 12,974.0

The accompanying notes are an integral part of these Condensed Consolidated Financial Statements (Unaudited).

INTUITIVE SURGICAL, INC.
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(UNAUDITED)

in millions (except per share amounts)	Three Months Ended March 31, 2023	2022
Revenue:		
Product	$ 1,413.0	$ 1,238.4
Service	283.2	249.3
Total revenue	1,696.2	1,487.7
Cost of revenue:		
Product	493.0	397.3
Service	90.2	80.7
Total cost of revenue	583.2	478.0
Gross profit	1,113.0	1,009.7
Operating expenses:		
Selling, general and administrative	480.5	391.1
Research and development	244.9	210.5
Total operating expenses	725.4	601.6
Income from operations	387.6	408.1
Interest and other income (expense), net	34.2	(5.7)
Income before taxes	421.8	402.4
Income tax expense	61.0	33.0
Net income	360.8	369.4
Less: net income attributable to noncontrolling interest in joint venture	5.5	3.8
Net income attributable to Intuitive Surgical, Inc.	$ 355.3	$ 365.6
Net income per share attributable to Intuitive Surgical, Inc.:		
Basic	$ 1.01	$ 1.02
Diluted	$ 1.00	$ 1.00
Shares used in computing net income per share attributable to Intuitive Surgical, Inc.:		
Basic	350.2	358.4
Diluted	356.0	366.7
Other comprehensive income (loss), net of tax:		
Unrealized gains on hedge instruments	$ 2.5	$ 1.0
Unrealized gains (losses) on available-for-sale securities	37.6	(90.7)
Foreign currency translation gains	14.2	3.5
Prior service cost for employee benefit plans	—	0.1
Other comprehensive income (loss)	54.3	(86.1)
Total comprehensive income	415.1	283.3
Less: comprehensive income attributable to noncontrolling interest	5.8	4.2
Total comprehensive income attributable to Intuitive Surgical, Inc.	$ 409.3	$ 279.1

The accompanying notes are an integral part of these Condensed Consolidated Financial Statements (Unaudited).

INTUITIVE SURGICAL, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(UNAUDITED)

in millions	Three Months Ended March 31, 2023	2022
Operating activities:		
Net income	$ 360.8	$ 369.4
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and loss on disposal of property, plant, and equipment	87.7	77.7
Amortization of intangible assets	5.0	6.1
Gain on sale of business	—	(3.8)
Loss on investments, accretion of discounts, and amortization of premiums on investments, net	4.9	26.0
Deferred income taxes	9.3	(14.4)
Share-based compensation expense	139.8	120.8
Amortization of contract acquisition assets	7.4	6.6
Changes in operating assets and liabilities, net of effects of acquisitions:		
Accounts receivable	16.9	(123.4)
Inventory	(127.1)	(120.1)
Prepaids and other assets	(27.3)	(21.7)
Accounts payable	16.9	(1.9)
Accrued compensation and employee benefits	(140.6)	(130.3)
Deferred revenue	24.2	11.4
Other liabilities	(6.5)	20.6
Net cash provided by operating activities	371.4	223.0
Investing activities:		
Purchase of investments	(3.5)	(1,187.3)
Proceeds from sales of investments	26.3	—
Proceeds from maturities of investments	744.4	1,067.7
Purchase of property, plant, and equipment	(194.1)	(93.6)
Acquisition of businesses, net of cash, and intellectual property and other investing activities	—	(1.5)
Net cash provided by (used in) investing activities	573.1	(214.7)
Financing activities:		
Proceeds from issuance of common stock relating to employee stock plans	100.2	80.0
Taxes paid related to net share settlement of equity awards	(129.7)	(172.2)
Repurchase of common stock	(350.0)	(106.5)
Payment of deferred purchase consideration	(1.7)	(1.2)
Net cash used in financing activities	(381.2)	(199.9)
Effect of exchange rate changes on cash, cash equivalents, and restricted cash	1.8	3.8
Net increase (decrease) in cash, cash equivalents, and restricted cash	565.1	(187.8)
Cash, cash equivalents, and restricted cash, beginning of period	1,600.7	1,306.0
Cash, cash equivalents, and restricted cash, end of period	$ 2,165.8	$ 1,118.2

The accompanying notes are an integral part of these Condensed Consolidated Financial Statements (Unaudited).

In this report, "Intuitive Surgical," "Intuitive," the "Company," "we," "us," and "our" refer to Intuitive Surgical, Inc. and its wholly and majority-owned subsidiaries.

NOTE 1. DESCRIPTION OF THE BUSINESS

Intuitive Surgical, Inc. ("Intuitive" or the "Company") develops, manufactures, and markets da Vinci® Surgical Systems and the Ion® endoluminal system. The Company's products and related services enable physicians and healthcare providers to improve the quality of and access to minimally invasive care. The systems consist of a surgeon console or consoles, a patient-side cart, and a high-performance vision system and use proprietary instruments and accessories.

NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation

In the opinion of management, the accompanying unaudited Condensed Consolidated Financial Statements ("Financial Statements") of Intuitive Surgical, Inc. and its wholly and majority-owned subsidiaries have been prepared on a consistent basis with the audited Consolidated Financial Statements for the fiscal year ended December 31, 2022, and include all adjustments, consisting of only normal, recurring adjustments, necessary to fairly state the information set forth herein. The Financial Statements have been prepared in accordance with the rules and regulations of the Securities and Exchange Commission ("SEC") and, therefore, omit certain information and footnote disclosure necessary to present the Financial Statements in accordance with United States ("U.S.") generally accepted accounting principles ("GAAP"). These Financial Statements should be read in conjunction with the audited Consolidated Financial Statements and notes thereto included in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2022, which was filed with the SEC on February 10, 2023. The results of operations for the first three months of 2023 are not necessarily indicative of the results to be expected for the entire fiscal year or any future periods.

The Financial Statements include the results and balances of the Company's majority-owned joint ventures, Intuitive Surgical-Fosun Medical Technology (Shanghai) Co., Ltd. and Intuitive Surgical-Fosun (HongKong) Co., Ltd. (collectively, the "Joint Venture"), with Shanghai Fosun Pharmaceutical (Group) Co., Ltd. ("Fosun Pharma"). The Company holds a controlling financial interest in the Joint Venture, and the noncontrolling interest is reflected as a separate component of the consolidated stockholders' equity. The noncontrolling interest's share of the earnings in the Joint Venture is presented separately in the Condensed Consolidated Statements of Comprehensive Income.

Risks and Uncertainties

The Company's future results of operations and liquidity could be materially adversely affected by macroeconomic and geopolitical factors in the U.S. and globally, including the supply chain environment, inflationary pressure, rising interest rates, instability in the global financial markets, labor shortages, significant disruptions in the commodities' markets as a result of the Russia and Ukraine conflict, the introduction of or changes in tariffs, trade barriers, or regulatory requirements, and uncertain or reduced demand, as well as the impact of any initiatives or programs that the Company may undertake to address financial and operational challenges faced by its customers.

The Company continues to experience difficulties in obtaining a sufficient supply of a number of component materials used in its products, such as semiconductor components as well as a range of other materials including, but not limited to, metals and polymers, as global supply has become significantly constrained due to increased demand for certain materials. Additionally, prices of such materials have increased due to the increased demand and supply shortages. With rising interest rates, access to credit may become more difficult, and any insolvency of the Company's key suppliers, including sole-source and single-source suppliers, may exacerbate current supply chain challenges. Also, liquidity concerns in the broader financial services industry could result in delayed access or loss of access to the Company's key suppliers' uninsured deposits or loss of their ability to draw on existing credit facilities involving a troubled or failed financial institution. The Company is engaged in activities to seek to mitigate supply disruptions, but the global supply chain shortages will remain a challenge in the mid-term.

Such global shortages in important components as well as certain logistics challenges have resulted in, and will continue to cause, inflationary cost pressure in the Company's supply chain. To date, the inflationary cost pressure has been more pronounced in the Company's logistics costs, but these supply chain challenges have not materially impacted the Company's results of operations or ability to deliver products and services to its customers. However, if shortages in important supply chain materials in the semiconductor or other markets or logistics challenges continue, the Company could fail to meet product demand, which could result in deferred or canceled procedures. Additionally, if inflationary pressures in logistics or component costs persist, the Company may not be able to quickly or easily adjust pricing, reduce costs, or implement countermeasures. Additionally, there is uncertainty surrounding the impact of any monetary policy changes taken by the U.S. Federal Reserve and other central banks to address the structural risks associated with inflation.

Fluctuations in labor availability globally, including labor shortages and staff burnout and attrition, could also impact the Company's ability to hire and retain personnel critical to its manufacturing, logistics, and commercial operations. The Company is also highly dependent on the principal members of its management and scientific staff. The loss of critical members of the Company's team, or its inability to attract and retain qualified personnel, could significantly harm its operations, business, and ability to compete.

Hospitals are also experiencing challenges with staffing and cost pressures that could affect their ability to provide patient care. Additionally, hospitals are facing significant financial pressure as supply chain constraints and inflation drive up operating costs, rising interest rates make access to credit more expensive, unrealized losses decrease available cash reserves, and fiscal stimulus programs enacted during the COVID-19 pandemic wind down. Hospitals may also be adversely affected by the liquidity concerns in the broader financial services industry that could result in delayed access or loss of access to uninsured deposits or loss of their ability to draw on existing credit facilities involving a troubled or failed financial institution. To the extent macroeconomic conditions remain challenging, it is likely that hospitals' spend on capital equipment will be adversely impacted. In addition, as competition progresses in various markets, longer selling cycles and pricing pressures are likely to result. As of the date of issuance of these Financial Statements, the extent to which these macroeconomic factors may materially adversely affect the Company's financial condition, liquidity, or results of operations is uncertain.

The Company maintains the majority of its cash and cash equivalents in accounts with major U.S. and multi-national financial institutions, and our deposits exceed insured limits. Market conditions could impact the viability of these institutions. To date, these market conditions and liquidity concerns have not impacted our results of operations. However, in the event of failure of any of the financial institutions where we maintain our cash and cash equivalents, there can be no assurance that we would be able to access uninsured funds in a timely manner or at all. Any inability to access or delay in accessing these funds could adversely affect our business and financial position.

The Company is also subject to additional risks and uncertainties due to the ongoing COVID-19 pandemic. The extent of the impact on the Company's business is highly uncertain and difficult to predict. The Company's customers may divert resources to treat COVID-19 patients and defer some elective surgical procedures, both of which may impact the Company's customers' ability to meet their obligations, including to the Company. The severity of the impact of the COVID-19 pandemic on the Company's business will depend on a number of factors, including, but not limited to, the duration and severity of the pandemic and the extent and severity of the impact on the Company's customers, all of which are uncertain and cannot be predicted.

Recently Adopted Accounting Pronouncements

Troubled Debt Restructurings and Vintage Disclosures

In March 2022, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2022-02, *Financial Instruments-Credit Losses (Topic 326): Troubled Debt Restructurings and Vintage Disclosures* ("ASU 2022-02"), which eliminates the accounting guidance for troubled debt restructurings by creditors while enhancing disclosure requirements for certain loan refinancings and restructurings by creditors when a borrower is experiencing financial difficulty. Additionally, the standard requires disclosure of current-period gross write-offs by year of origination for financing receivables and net investments in leases within the scope of Subtopic ASC 326-20, *Financial Instruments-Credit Losses-Measured at Amortized Cost*. The Company adopted ASU 2022-02 on January 1, 2023, on a prospective basis. There was no impact of the adoption of ASU 2022-02 on the Company's Financial Statements in the three months ended March 31, 2023.

Recently Issued Accounting Pronouncements

The Company continues to monitor new accounting pronouncements issued by the FASB and does not believe any accounting pronouncements issued through the date of this report will have a material impact on the Company's Financial Statements.

Significant Accounting Policies

There have been no new or material changes to the significant accounting policies discussed in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2022, that are of significance, or potential significance, to the Company.

NOTE 3. FINANCIAL INSTRUMENTS

Cash, Cash Equivalents, and Investments

The following tables summarize the Company's cash and available-for-sale debt securities' amortized cost, gross unrealized gains, gross unrealized losses, allowance for credit loss, and fair value by significant investment category reported as cash and cash equivalents, short-term investments, or long-term investments as of March 31, 2023, and December 31, 2022 (in millions):

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Allowance for Credit Loss	Fair Value	Reported as: Cash and Cash Equivalents	Short-term Investments	Long-term Investments
March 31, 2023								
Cash	$ 605.2	$ —	$ —	$ —	$ 605.2	$ 605.2	$ —	$ —
Level 1:								
Money market funds	1,537.8	—	—	—	1,537.8	1,537.8	—	—
U.S. treasuries	2,279.0	—	(69.7)	—	2,209.3	—	1,522.6	686.7
Subtotal	3,816.8	—	(69.7)	—	3,747.1	1,537.8	1,522.6	686.7
Level 2:								
Corporate debt securities	1,789.2	—	(60.3)	(1.1)	1,727.8	—	769.6	958.2
U.S. government agencies	400.4	—	(15.3)	—	385.1	—	210.5	174.6
Municipal securities	118.2	—	(4.8)	—	113.4	—	46.5	66.9
Subtotal	2,307.8	—	(80.4)	(1.1)	2,226.3	—	1,026.6	1,199.7
Total assets measured at fair value	$ 6,729.8	$ —	$ (150.1)	$ (1.1)	$ 6,578.6	$ 2,143.0	$ 2,549.2	$ 1,886.4

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Allowance for Credit Loss	Fair Value	Reported as: Cash and Cash Equivalents	Short-term Investments	Long-term Investments
December 31, 2022								
Cash	$ 497.2	$ —	$ —	$ —	$ 497.2	$ 497.2	$ —	$ —
Level 1:								
Money market funds	1,084.0	—	—	—	1,084.0	1,084.0	—	—
U.S. treasuries	2,715.2	—	(96.6)	—	2,618.6	—	1,542.4	1,076.2
Subtotal	3,799.2	—	(96.6)	—	3,702.6	1,084.0	1,542.4	1,076.2
Level 2:								
Commercial paper	20.0	—	—	—	20.0	—	20.0	—
Corporate debt securities	2,022.0	—	(76.0)	(1.1)	1,944.9	—	651.8	1,293.1
U.S. government agencies	447.2	—	(19.9)	—	427.3	—	247.8	179.5
Municipal securities	155.5	—	(6.0)	—	149.5	—	74.7	74.8
Subtotal	2,644.7	—	(101.9)	(1.1)	2,541.7	—	994.3	1,547.4
Total assets measured at fair value	$ 6,941.1	$ —	$ (198.5)	$ (1.1)	$ 6,741.5	$ 1,581.2	$ 2,536.7	$ 2,623.6

The following table summarizes the contractual maturities of the Company's cash equivalents and available-for-sale debt securities (excluding money market funds), as of March 31, 2023 (in millions):

	Amortized Cost	Fair Value
Mature in less than one year	$ 2,602.1	$ 2,549.2
Mature in one to five years	1,984.7	1,886.4
Total	$ 4,586.8	$ 4,435.6

Actual maturities may differ from contractual maturities, because certain borrowers have the right to call or prepay certain obligations. Gross realized gains and losses recognized on the sale of investments were immaterial for the periods presented.

As of March 31, 2023, and December 31, 2022, net unrealized losses on available-for-sale debt securities, net of tax, of $116.6 million and $154.2 million, respectively, were included in accumulated other comprehensive loss in the accompanying Consolidated Balance Sheets.

The following tables present the breakdown of the available-for-sale debt securities with unrealized losses as of March 31, 2023, and December 31, 2022 (in millions):

	March 31, 2023					
	Unrealized losses less than 12 months		Unrealized losses 12 months or greater		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
U.S. treasuries	$ 71.7	$ (0.8)	$ 2,137.6	$ (68.9)	$ 2,209.3	$ (69.7)
Corporate debt securities	159.6	(2.0)	1,550.3	(58.3)	1,709.9	(60.3)
U.S. government agencies	9.7	(0.3)	375.4	(15.0)	385.1	(15.3)
Municipal securities	—	—	113.4	(4.8)	113.4	(4.8)
Total	$ 241.0	$ (3.1)	$ 4,176.7	$ (147.0)	$ 4,417.7	$ (150.1)

	December 31, 2022					
	Unrealized losses less than 12 months		Unrealized losses 12 months or greater		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
U.S. treasuries	$ 731.7	$ (26.0)	$ 1,886.9	$ (70.6)	$ 2,618.6	$ (96.6)
Corporate debt securities	631.4	(17.6)	1,221.9	(58.4)	1,853.3	(76.0)
U.S. government agencies	102.7	(4.4)	324.6	(15.5)	427.3	(19.9)
Municipal securities	44.6	(1.1)	104.9	(4.9)	149.5	(6.0)
Total	$ 1,510.4	$ (49.1)	$ 3,538.3	$ (149.4)	$ 5,048.7	$ (198.5)

The Company's investments may consist of money market funds, U.S. treasury and U.S. government agency securities, high-quality corporate notes and bonds, commercial paper, non-U.S. government agency securities, and taxable and tax-exempt municipal notes. The Company regularly reviews its investments and evaluates the current expected credit loss by considering factors such as historical experience, market data, financial condition and near-term prospects of the investee, the extent of any losses related to the credit of the issuer, and the expected cash flows from the security. The Company segments its portfolio based on the underlying risk profiles of the securities and has a zero-loss expectation for U.S. treasury and U.S. government agency securities. The basis for this assumption is that these securities have consistently high credit ratings by rating agencies, have a long history with no credit losses, are explicitly guaranteed by a sovereign entity, which can print its own currency, and are denominated in a currency that is routinely held by central banks, used in international commerce, and commonly viewed as a reserve currency.

The current unrealized losses on the Company's available-for-sale debt securities were caused by interest rate increases. The contractual terms of those investments do not permit the issuer to settle the securities at a price less than the amortized cost basis of the investments. As of March 31, 2023, the Company does not intend to sell the investments in unrealized loss positions, and it is not more-likely-than-not that the Company will be required to sell any of the investments before recovery of their amortized cost basis, which may be at maturity. Therefore, the Company does not expect to realize any losses on these available-for-sale debt securities. Additional factors considered in determining the treatment of unrealized losses include the financial condition and near-term prospects of the investee, the extent of the loss related to the credit of the issuer, and the expected cash flows from the security.

For the three months ended March 31, 2023, and 2022, credit losses related to available-for-sales debt securities were not material.

Equity Investments

The Company holds equity investments with readily determinable fair values and equity investments without readily determinable fair values. The Company generally recognizes equity investments that do not have readily determinable fair values at cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for the identical or a similar investment of the same issuer.

The following table is a summary of the activity related to equity investments (in millions):

	December 31, 2022 Carrying Value	Changes in Fair Value [1]	Purchases / Sales / Other [2]	March 31, 2023 Carrying Value	Reported as: Prepaids and other current assets	Reported as: Intangible and other assets, net
Equity investments with readily determinable value (Level 1)	$ 4.3	$ (0.4)	$ (2.7)	$ 1.2	$ 1.2	$ —
Equity investments without readily determinable value (Level 2)	$ 59.1	$ 0.5	$ 4.0	$ 63.6	$ —	$ 63.6

[1] Recorded in interest and other income (expense), net.

[2] Other includes foreign currency translation gains/(losses).

For the three months ended March 31, 2023, the Company recognized a decrease in fair value of $0.4 million on its equity investments with readily determinable market values (Level 1), which was reflected in interest and other income (expense), net. For the three months ended March 31, 2023, the Company recognized an increase in fair value of $0.5 million due to changes in observable prices for certain equity investments that lack readily determinable market values (Level 2), which was also reflected in interest and other income (expense), net.

There were no decreases in fair value reflected in net income due to impairments.

Foreign Currency Derivatives

The objective of the Company's hedging program is to mitigate the impact of changes in currency exchange rates on net cash flow from foreign currency-denominated sales, expenses, intercompany balances, and other monetary assets or liabilities denominated in currencies other than the U.S. dollar ("USD"). The terms of the Company's derivative contracts are generally twelve months or shorter. The derivative assets and liabilities are measured using Level 2 fair value inputs.

Cash Flow Hedges

The Company enters into currency forward contracts as cash flow hedges to hedge certain forecasted revenue transactions denominated in currencies other than the USD, primarily the Euro ("EUR"), the British Pound ("GBP"), the Japanese Yen ("JPY"), the Korean Won ("KRW"), and the New Taiwan Dollar ("TWD"). The Company also enters into currency forward contracts as cash flow hedges to hedge certain forecasted expense transactions denominated in EUR and the Swiss Franc ("CHF").

For these derivatives, the Company reports the unrealized after-tax gain or loss from the hedge as a component of accumulated other comprehensive loss in stockholders' equity and reclassifies the amount into earnings in the same period in which the hedged transaction affects earnings. The amounts reclassified to revenue and expenses related to the hedged transactions and the ineffective portions of cash flow hedges were not material for the periods presented.

Other Derivatives Not Designated as Hedging Instruments

Other derivatives not designated as hedging instruments consist primarily of forward contracts that the Company uses to hedge intercompany balances and other monetary assets or liabilities denominated in currencies other than the USD, primarily the EUR, GBP, JPY, KRW, CHF, TWD, Indian Rupee ("INR"), Mexican Peso ("MXN"), Chinese Yuan ("CNY"), and Canadian Dollar ("CAD").

These derivative instruments are used to hedge against balance sheet foreign currency exposures. The related gains and losses were as follows (in millions):

	Three Months Ended March 31, 2023	Three Months Ended March 31, 2022
Recognized gains (losses) in interest and other income (expense), net	$ (3.3)	$ 6.8
Foreign exchange gains (losses) related to balance sheet re-measurement	$ 5.4	$ (10.1)

The notional amounts for derivative instruments provide one measure of the transaction volume. Total gross notional amounts (in USD) for outstanding derivatives and the aggregate gross fair value at the end of each period were as follows (in millions):

	Derivatives Designated as Hedging Instruments		Derivatives Not Designated as Hedging Instruments	
	March 31, 2023	December 31, 2022	March 31, 2023	December 31, 2022
Notional amounts:				
Forward contracts	$ 222.9	$ 188.4	$ 513.3	$ 496.3
Gross fair value recorded in:				
Prepaids and other current assets	$ 2.8	$ 1.8	$ 1.7	$ 4.3
Other accrued liabilities	$ 3.4	$ 5.3	$ 3.6	$ 4.2

NOTE 4. BALANCE SHEET DETAILS AND OTHER FINANCIAL INFORMATION

Balance Sheet Details

The following tables provide details of selected balance sheet line items (in millions):

	As of	
Accounts receivable, net	March 31, 2023	December 31, 2022
Trade accounts receivable, net	$ 844.5	$ 864.9
Unbilled accounts receivable and other	94.5	91.7
Sales returns and allowances	(13.7)	(14.5)
Total accounts receivable, net	$ 925.3	$ 942.1

	As of	
Inventory	March 31, 2023	December 31, 2022
Raw materials	$ 386.5	$ 382.9
Work-in-process	145.1	159.9
Finished goods	415.0	350.4
Total inventory	$ 946.6	$ 893.2

	As of	
Prepaids and other current assets	March 31, 2023	December 31, 2022
Net investment in sales-type leases – short-term	$ 132.1	$ 131.2
Other prepaids and other current assets	180.8	168.6
Total prepaids and other current assets	$ 312.9	$ 299.8

	As of	
Other accrued liabilities – short-term	March 31, 2023	December 31, 2022
Income and other taxes payable	$ 125.4	$ 96.1
Accrued construction-related capital expenditures	71.2	50.3
Litigation-related accruals	3.2	23.0
Other accrued liabilities	264.8	306.8
Total other accrued liabilities – short-term	$ 464.6	$ 476.2

	As of	
Other long-term liabilities	**March 31, 2023**	**December 31, 2022**
Income taxes – long-term	$ 293.7	$ 288.0
Deferred revenue – long-term	44.7	41.0
Other long-term liabilities	113.2	110.3
Total other long-term liabilities	$ 451.6	$ 439.3

Supplemental Cash Flow Information

The following table provides supplemental non-cash investing and financing activities (in millions):

	Three Months Ended March 31,	
	2023	**2022**
Equipment transfers, including operating lease assets, from inventory to property, plant, and equipment	$ 89.6	$ 60.9
Acquisition of property, plant, and equipment in accounts payable and accrued liabilities	$ 80.2	$ 53.5

NOTE 5. REVENUE AND CONTRACT ACQUISITION COSTS

The following table presents revenue disaggregated by types and geography (in millions):

	Three Months Ended March 31,	
U.S.	**2023**	**2022**
Instruments and accessories	$ 701.4	$ 550.6
Systems	221.8	248.3
Services	186.7	165.9
Total U.S. revenue	$ 1,109.9	$ 964.8
Outside of U.S. ("OUS")		
Instruments and accessories	$ 284.2	$ 259.7
Systems	205.6	179.8
Services	96.5	83.4
Total OUS revenue	$ 586.3	$ 522.9
Total		
Instruments and accessories	$ 985.6	$ 810.3
Systems	427.4	428.1
Services	283.2	249.3
Total revenue	$ 1,696.2	$ 1,487.7

Remaining Performance Obligations

The transaction price allocated to remaining performance obligations relates to amounts allocated to products and services for which revenue has not yet been recognized. A significant portion of these performance obligations relate to service obligations in the Company's system sale and lease arrangements that will be satisfied and recognized as revenue in future periods. The transaction price allocated to the remaining performance obligations was $1.95 billion as of March 31, 2023. The remaining performance obligations are expected to be satisfied over the term of the system sale, lease, and service arrangements. Approximately 42% of the remaining performance obligations are expected to be recognized in the next 12 months with the remainder recognized thereafter over the term of the system sale, lease, and service arrangements, which are generally up to 5 years.

Contract Assets and Liabilities

The following information summarizes the Company's contract assets and liabilities (in millions):

	As of	
	March 31, 2023	December 31, 2022
Contract assets	$ 49.4	$ 45.0
Deferred revenue	$ 462.5	$ 438.3

The Company invoices its customers based on the billing schedules in its sales arrangements. Payments are generally due 30 to 60 days from the date of invoice. Contract assets for the periods presented primarily represent the difference between the revenue that was recognized based on the relative standalone selling price of the related performance obligations satisfied and the contractual billing terms in the arrangements. Deferred revenue for the periods presented primarily relates to service contracts where the service fees are billed up-front, generally quarterly or annually, prior to those services having been performed. The associated deferred revenue is generally recognized over the term of the service period. The Company did not have any significant impairment losses on its contract assets for the periods presented.

During the three months ended March 31, 2023, the Company recognized $184.6 million of revenue that was included in the deferred revenue balance as of December 31, 2022. During the three months ended March 31, 2022, the Company recognized $172.0 million of revenue that was included in the deferred revenue balance as of December 31, 2021.

Intuitive System Leasing

The following table presents product revenue from Intuitive System Leasing arrangements (in millions):

	Three Months Ended March 31,	
	2023	2022
Sales-type lease revenue	$ 23.0	$ 35.6
Operating lease revenue*	$ 112.0	$ 83.2
*Variable lease revenue relating to usage-based arrangements included within operating lease revenue	$ 46.0	$ 24.9

Trade Accounts Receivable

The allowance for doubtful accounts is based on the Company's assessment of the collectibility of customer accounts. The Company regularly reviews the allowance by considering factors such as historical experience, credit quality, the age of the accounts receivable balances, and current economic conditions that may affect a customer's ability to pay. For the three months ended March 31, 2023, and 2022, bad debt expense was not material.

The Company's exposure to credit losses may increase if its customers are adversely affected by changes in healthcare laws, coverage, and reimbursement, economic pressures or uncertainty associated with local or global economic recessions, disruption associated with the current COVID-19 pandemic, or other customer-specific factors. Although the Company has historically not experienced significant credit losses, it is possible that there could be a material adverse impact from potential adjustments to the carrying amount of lease and trade receivables, particularly as hospital cash flows are impacted by inflation and rising interest rates, which drive up their operating costs.

NOTE 6. LEASES

Lessor Information related to Intuitive System Leasing

Sales-type Leases. Lease receivables relating to sales-type lease arrangements are presented on the Condensed Consolidated Balance Sheets as follows (in millions):

	As of	
	March 31, 2023	December 31, 2022
Gross lease receivables	$ 436.4	$ 449.4
Unearned income	(14.4)	(14.4)
Subtotal	422.0	435.0
Allowance for credit loss	(3.0)	(3.0)
Net investment in sales-type leases	$ 419.0	$ 432.0
Reported as:		
Prepaids and other current assets	$ 132.1	$ 131.2
Intangible and other assets, net	286.9	300.8
Net investment in sales-type leases	$ 419.0	$ 432.0

Contractual maturities of gross lease receivables as of March 31, 2023, are as follows (in millions):

Fiscal Year	Amount
Remainder of 2023	$ 106.0
2024	131.0
2025	100.3
2026	64.3
2027	30.8
2028 and thereafter	4.0
Total	$ 436.4

The Company enters into sales-type leases with certain qualified customers to purchase its systems. Sales-type leases have terms that generally range from 24 to 84 months and are usually collateralized by a security interest in the underlying assets. The allowance for loan loss is based on the Company's assessment of current expected lifetime losses on lease receivables. The Company regularly reviews the allowance by considering factors such as historical experience, credit quality, age of the lease receivable balances, and current economic conditions that may affect a customer's ability to pay. Lease receivables are considered past due 90 days after invoice.

The Company manages the credit risk in net investment in sales-type leases using a number of factors, including, but not limited to the following: size of operations; profitability, liquidity, and debt ratios; payment history; and past due amounts. The Company also uses credit scores obtained from external providers as a key indicator for the purposes of determining credit quality. The following table summarizes the amortized cost basis by year of origination and by credit quality for the net investment in sales-type leases as of March 31, 2023 (in millions):

	2023	2022	2021	2020	2019	Prior	Net Investment
Credit Rating:							
High	$ 15.3	$ 87.3	$ 78.6	$ 44.1	$ 11.8	$ 1.4	$ 238.5
Moderate	8.1	67.8	61.8	24.5	7.8	3.5	173.5
Low	0.2	3.6	4.0	2.2	—	—	10.0
Total	$ 23.6	$ 158.7	$ 144.4	$ 70.8	$ 19.6	$ 4.9	$ 422.0

For the three months ended March 31, 2023, and 2022, credit losses related to net investment in sales-type leases were not material.

NOTE 7. GOODWILL AND INTANGIBLE ASSETS

Acquisitions

There were no acquisitions in the three months ended March 31, 2023, and 2022.

Goodwill

The following table summarizes the changes in the carrying amount of goodwill (in millions):

	Amount
Balance as of December 31, 2022	$ 348.5
Acquisition activity	—
Translation and other	0.1
Balance as of March 31, 2023	$ 348.6

Intangible Assets

The following table summarizes the components of gross intangible assets, accumulated amortization, and net intangible assets balances as of March 31, 2023, and December 31, 2022 (in millions):

	March 31, 2023			December 31, 2022		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Patents and developed technology	$ 199.1	$ (170.7)	$ 28.4	$ 199.1	$ (167.4)	$ 31.7
Distribution rights and others	10.6	(7.6)	3.0	11.0	(7.4)	3.6
Customer relationships	32.7	(19.3)	13.4	32.6	(18.1)	14.5
Total intangible assets	$ 242.4	$ (197.6)	$ 44.8	$ 242.7	$ (192.9)	$ 49.8

Amortization expense related to intangible assets was $5.0 million and $6.1 million for the three months ended March 31, 2023, and 2022, respectively.

The estimated future amortization expense related to intangible assets as of March 31, 2023, is as follows (in millions):

Fiscal Year	Amount
Remainder of 2023	$ 14.2
2024	15.0
2025	10.3
2026	3.4
2027	1.0
2028 and thereafter	0.9
Total	$ 44.8

The preceding expected amortization expense is an estimate. Actual amounts of amortization expense may differ from estimated amounts due to additional intangible asset acquisitions, measurement-period adjustments to intangible assets, changes in foreign currency exchange rates, impairments of intangible assets, accelerated amortization of intangible assets, and other events.

NOTE 8. CONTINGENCIES

From time to time, the Company is involved in a variety of claims, lawsuits, investigations, and proceedings relating to securities laws, product liability, intellectual property, commercial, insurance, contract disputes, employment, and other matters. Certain of these lawsuits and claims are described in further detail below. It is not possible to predict what the outcome of these matters will be, and the Company cannot guarantee that any resolution will be reached on commercially reasonable terms, if at all.

A liability and related charge to earnings are recorded in the Financial Statements for legal contingencies when the loss is considered probable and the amount can be reasonably estimated. The assessment is re-evaluated each accounting period and is based on all available information, including the impact of negotiations, settlements, rulings, advice of legal counsel, and other information and events pertaining to each case. Nevertheless, it is possible that additional future legal costs (including settlements, judgments, legal fees, and other related defense costs) could have a material adverse effect on the Company’s business, financial condition, or future results of operations.

Product Liability Litigation

The Company is currently named as a defendant in a number of individual product liability lawsuits filed in various state and federal courts. The plaintiffs generally allege that they or a family member underwent surgical procedures that utilized the da Vinci Surgical System and sustained a variety of personal injuries and, in some cases, death as a result of such surgery. Several of the filed cases have trial dates in the next 12 months.

The cases raise a variety of allegations including, to varying degrees, that plaintiffs' injuries resulted from purported defects in the da Vinci Surgical System and/or failure on the Company's part to provide adequate training resources to the healthcare professionals who performed plaintiffs' surgeries. The cases further allege that the Company failed to adequately disclose and/or misrepresented the potential risks and/or benefits of the da Vinci Surgical System. Plaintiffs also assert a variety of causes of action, including, for example, strict liability based on purported design defects, negligence, fraud, breach of express and implied warranties, unjust enrichment, and loss of consortium. Plaintiffs seek recovery for alleged personal injuries and, in many cases, punitive damages. The Company disputes these allegations and is defending against these claims.

The Company's estimate of the anticipated cost of resolving the pending cases is based on negotiations with attorneys for the claimants. The final outcome of the pending lawsuits and claims, and others that might arise, is dependent on many variables that are difficult to predict, and the ultimate cost associated with these product liability lawsuits and claims may be materially different than the amount of the current estimate and accruals and could have a material adverse effect on the Company's business, financial condition, or future results of operations. Although there is a reasonable possibility that a loss in excess of the amount recognized exists, the Company is unable to estimate the possible loss or range of loss in excess of the amount recognized at this time.

Patent Litigation

On June 30, 2017, Ethicon LLC, Ethicon Endo-Surgery, Inc., and Ethicon US LLC (collectively, "Ethicon") filed a complaint for patent infringement against the Company in the U.S. District Court for the District of Delaware. The complaint, which was served on the Company on July 12, 2017, alleges that the Company's EndoWrist Stapler instruments infringe several of Ethicon's patents. Ethicon asserts infringement of U.S. Patent Nos. 9,585,658; 8,479,969; 9,113,874; 8,998,058; 8,991,677; 9,084,601; and 8,616,431. A claim construction hearing occurred on October 1, 2018, and the Court issued a scheduling order on December 28, 2018. On March 20, 2019, the Court granted the Company's Motion to Stay pending an Inter Partes Review to be held at the Patent Trademark and Appeals Board to review patentability of six of the seven patents noted above and vacated the trial date. On August 1, 2019, the Court granted the parties' joint stipulation to modify the stay in light of Ethicon's U.S. International Trade Commission ("USITC") complaint against Intuitive involving U.S. Patent Nos. 8,479,969 and 9,113,874, discussed below. There is currently no trial date scheduled for this matter.

On August 27, 2018, Ethicon filed a second complaint for patent infringement against the Company in the U.S. District Court for the District of Delaware. The complaint alleges that the Company's SureForm 60 Staplers infringe five of Ethicon's patents. Ethicon asserts infringement of U.S. Patent Nos. 9,884,369; 7,490,749; 8,602,288; 8,602,287; and 9,326,770. The Company filed an answer denying all claims. On March 19, 2019, Ethicon filed a Motion for Leave to File a First Amended Complaint, removing allegations related to U.S. Patent No. 9,326,770 and adding allegations related to U.S. Patent Nos. 9,844,379 and 8,479,969. On July 17, 2019, the Court entered an order denying the amendment, without prejudice, and granting the parties' joint stipulation to stay the case in its entirety in light of the USITC investigation involving U.S. Patent Nos. 9,844,369 and 7,490,749, discussed below. There is currently no trial date scheduled for this matter.

Based on currently available information, the Company is unable to make a reasonable estimate of loss or range of losses, if any, arising from these matters.

On May 30, 2019, Ethicon filed a complaint with the USITC, asserting infringement of U.S. Patent Nos. 9,884,369 ("'369"); 7,490,749 ("'749"); 9,844,379 ("'379"); 9,113,874 ("'874"); and 8,479,969 ("'969"). On June 28, 2019, the USITC voted to institute an investigation (No. 337-TA-1167) with respect to the claims in this complaint. The accused products include the Company's EndoWrist 30, EndoWrist 45, SureForm 45, and SureForm 60 Staplers, as well as the stapler reload cartridges. In March 2020, Ethicon dismissed its claims concerning the '749 patent. The evidentiary hearing took place in February 2021. On March 26, 2021, the U.S. Patent Trial and Appeal Board ("PTAB") issued a Final Written Decision in which it found the claims in the '379 patent asserted against the Company in this USITC proceeding to be invalid. On June 8, 2021, the Chief Administrative Law Judge issued an Initial Determination concluding that (1) the accused products do not infringe the asserted claims in the '874 or '969 patents; (2) the asserted claims in the '874 and '969 patents are invalid; (3) the accused SureForm staplers and associated reload cartridges infringe two claims of the '369 patent; (4) the accused SureForm staplers and associated reload cartridges infringe two claims of the '379 patent; and (5) the Company was estopped from contending that the asserted claims in the '379 patent are invalid. Ethicon has not challenged the Initial Determination with regard to the findings that absolve Intuitive of any liability regarding the accused EndoWrist staplers and associated reload cartridges. On October 14, 2021, the USITC issued its Opinion in which it made the following rulings: (1) the USITC absolved Intuitive from any liability regarding the '874, '969, and '369 patents; and (2) the USITC found that, while the SureForm staplers and their associated

reload cartridges infringe the asserted claims in the ’379 patent, it has suspended the imposition of any remedial order pending an opinion from the U.S. Court of Appeal for the Federal Circuit of whether the Patent and Trademark Office correctly found the asserted claims in this patent to be invalid. On May 23, 2022, the U.S. Court of Appeal for the Federal Circuit affirmed the earlier PTAB Final Written Decision invalidating the asserted claims in the ’379 patent. A hearing before the U.S. Court of Appeal for the Federal Circuit occurred on March 8, 2023, on Ethicon’s appeal of the USITC’s Opinion. An adverse ruling on Ethicon’s appeal of the USITC’s Opinion could result in a prohibition on importing the accused SureForm products into the U.S. or necessitating workarounds. Based on currently available information, the Company does not believe that any losses arising from this matter would be material.

On October 19, 2022, a jury rendered a verdict against the Company awarding $10 million in damages to Rex Medical, L.P. in a patent infringement lawsuit. The Company intends to appeal the decision and vigorously defend its position. Based on currently available information, the Company does not believe that any losses arising from this matter would be material.

Commercial Litigation

On May 10, 2021, Surgical Instrument Service Company, Inc. (“SIS”) filed a complaint in the Northern District of California Court alleging anti-trust claims against the Company relating to EndoWrist service, maintenance, and repair processes. The Court granted in part and denied in part the Company’s Motion to Dismiss, and discovery has commenced. The Company filed an answer denying the anti-trust allegations and filed counterclaims against SIS. The counterclaims allege that SIS violated the Federal Lanham Act, California’s Unfair Competition Law, and California’s False Advertising Law and that SIS is also liable to the Company for Unfair Competition and Tortious Interference with Contract. Based on currently available information, the Company is unable to make a reasonable estimate of loss or range of losses, if any, arising from this matter.

Three class action complaints were filed against the Company in the Northern District of California Court alleging anti-trust allegations relating to the service and repair of certain instruments manufactured by the Company. A complaint by Larkin Community Hospital was filed on May 20, 2021, a complaint by Franciscan Alliance, Inc. and King County Public Hospital District No. 1 was filed on July 6, 2021, and a complaint by Kaleida Health was filed on July 8, 2021. The Court has consolidated the Franciscan Alliance, Inc. and King County Public Hospital District No. 1 and Kaleida Health cases with the Larkin Community Hospital case, which is now captioned on the Larkin docket as “In Re: da Vinci Surgical Robot Antitrust Litigation.” A Consolidated Amended Class Action Complaint has been filed on behalf of each plaintiff named in the earlier-filed cases. On January 14, 2022, Kaleida Health voluntarily dismissed itself as a party to this case. On January 18, 2022, the Company filed an answer against the plaintiffs in this matter, and discovery has commenced. Based on currently available information, the Company is unable to make a reasonable estimate of loss or range of losses, if any, arising from this matter.

NOTE 9. STOCKHOLDERS’ EQUITY

Stockholders’ Equity

The following tables present the changes in stockholders’ equity (in millions):

	Three Months Ended March 31, 2023							
	Common Stock		Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Intuitive Surgical, Inc. Stockholders’ Equity	Noncontrolling Interest in Joint Venture	Total Stockholders’ Equity
	Shares	Amount						
Beginning balance	350.0	$ 0.4	$ 7,703.9	$ 3,500.1	$ (162.5)	$ 11,041.9	$ 70.7	$ 11,112.6
Issuance of common stock through employee stock plans	2.4	—	100.2	—	—	100.2	—	100.2
Shares withheld related to net share settlement of equity awards	(0.5)	—	(5.9)	(123.8)	—	(129.7)	—	(129.7)
Share-based compensation expense related to employee stock plans	—	—	146.0	—	—	146.0	—	146.0
Repurchase and retirement of common stock	(1.5)	—	(15.8)	(334.2)	—	(350.0)	—	(350.0)
Net income attributable to Intuitive Surgical, Inc.	—	—	—	355.3	—	355.3	—	355.3
Other comprehensive income (loss)	—	—	—	—	54.0	54.0	0.3	54.3
Net income attributable to noncontrolling interest in joint venture	—	—	—	—	—	—	5.5	5.5
Ending balance	350.4	$ 0.4	$ 7,928.4	$ 3,397.4	$ (108.5)	$ 11,217.7	$ 76.5	$ 11,294.2

	Three Months Ended March 31, 2022							
	Common Stock		Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Intuitive Surgical, Inc. Stockholders' Equity	Noncontrolling Interest in Joint Venture	Total Stockholders' Equity
	Shares	Amount						
Beginning balance	357.7	$ 0.4	$ 7,164.0	$ 4,760.9	$ (24.2)	$ 11,901.1	$ 50.4	$ 11,951.5
Issuance of common stock through employee stock plans	2.2	—	80.0	—	—	80.0	—	80.0
Shares withheld related to net share settlement of equity awards	(0.6)	—	(6.1)	(166.1)	—	(172.2)	—	(172.2)
Share-based compensation expense related to employee stock plans	—	—	120.8	—	—	120.8	—	120.8
Repurchase and retirement of common stock	(0.4)	—	(4.1)	(102.4)	—	(106.5)	—	(106.5)
Net income attributable to Intuitive Surgical, Inc.	—	—	—	365.6	—	365.6	—	365.6
Other comprehensive income (loss)	—	—	—	—	(86.5)	(86.5)	0.4	(86.1)
Net income attributable to noncontrolling interest in joint venture	—	—	—	—	—	—	3.8	3.8
Ending balance	358.9	$ 0.4	$ 7,354.6	$ 4,858.0	$ (110.7)	$ 12,102.3	$ 54.6	$ 12,156.9

Stock Repurchase Program

The Company's Board of Directors (the "Board") has authorized an aggregate of $10.0 billion of funding for the Company's common stock repurchase program (the "Repurchase Program") since its establishment in March 2009. The most recent authorization occurred in July 2022, when the Board increased the authorized amount available under the Repurchase Program to $3.5 billion, including amounts remaining under previous authorization. As of March 31, 2023, the remaining amount of share repurchases authorized by the Board under the Repurchase Program was approximately $1.1 billion.

The following table summarizes stock repurchase activities (in millions, except per share amounts):

	Three Months Ended March 31,	
	2023	2022
Shares repurchased	1.5	0.4
Average price per share	$ 238.1	$ 268.0
Value of shares repurchased	$ 350.0	$ 106.5

As a provision of the Inflation Reduction Act enacted in the U.S. during 2022, the Company is subject to an excise tax on corporate stock repurchases, which is assessed as one percent of the fair market value of net stock repurchases after December 31, 2022. For the three months ended March 31, 2023, no excise tax was accrued, as the aggregate fair market value of the Company's stock issuances exceeded the fair market value of stock repurchases.

Accumulated Other Comprehensive Loss, Net of Tax, Attributable to Intuitive Surgical, Inc.

The components of accumulated other comprehensive loss, net of tax, attributable to Intuitive Surgical, Inc. are as follows (in millions):

	Three Months Ended March 31, 2023				
	Gains (Losses) on Hedge Instruments	Unrealized Gains (Losses) on Available-for-Sale Securities	Foreign Currency Translation Gains (Losses)	Employee Benefit Plans	Total
Beginning balance	$ (2.9)	$ (154.2)	$ (6.6)	$ 1.2	$ (162.5)
Other comprehensive income (loss) before reclassifications	3.7	37.8	13.9	—	55.4
Amounts reclassified from accumulated other comprehensive income (loss)	(1.2)	(0.2)	—	—	(1.4)
Net current-period other comprehensive income (loss)	2.5	37.6	13.9	—	54.0
Ending balance	$ (0.4)	$ (116.6)	$ 7.3	$ 1.2	$ (108.5)

	Three Months Ended March 31, 2022				
	Gains (Losses) on Hedge Instruments	Unrealized Gains (Losses) on Available-for-Sale Securities	Foreign Currency Translation Gains (Losses)	Employee Benefit Plans	Total
Beginning balance	$ 4.5	$ (16.0)	$ (7.9)	$ (4.8)	$ (24.2)
Other comprehensive income (loss) before reclassifications	3.7	(90.8)	3.1	—	(84.0)
Amounts reclassified from accumulated other comprehensive income (loss)	(2.7)	0.1	—	0.1	(2.5)
Net current-period other comprehensive income (loss)	1.0	(90.7)	3.1	0.1	(86.5)
Ending balance	$ 5.5	$ (106.7)	$ (4.8)	$ (4.7)	$ (110.7)

The tax impacts for amounts recognized in other comprehensive income (loss) before reclassifications were as follows (in millions):

	Three Months Ended March 31,	
Available-for-sale securities	2023	2022
Income tax benefit (expense) for net gains (losses) recorded in other comprehensive income (loss)	$ (10.9)	$ 29.7

The tax impacts for amounts recognized in other comprehensive income (loss) before reclassifications for hedge instruments, foreign currency translation, and employee benefit plans for the three months ended March 31, 2023, and 2022, were not material to the Company's Financial Statements. The tax impacts for amounts reclassified from accumulated other comprehensive loss relating to hedge instruments, available-for-sale securities, foreign currency translation, and employee benefit plans for the three months ended March 31, 2023, and 2022, were not material to the Company's Financial Statements.

NOTE 10. SHARE-BASED COMPENSATION

As of March 31, 2023, the total number of shares of common stock reserved for issuance under the 2010 Incentive Award Plan was 110,350,000. Approximately 21.2 million shares were reserved for future issuance under the Company's stock plans, and a maximum of approximately 9.2 million of these shares can be awarded as restricted stock units ("RSUs").

Restricted Stock Units

A summary of RSUs activity under all stock plans for the three months ended March 31, 2023, is presented as follows (in millions, except per share amounts):

	Shares	Weighted-Average Grant-Date Fair Value
Unvested balance as of December 31, 2022	4.6	$ 241.47
RSUs granted	2.2	$ 230.07
RSUs vested	(1.5)	$ 223.07
RSUs forfeited	—	$ 250.75
Unvested balance as of March 31, 2023	5.3	$ 241.84

Stock Options

A summary of stock option activity under all stock plans for the three months ended March 31, 2023, is presented as follows (in millions, except per share amounts):

	Stock Options Outstanding	
	Number Outstanding	Weighted-Average Exercise Price Per Share
Balance as of December 31, 2022	10.8	$ 144.86
Options granted	0.7	$ 229.86
Options exercised	(0.6)	$ 73.91
Options forfeited/expired	—	$ 264.19
Balance as of March 31, 2023	10.9	$ 153.45

As of March 31, 2023, options to purchase an aggregate of 8.6 million shares of common stock were exercisable at a weighted average price of $127.98 per share.

Performance Stock Units

In 2022, the Company began granting performance stock units (“PSUs”) to officers and other key employees subject to three-year cliff vesting and pre-established, quantitative goals. Whether any PSUs vest, and the amount that does vest, is tied to completion of service over three years and the achievement of three equally-weighted, quantitative goals that directly align with or help drive the Company’s strategy and long-term total shareholder return.

The 2022 PSU grant metrics are focused on relative total shareholder return (“TSR”), year-over-year da Vinci procedure growth for 2023, and two-year compound annual da Vinci procedure growth for 2024. The 2023 PSU grant metrics are focused on relative TSR, da Vinci and Ion procedure growth in 2024 compared to 2022, and da Vinci and Ion procedure growth in 2025 compared to 2022. The TSR metric is considered a market condition, and the expense is determined at the grant date. The procedure growth metrics are considered performance conditions, and the expense is recorded based on the forecasted performance, which is reassessed each reporting period based on the probability of achieving the performance conditions. The number of shares earned at the end of the three-year period will vary, based on actual performance, from 0% to 125% of the target number of PSUs granted. PSUs are subject to forfeiture if employment terminates prior to the vesting date. PSUs are not considered issued or outstanding shares of the Company.

The Company calculates the fair value for each component of the PSUs individually. The fair value for the component with the TSR metric was determined using Monte Carlo simulation. The fair value per share for the components with the procedure growth metrics is equal to the closing stock price on the grant date.

PSU activity for the three months ended March 31, 2023, was as follows (in millions, except per share amounts):

	Shares	Weighted-Average Grant Date Fair Value Per Share
Unvested balance as of December 31, 2022	0.1	$ 299.32
Granted	0.1	$ 235.84
Vested	—	$ —
Performance change	—	$ —
Forfeited	—	$ —
Unvested balance as of March 31, 2023	0.2	$ 256.44

Employee Stock Purchase Plan

Under the Employee Stock Purchase Plan ("ESPP"), employees purchased approximately 0.3 million shares for $59.9 million and approximately 0.2 million shares for $47.8 million during the three months ended March 31, 2023, and 2022, respectively.

Share-based Compensation Expense

The following table summarizes share-based compensation expense for the three months ended March 31, 2023, and 2022 (in millions):

	Three Months Ended March 31,	
	2023	2022
Cost of sales – products (before capitalization)	$ 23.0	$ 18.7
Amounts capitalized into inventory [(1)]	(18.8)	—
Amounts recognized in income for amounts previously capitalized in inventory	12.6	—
Cost of sales – products	$ 16.8	$ 18.7
Cost of sales – services	7.0	5.6
Total cost of sales	23.8	24.3
Selling, general, and administrative	66.7	60.3
Research and development	50.1	36.8
Share-based compensation expense before income taxes	140.6	121.4
Income tax benefit	28.0	27.2
Share-based compensation expense after income taxes	$ 112.6	$ 94.2

[(1)] Share-based compensation expense subject to capitalization into inventory was not material during the quarter ended March 31, 2022, and, therefore, not recorded. The Company commenced capitalization of share-based compensation expense into inventory during the quarter ended December 31, 2022, on a prospective basis.

The Black-Scholes-Merton option pricing model is used to estimate the fair value of stock options granted under the Company's share-based compensation plans and the rights to acquire stock granted under the ESPP. The weighted-average estimated fair values of stock options and the rights to acquire stock under the ESPP, as well as the weighted-average assumptions used in calculating the fair values of stock options and the rights to acquire stock under the ESPP that were granted during the three months ended March 31, 2023, and 2022, were as follows:

	Three Months Ended March 31,	
	2023	2022
Stock Options		
Risk-free interest rate	4.8%	1.6%
Expected term (in years)	3.4	3.5
Expected volatility	34%	35%
Fair value at grant date	$72.13	$80.80
ESPP		
Risk-free interest rate	4.7%	0.8%
Expected term (in years)	1.2	1.2
Expected volatility	35%	37%
Fair value at grant date	$79.33	$88.85

NOTE 11. INCOME TAXES

Income tax expense for the three months ended March 31, 2023, was $61.0 million, or 14.5% of income before taxes, compared to $33.0 million, or 8.2% of income before taxes, for the three months ended March 31, 2022.

The effective tax rates for the three months ended March 31, 2023, and 2022, differed from the U.S. federal statutory rate of 21% mainly due to the tax benefits associated with employee equity plans, the effect of income earned by certain overseas entities being taxed at rates lower than the federal statutory rate, and the federal research and development credit benefit, partially offset by the U.S. tax on foreign earnings and state income taxes (net of federal benefit).

The provision for income taxes for the three months ended March 31, 2023, and 2022, included excess tax benefits associated with employee equity plans of $22.5 million and $53.0 million, which reduced the Company's effective tax rate by 5.3 and 13.2 percentage points, respectively.

On August 16, 2022, the Inflation Reduction Act was enacted in the U.S. and introduced a 15% alternative minimum tax based on the financial statement income of certain large corporations ("CAMT"), effective January 1, 2023. There is no impact on the Company's provision for income taxes from the CAMT for the three months ended March 31, 2023.

The Company files federal, state, and foreign income tax returns in many U.S. and OUS jurisdictions. Years before 2016 are closed for the significant jurisdictions. Certain of the Company's unrecognized tax benefits could change due to activities of various tax authorities, including evolving interpretations of existing tax laws in the jurisdictions the Company operates, potential assessment of additional tax, possible settlement of audits, or through normal expiration of various statutes of limitations, which could affect the Company's effective tax rate in the period in which they change. Due to the uncertainty related to the timing and potential outcome of audits, the Company cannot estimate the range of reasonably possible changes in unrecognized tax benefits that may occur in the next 12 months.

The Company is subject to the examination of its income tax returns by the Internal Revenue Service and other tax authorities. The outcome of these audits cannot be predicted with certainty. The Company's management regularly assesses the likelihood of adverse outcomes resulting from these examinations to determine the adequacy of the Company's provision for income taxes. If any issues addressed in the Company's tax audits are resolved in a manner not consistent with management's expectations, the Company could be required to adjust its provision for income taxes in the period such resolution occurs.

NOTE 12. NET INCOME PER SHARE

The following table presents the computation of basic and diluted net income per share attributable to Intuitive Surgical, Inc. (in millions, except per share amounts):

	Three Months Ended March 31,	
	2023	2022
Numerator:		
Net income attributable to Intuitive Surgical, Inc.	$ 355.3	$ 365.6
Denominator:		
Weighted-average shares outstanding used in basic calculation	350.2	358.4
Add: dilutive effect of potential common shares	5.8	8.3
Weighted-average shares outstanding used in diluted calculation	356.0	366.7
Net income per share attributable to Intuitive Surgical, Inc.:		
Basic	$ 1.01	$ 1.02
Diluted	$ 1.00	$ 1.00

Share-based compensation awards of approximately 3.2 million and 1.5 million shares for the three months ended March 31, 2023, and 2022, respectively, were outstanding but were not included in the computation of diluted net income per share attributable to Intuitive Surgical, Inc. common stockholders, because the effect of including such shares would have been anti-dilutive in the periods presented.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This management's discussion and analysis of financial condition as of March 31, 2023, and results of operations for the three months ended March 31, 2023, and 2022, should be read in conjunction with management's discussion and analysis of financial condition and results of operations included in our Annual Report on Form 10-K for the year ended December 31, 2022.

This report contains "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Forward-looking statements relate to expectations concerning matters that are not historical facts. Statements using words such as "estimates," "projects," "believes," "anticipates," "plans," "expects," "intends," "may," "will," "could," "should," "would," "targeted," and similar words and expressions are intended to identify forward-looking statements. These forward-looking statements include, but are not limited to, statements related to the expected impacts of the COVID-19 pandemic on our business, financial condition, and results of operations, future results of operations, future financial condition, our financing plans and future capital requirements, our potential tax assets or liabilities, and statements based on current expectations, estimates, forecasts, and projections about the economies and markets in which we operate and our beliefs and assumptions regarding these economies and markets. These forward-looking statements are necessarily estimates reflecting the judgment of our management and involve a number of risks and uncertainties that could cause actual results to differ materially from those suggested by the forward-looking statements. These forward-looking statements should be considered in light of various important factors, including, but not limited to, the following: the overall macroeconomic environment, which impacts customer spending and our costs, including increased inflation and interest rates; the conflict in Ukraine; disruption to our supply chain, including increased difficulties in obtaining a sufficient supply of materials in the semiconductor and other markets; the risk that the COVID-19 pandemic could lead to material delays and cancellations of, or reduced demand for, procedures; curtailed or delayed capital spending by hospitals; closures of our facilities; delays in surgeon training; delays in gathering clinical evidence; delays in obtaining new product approvals, clearances, or certifications from the U.S. FDA, comparable regulatory authorities, or notified bodies; diversion of resources to respond to COVID-19 outbreaks; the impact of global and regional economic and credit market conditions on healthcare spending; the risk of our inability to comply with complex FDA and other regulations, which may result in significant enforcement actions; regulatory approvals, clearances, certifications, and restrictions or any dispute that may occur with any regulatory body; guidelines and recommendations in the healthcare and patient communities; healthcare reform legislation in the U.S. and its impact on hospital spending, reimbursement, and fees levied on certain medical device revenues; changes in hospital admissions and actions by payers to limit or manage surgical procedures; the timing and success of product development and market acceptance of developed products; the results of any collaborations, in-licensing arrangements, joint ventures, strategic alliances, or partnerships, including the joint venture with Shanghai Fosun Pharmaceutical (Group) Co., Ltd.; our completion of and ability to successfully integrate acquisitions; procedure counts; intellectual property positions and litigation; competition in the medical device industry and in the specific markets of surgery in which we operate; risks associated with our operations and any expansion outside of the United States; unanticipated manufacturing disruptions or the inability to meet demand for products; our reliance on sole and single source suppliers; the results of legal proceedings to which we are or may become a party, including, but not limited to, product liability claims; adverse publicity regarding us and the safety of our products and adequacy of training; the impact of changes to tax legislation, guidance, and interpretations; changes in tariffs, trade barriers, and regulatory requirements; and other risks and uncertainties, including those listed under the caption "Risk factors." Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this report and which are based on current expectations and are subject to risks, uncertainties, and assumptions that are difficult to predict, including those risk factors described throughout this filing and identified under the heading "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2022, as updated by our other filings with the Securities and Exchange Commission. Our actual results may differ materially and adversely from those expressed in any forward-looking statement, and we undertake no obligation to publicly update or release any revisions to these forward-looking statements, except as required by law.

Intuitive®, Intuitive Surgical®, da Vinci®, da Vinci S®, da Vinci Si®, da Vinci X®, da Vinci Xi®, da Vinci SP®, EndoWrist®, Firefly®, Ion®, Iris®, OnSite®, SimNow®, SureForm®, and SynchroSeal® are trademarks or registered trademarks of the Company.

Overview

As part of our mission, we believe that minimally invasive care is life-enhancing care. We are committed to advancing minimally invasive care through a comprehensive ecosystem of products and services. This ecosystem includes systems, instruments and accessories, learning, and services connected by a digital portfolio that enables precision and control, seamless interactions and experiences, and meaningful insights to drive better care.

We bring nearly three decades of experience and technical innovation to our robotic-assisted surgical solutions. While surgery and acute interventions have improved significantly in the past decades, there remains a significant need for better

outcomes and decreased variability of these outcomes across care teams. The current healthcare environment continues to stress critical resources, including the professionals who staff care teams: surgeons, anesthesiologists, nurses, and other staff. At the same time, governments strain to cover the healthcare needs of their populations and demand lower total cost per patient to treat disease. In the face of these challenges, we believe scientific and technological advances in biology, computing, imaging, algorithms, and robotics may offer new methods to solve continued and difficult problems.

We address our customer needs by sharing their goals reflected in the quadruple aim. First, we focus on improving patient outcomes through an ecosystem of advanced robotic systems, instruments and accessories, progressive technology learning pathways, and comprehensive support and program assistance services. Second, we seek to improve the patient experience by minimizing disruption to lives and creating greater predictability for the treatment experience. Third, we seek to improve care team satisfaction by creating products and services that are dependable, smart, and optimized for the care environment in which they are used. Finally, we seek to lower the total cost to treat per patient episode when compared with existing treatment alternatives, providing a return on investment for hospitals and healthcare systems and value for payers.

Open surgery remains the predominant form of surgery and is used in almost every area of the body. However, the large incisions required for open surgery create trauma to patients, typically resulting in longer hospitalization and recovery times, increased hospitalization costs, and additional pain and suffering relative to minimally invasive surgery ("MIS"), where MIS is available. For over three decades, MIS has reduced trauma to patients by allowing selected surgeries to be performed through small ports rather than large incisions. MIS has been widely adopted for certain surgical procedures.

Da Vinci Surgical Systems enable surgeons to extend the benefits of MIS to many patients who would otherwise undergo a more invasive surgery by using computational, robotic, and imaging technologies to overcome many of the limitations of traditional open surgery or conventional MIS. Surgeons using a da Vinci Surgical System operate while seated comfortably at a console viewing a 3D, high-definition image of the surgical field. This immersive console connects surgeons to the surgical field and their instruments. While seated at the console, the surgeon manipulates instrument controls in a natural manner, similar to open surgical technique. Our technology is designed to provide surgeons with a range of articulation of the surgical instruments used in the surgical field analogous to the motions of a human wrist, while filtering out the tremor inherent in a surgeon's hand. In designing our products, we focus on making our technology easy and safe to use.

Our da Vinci products fall into five broad categories: da Vinci Surgical Systems, da Vinci instruments and accessories, da Vinci Stapling, da Vinci Energy, and da Vinci Vision, including Firefly Fluorescence imaging systems and da Vinci Endoscopes. We also provide a comprehensive suite of systems, learning, and services offerings. Digitally-enabled for nearly three decades, these three offerings aim to decrease variability by providing dependable, consistent functionality and an integrated user experience. Our systems category includes robotic platforms, software, vision, energy, and instruments and accessories. Our learning category includes educational technology, such as simulation and telepresence, as well as technical training programs and personalized peer-to-peer learning opportunities. Our services category assists and optimizes minimally invasive programs through readiness, on-demand support, consultation for minimally invasive program optimization, and hospitals customized analytics. Within our integrated ecosystem, our focus is to decrease variability in surgery by offering actionable insights, with digital solutions, to take action with the potential to improve outcomes, personalize learning, and optimize efficiency. We take a holistic approach, offering intelligent technology and systems designed to work together to make MIS intervention more available and applicable.

We have commercialized the following da Vinci Surgical Systems: the da Vinci standard Surgical System in 1999, the da Vinci S Surgical System in 2006, the da Vinci Si Surgical System in 2009, and the fourth generation da Vinci Xi Surgical System in 2014. We extended our fourth-generation platform by adding the da Vinci X Surgical System, commercialized in 2017, and the da Vinci SP Surgical System, commercialized in 2018. The da Vinci SP Surgical System accesses the body through a single incision, while the other da Vinci Surgical Systems access the body through multiple incisions. All da Vinci systems include a surgeon's console (or consoles), imaging electronics, a patient-side cart, and computational hardware and software. We are in the early stages of launching our da Vinci SP Surgical System, and we have an installed base of 130 da Vinci SP Surgical Systems as of March 31, 2023. We have received FDA clearance for the da Vinci SP Surgical System for urologic and certain transoral procedures, and we have received regulatory clearance in South Korea where the da Vinci SP Surgical System may be used for a broad set of procedures. In September 2022, we also received regulatory clearance for the da Vinci SP Surgical System in Japan for the same set of procedures as can be performed on the da Vinci Xi Surgical System in Japan. We plan to seek FDA clearances for additional indications for da Vinci SP over time. We also plan to seek clearances in other OUS markets over time. The success of the da Vinci SP Surgical System is dependent on positive experiences and improved clinical outcomes for the procedures for which it has been cleared as well as securing additional clinical clearances.

We offer approximately 70 different multi-port da Vinci instruments to provide surgeons with flexibility in choosing the types of tools needed to perform a particular surgery. These multi-port instruments are generally robotically controlled and provide end effectors (tips) that are similar to those used in either open or laparoscopic surgery. We offer advanced instrumentation for the da Vinci X and da Vinci Xi platforms, including da Vinci Energy and da Vinci Stapler products, to provide surgeons with sophisticated, computer-aided tools to precisely and efficiently interact with tissue. Da Vinci X and da

Vinci Xi Surgical Systems share the same instruments, whereas the da Vinci Si Surgical System uses instruments that are not compatible with da Vinci X or da Vinci Xi systems. We currently offer nine core instruments on our da Vinci SP Surgical System. We plan to expand the SP instrument offering over time.

Training technologies include our Intuitive Simulation products, our Intuitive Telepresence remote case observation and telementoring tools, and our dual console for use in surgeon proctoring and collaborative surgery.

In 2019, the FDA cleared our Ion endoluminal system, which is a flexible, robotic-assisted, catheter-based platform that utilizes instruments and accessories for which the first cleared indication is minimally invasive biopsies in the lung. Our Ion system extends our commercial offering beyond surgery into diagnostic, endoluminal procedures. The system features an ultra-thin, ultra-maneuverable catheter that can articulate 180 degrees in all directions and allows navigation far into the peripheral lung and provides the stability necessary for precision in a biopsy. Many suspicious lesions found in the lung may be small and difficult to access, which can make diagnosis challenging, and Ion helps physicians obtain tissue samples from deep within the lung, which could help enable earlier diagnosis.

The success of new product introductions depends on a number of factors including, but not limited to, pricing, competition, market and consumer acceptance, the effective forecasting and management of product demand, inventory levels, the management of manufacturing and supply costs, and the risk that new products may have quality or other defects in the early stages of introduction.

Macroeconomic Environment

Uncertainty surrounding macroeconomic and geopolitical factors in the U.S. and globally characterized by the supply chain environment, inflationary pressure, rising interest rates, instability in the global financial markets, labor shortages, significant disruptions in the commodities' markets as a result of the Russia and Ukraine conflict, and the introduction of or changes in tariffs or trade barriers may result in a recession, which could have a material adverse effect on our long-term business.

We continue to experience difficulties in obtaining a sufficient supply of a number of component materials used in our products, such as semiconductor components as well as a range of other materials, including, but not limited to, metals and polymers, as global supply has become significantly constrained due to increased demand for certain materials. Additionally, prices of such materials have increased due to the increased demand and supply shortage. With rising interest rates, access to credit may become more difficult and any insolvency of our key suppliers, including sole-source and single-source suppliers, may exacerbate current supply chain challenges. Also, liquidity concerns in the broader financial services industry could result in delayed access or loss of access to the Company's key suppliers' uninsured deposits or loss of their ability to draw on existing credit facilities involving a troubled or failed financial institution. We are engaged in activities to seek to mitigate supply disruptions, but the global supply chain shortages will remain a challenge in the mid-term.

Such global shortages in important components as well as certain logistics challenges have resulted in, and will continue to cause, inflationary cost pressure in our supply chain. To date, the inflationary cost pressure has been more pronounced in our logistics costs, but these supply chain challenges have not materially impacted our results of operations or ability to deliver products and services to our customers. However, if shortages in important supply chain materials in the semiconductor or other markets or logistics challenges continue, we could fail to meet product demand, which could result in deferred or canceled procedures. Additionally, if inflationary pressures in logistics or component costs persist, we may not be able to quickly or easily adjust pricing, reduce costs, or implement countermeasures. Additionally, there is uncertainty surrounding the impact of any monetary policy changes taken by the U.S. Federal Reserve and other central banks to address the structural risks associated with inflation.

Fluctuations in labor availability globally, including labor shortages and staff burnout and attrition, could also impact our ability to hire and retain personnel critical to our manufacturing, logistics, and commercial operations. We are also highly dependent on the principal members of our management and scientific staff. The loss of critical members of our team, or our inability to attract and retain qualified personnel, could significantly harm our operations, business, and ability to compete.

The current macroeconomic environment is impacting our customers financially and operationally as well. Hospitals are experiencing challenges with staffing and cost pressures that could affect their ability to provide patient care. Additionally, hospitals are facing significant financial pressure as supply chain constraints and inflation drive up operating costs, rising interest rates make access to credit more expensive, unrealized losses decrease available cash reserves, and fiscal stimulus programs enacted during the COVID-19 pandemic wind down. Hospitals may also be adversely affected by the liquidity concerns in the broader financial services industry that could result in delayed access or loss of access to uninsured deposits or loss of their ability to draw on existing credit facilities involving a troubled or failed financial institution. As a consequence of the financial pressures and decreased profitability, some hospitals have indicated that they are lowering their capital investment plans and tightening their operational budgets. We believe that these factors have contributed to a softening in our U.S. capital pipeline, and we expect that demand for capital, particularly in the U.S., will continue to be impacted while macroeconomic conditions remain challenging. In addition, as competition progresses in various markets, we will likely experience longer

selling cycles and pricing pressures. Any or all of these factors could negatively impact the number of da Vinci procedures performed or the number of system placements and have a material adverse effect on our business, financial condition, or results of operations resulting in failure to achieve our anticipated financial results.

We maintain the majority of our cash and cash equivalents in accounts with major U.S. and multi-national financial institutions, and our deposits exceed insured limits. Market conditions could impact the viability of these institutions. To date, these market conditions and liquidity concerns have not impacted our results of operations. However, in the event of failure of any of the financial institutions where we maintain our cash and cash equivalents, there can be no assurance that we would be able to access uninsured funds in a timely manner or at all. Any inability to access or delay in accessing these funds could adversely affect our business and financial position.

COVID-19 Pandemic

In early 2022, a resurgence of COVID-19 resulted in a significant increase in infections and hospitalization rates in the U.S. and certain countries in Europe, which, in turn, negatively impacted procedure volumes in January. As infections and hospitalizations started to decrease in February in the U.S. and Europe, we saw a recovery of procedure volumes. In March and during the second quarter of 2022, we also saw a resurgence in COVID-19 cases and increased hospitalizations and government interventions impacting parts of Asia, particularly China, which negatively impacted procedure volumes. In the fourth quarter of 2022, we saw a resurgence in COVID-19 cases in China, which had a significant negative impact on our procedure volumes in the region.

In the first quarter of 2023, the most recent COVID-19 resurgences in China continued to negatively impact our procedure volumes in January. However, in February and March, as infections and hospitalization started to decrease, we saw a recovery of procedure volumes.

The depth and extent to which the COVID-19 pandemic will impact individual markets will vary based on the availability of vaccinations, personal protective equipment, intensive care units and operating rooms, and medical staff, as well as government interventions. Additionally, COVID-19 has, and may continue to, contribute to hospital staffing shortages, which impacts hospitals' ability to provide patient care and, in some cases, results in the deferral of elective surgeries. When COVID-19 infection rates have spiked in a particular region, procedure volumes have been negatively impacted and the diagnoses of new conditions and their related treatments have been deferred. While we believe that there may be a backlog of patients that remains to be treated, it is unpredictable when those patients will ultimately seek diagnosis and treatment and whether they will be treated through surgery. Based on our experience during the last three years, we do not expect all markets, regions, and procedure types to recover at the same time or at the same pace.

Business Model

Overview

We generate revenue from the placement of da Vinci Surgical Systems, in sales or sales-type lease arrangements where revenue is recognized up-front or in operating lease and usage-based arrangements where revenue is recognized over time. We earn recurring revenue from the sales of instruments, accessories, and services, as well as the revenue from operating leases. The da Vinci Surgical System generally sells for between $0.5 million and $2.5 million, depending on the model, configuration, and geography, and represents a significant capital equipment investment for our customers when purchased. Our instruments and accessories have limited lives and will either expire or wear out as they are used in surgery, at which point they need to be replaced. We generally earn between $600 and $3,500 of instruments and accessories revenue per surgical procedure performed, depending on the type and complexity of the specific procedures performed and the number and type of instruments used. In 2020, we launched our Extended Use Program in the U.S. and Europe, which consists of select da Vinci Xi and da Vinci X instruments possessing 12 to 18 uses compared to the previous 10 uses, with the intention to reduce the cost for customers to treat patients, which in turn will reduce our overall instruments and accessories revenue per procedure. We typically enter into service contracts at the time systems are sold or leased at an annual fee between $80,000 and $190,000, depending on the configuration of the underlying system and the composition of the services offered under the contract. These service contracts have generally been renewed at the end of the initial contractual service periods.

We generate revenue from our Ion endoluminal system in a business model consistent with the da Vinci Surgical System model described above. We generate revenue from the placement of Ion systems, in sales or sales-type lease arrangements where revenue is recognized up-front or in operating lease and usage-based arrangements where revenue is recognized over time. We earn recurring revenue from the sales of instruments, accessories, and services, as well as revenue from operating leases. The Ion endoluminal system generally sells for between $0.5 million and $0.6 million. Our instruments and accessories have limited lives and will either expire or wear out as they are used in procedures, at which point they need to be replaced. We typically enter into service contracts at the time systems are sold or leased at an annual fee of approximately $60,000. For the three months ended March 31, 2023, and 2022, Ion's contribution to revenue and gross margin was not significant.

Additionally, as part of our ecosystem of products and services, we provide a portfolio of learning offerings and digital solutions. We do not currently generate material revenue from these offerings.

Recurring Revenue

Recurring revenue consists of instruments and accessories revenue, service revenue, and operating lease revenue. Recurring revenue increased to $4.9 billion, or 79% of total revenue in 2022, compared to $4.3 billion, or 75% of total revenue in 2021, and $3.4 billion, or 77% of total revenue in 2020.

Instruments and accessories revenue has grown at a faster rate than systems revenue over time. Instruments and accessories revenue increased to $3.52 billion in 2022, compared to $3.10 billion in 2021 and $2.46 billion in 2020. The increase in instruments and accessories revenue largely reflects continued procedure adoption.

Service revenue was $1.02 billion in 2022, compared to $0.92 billion in 2021 and $0.72 billion in 2020. The increase in service revenue was primarily driven by the growth of the base of installed da Vinci Surgical Systems producing service revenue, as well as the effects of the Customer Relief Program in 2020, which resulted in an $80 million decrease in service revenue. The installed base of da Vinci Surgical Systems grew 12% to approximately 7,544 as of December 31, 2022; 12% to approximately 6,730 as of December 31, 2021; and 7% to approximately 5,989 as of December 31, 2020.

We use the installed base, number of placements, and utilization of systems as metrics for financial and operational decision-making and as a means to evaluate period-to-period comparisons. Management believes that the installed base, number of placements, and utilization of systems provide meaningful supplemental information regarding our performance, as management believes that the installed base, number of placements, and utilization of systems are an indicator of the rate of adoption of robotic-assisted surgery or bronchoscopy as well as an indicator of future recurring revenue. Management believes that both it and investors benefit from referring to the installed base, number of placements, and utilization of systems in assessing our performance and when planning, forecasting, and analyzing future periods. The installed base, number of placements, and utilization of systems also facilitate management's internal comparisons of our historical performance. We believe that the installed base, number of placements, and utilization of systems are useful to investors as metrics, because (1) they allow for greater transparency with respect to key metrics used by management in its financial and operational decision-making, and (2) they are used by institutional investors and the analyst community to help them analyze the performance of our business. The vast majority of installed systems are connected via the internet. System logs can also be accessed by field engineers for systems that are not connected to the internet. We utilize this information as well as other information from agreements and discussions with our customers that involve estimates and judgments, which are, by their nature, subject to substantial uncertainties and assumptions. Estimates and judgments for determining the installed base, number of placements, and utilization of systems may be impacted over time by various factors, including system internet connectivity, hospital and distributor reporting behavior, and inherent complexities in new agreements. Such estimates and judgments are also susceptible to technical errors. In addition, the relationship between the installed base, number of placements, and utilization of systems and our revenues may fluctuate from period to period, and growth in the installed base, number of placements, and utilization of systems may not correspond to an increase in revenue. The installed base, number of placements, and utilization of systems are not intended to be considered in isolation or as a substitute for, or superior to, revenue or other financial information prepared and presented in accordance with GAAP.

Intuitive System Leasing

Since 2013, we have entered into sales-type and operating lease arrangements directly with certain qualified customers as a way to offer customers flexibility in how they acquire systems and expand their robotic-assisted programs while leveraging our balance sheet. These leases generally have commercially competitive terms as compared to other third-party entities that offer equipment leasing. We have also entered into usage-based arrangements with qualified customers that have committed da Vinci programs where we charge for the system and service as the systems are utilized. We believe that these alternative financing structures have been effective and well-received, and we are willing to expand the proportion of these structures based on customer demand. We include operating and sales-type leases, and systems placed under usage-based arrangements, in our system placement and installed base disclosures. We exclude operating lease-related revenue, usage-based revenue, and Ion system revenue from our da Vinci Surgical System average selling price ("ASP") computations.

In the years ended December 31, 2022, 2021, and 2020, we placed 591, 668, and 432 da Vinci Surgical Systems, respectively, under lease and usage-based arrangements, of which 492, 517, and 317 systems, respectively, were operating lease and usage-based arrangements. In the years ended December 31, 2022, 2021, and 2020, we placed 112, 57, and 9 Ion systems, respectively, under lease and usage-based arrangements, of which 101, 50, and 9 systems, respectively, were operating lease and usage-based arrangements.

Revenue from operating lease arrangements is generally recognized on a straight-line basis over the lease term or, in the case of usage-based arrangements, as the systems are used. We generally set operating lease and usage-based pricing at a modest premium relative to purchased systems reflecting the time value of money and, in the case of usage-based arrangements,

the risk that system utilization may fall short of anticipated levels. Variable lease revenue recognized from usage-based arrangements has been included in our operating lease metrics herein. Operating lease revenue has grown at a faster rate than overall systems revenue and was $377 million, $277 million, and $177 million for the years ended December 31, 2022, 2021, and 2020, respectively, of which $133 million, $78 million, and $28 million, respectively, was variable lease revenue. As revenue for operating leases and usage-based systems is recognized over time, total systems revenue growth is reduced in a period when the number of operating lease and usage-based placements increases as a proportion of total system placements. Generally, lease transactions generate similar gross margins as our sale transactions. A total of 1,683, 1,294, and 901 da Vinci Surgical Systems were installed at customers under operating lease or usage-based arrangements as of December 31, 2022, 2021, and 2020, respectively. A total of 132, 61, and 11 Ion systems were installed at customers under operating lease or usage-based arrangements as of December 31, 2022, 2021, and 2020, respectively.

Our exposure to the credit risks relating to our lease financing arrangements may increase if our customers are adversely affected by changes in healthcare laws, coverage and reimbursement, economic pressures or uncertainty, or other customer-specific factors. As a result of these macroeconomic factors impacting our customers, we may be exposed to defaults under our lease financing arrangements. Moreover, usage-based arrangements generally contain no minimum payments; therefore, customers may exit such arrangements without paying a financial penalty to us.

For some operating lease arrangements, our customers are provided with the right to purchase the leased system at certain points during and/or at the end of the lease term. Revenue generated from customer purchases of systems under operating lease arrangements ("Lease Buyouts") was $72 million, $96 million, and $52 million for the years ended December 31, 2022, 2021, and 2020, respectively. We expect that revenue recognized from customer exercises of the buyout options will fluctuate based on the timing of when, and if, customers choose to exercise their buyout options.

Systems Revenue

System placements are driven by procedure growth in most markets. In some markets, system placements are constrained by regulation. In geographies where da Vinci procedure adoption is in an early stage or system placements are constrained by regulation, system sales will precede procedure growth. System placements also vary due to seasonality, largely aligned with hospital budgeting cycles. We typically place a higher proportion of annual system placements in the fourth quarter and a lower proportion in the first quarter as customer budgets are reset. Systems revenue is also affected by the proportion of system placements under operating lease and usage-based arrangements, recurring operating lease and usage-based revenue, operating lease buyouts, product mix, ASPs, trade-in activities, and customer mix. Systems revenue declined 1% to $1.68 billion in 2022. Systems revenue grew 44% to $1.69 billion in 2021. Systems revenue declined 12% to $1.18 billion in 2020.

Procedure Mix / Products

Our da Vinci Surgical Systems are generally used for soft tissue surgery for areas of the body between the pelvis and the neck, primarily in general surgery, gynecologic surgery, urologic surgery, cardiothoracic surgery, and head and neck surgery. Within these categories, procedures range in complexity from cancer and other highly complex procedures to less complex procedures for benign conditions. Cancer and other highly complex procedures tend to be reimbursed at higher rates than less complex procedures for benign conditions. Thus, hospitals are more sensitive to the costs associated with treating less complex, benign conditions. Our strategy is to provide hospitals with attractive clinical and economical solutions across the spectrum of procedure complexity. Our fully featured da Vinci Xi Surgical System with advanced instruments (including da Vinci Energy and EndoWrist and SureForm Stapler products) and our Integrated Table Motion product targets the more complex procedure segment. Our da Vinci X Surgical System is targeted toward price-sensitive markets and procedures. Our da Vinci SP Surgical System complements the da Vinci Xi and X Surgical Systems by enabling surgeons to access narrow workspaces.

Procedure Seasonality

More than half of da Vinci procedures performed are for benign conditions, most notably hernia repairs, hysterectomies, and cholecystectomies. These benign procedures and other short-term elective procedures tend to be more seasonal than cancer operations and surgeries for other life-threatening conditions. Seasonality in the U.S. for procedures for benign conditions typically results in higher fourth quarter procedure volume when more patients have met annual deductibles and lower first quarter procedure volume when deductibles are reset. Seasonality outside of the U.S. varies and is more pronounced around local holidays and vacation periods. As a result of the factors outlined in the *COVID-19 Pandemic* section above, including past and potentially future recommendations of authorities to defer elective procedures, historical procedure patterns may be disrupted.

Distribution Channels

We provide our products through direct sales organizations in the U.S., Europe (excluding Spain, Portugal, Italy, Greece, and all Eastern European countries), China (through our Intuitive-Fosun Pharma joint venture), Japan, South Korea, India, Taiwan, and Canada. In the remainder of our OUS markets, we provide our products through distributors.

Regulatory Activities

Overview

Our products must meet the requirements of a large and growing body of international standards that govern the product safety, efficacy, advertising, labeling, safety reporting design, manufacture, materials content and sourcing, testing, certification, packaging, installation, use, and disposal of our products. Examples of such standards include electrical safety standards, such as those of the International Electrotechnical Commission, and composition standards, such as the Reduction of Hazardous Substances and the Waste Electrical and Electronic Equipment Directives. Failure to meet these standards could limit our ability to market our products in those regions that require compliance with such standards.

Our products and operations are also subject to increasingly stringent medical device, privacy, and other regulations by regional, federal, state, and local authorities. After a device is placed on the market, numerous FDA and other regulatory requirements continue to apply. These requirements include establishment registration and device listing with the FDA and compliance with medical device reporting regulations, which require that manufacturers report to the FDA if their device caused or contributed, or may have caused or contributed, to a death or serious injury or malfunctioned in a way that would likely cause or contribute to a death or serious injury if it were to recur.

We recently revised our medical device reporting policies, which had been developed based on previous feedback from the FDA. These revisions have been made in consultation with the FDA to better align with existing regulations. There has been an increase in medical device reporting filings due to changes in our reportability criteria. In addition, we have been investing in resources and utilizing external experts to strengthen our quality system. These efforts are ongoing.

We also anticipate that timelines for the introduction of new products and/or indications may be extended relative to past experience as a result of these regulations. For example, we have seen elongated regulatory approval timelines in the U.S. and Europe.

Clearances, Approvals, and Certifications

We have generally obtained the regulatory clearances, approvals, and certifications required to market our products associated with our da Vinci Surgical Multiport Systems (S, Si, Xi, and X systems) for our targeted surgical specialties within the U.S., South Korea, Japan, and the European markets in which we operate. Since 2021, we have obtained regulatory clearances, approvals, and certifications for the following products:

- In March 2023, we obtained European certification for our Ion endoluminal system. We plan to initially focus on the United Kingdom (“UK”) market and on the collection of clinical data in support of our European reimbursement strategy. The Ion system previously received FDA clearance in the U.S. in 2019.
- In September 2022, we obtained regulatory clearance for the da Vinci SP Surgical System in Japan for use in general surgeries, thoracic surgeries (excluding cardiac procedures and intercostal approaches), urologic surgeries, gynecological surgeries, and trans-oral head and neck surgeries. We obtained the initial FDA clearance for our da Vinci SP Surgical System in April 2014 and have since invested in important platform refinements. We have also received regulatory clearance in South Korea for our da Vinci SP Surgical System in May 2018.
- In February 2022, we received regulatory clearance in China to market both our 12 mm SureForm 45 Stapler and SureForm 60 Stapler and corresponding reloads.
- In January 2022, we received regulatory clearance in China to market our da Vinci Vessel Sealer Extend with up to 7 mm vascular indications.
- In December 2021, we obtained FDA clearance for our 8 mm SureForm 30 Curved-Tip Stapler and reloads for use in general, thoracic, gynecologic, urologic, and pediatric surgery. The 8 mm SureForm 30 Curved-Tip Stapler is expected to launch in the U.S. in 2023, with other countries to follow. In October 2022, we received regulatory clearance in Japan to market our 8 mm SureForm 30 Curved-Tip and Straight-Tip Stapler instruments and reloads for use in general, thoracic (except for cardiac), gynecologic, and urologic surgery.
- In late 2020 and early 2021, we obtained FDA clearance, European certification, and other regulatory clearances in most of our significant markets to market our Extended Use Instruments.
- In July 2019, we obtained FDA clearance for our SureForm 45 Curved-Tip Stapler and SureForm 45 Gray reload, which round out our SureForm 45 portfolio. We have also obtained European certification for our SureForm 45 Curved-Tip Stapler and SureForm 45 Gray reload. In September 2019, we received regulatory clearance in Japan to market both our SureForm 45 Curved-Tip Stapler and SureForm 45 Gray reload. We received regulatory clearance in South Korea to market our SureForm 45 Curved-Tip Stapler and SureForm 45 Gray reload in June 2021 and July 2021, respectively.

- In June 2019, we obtained European certification for our da Vinci Endoscope Plus for the da Vinci Xi and da Vinci X Surgical Systems in Europe. Following the CE mark, in July 2019, we obtained FDA clearance for our da Vinci Endoscope Plus. We have also received regulatory clearances in South Korea and Japan to market our da Vinci Endoscope Plus in December 2019 and May 2020, respectively. In March 2022, we received regulatory clearance in China to market our da Vinci Endoscope Plus.

Refer to the descriptions of our new products that received regulatory clearances, approvals, or certifications in 2023, 2022, and 2021 in the Recent Product Introductions section below.

In October 2018, the China National Health Commission published on its official website the quota for major medical equipment to be sold in China through 2020. After an adjustment notice was published in the third quarter of 2020, the government will now allow for the total sale of 225 new surgical robots into China, which could include da Vinci Surgical Systems as well as surgical systems introduced by others. As of March 31, 2023, we have sold 192 da Vinci Surgical Systems under this quota, and we believe that four system quotas are no longer available; therefore, 29 surgical robots should still be available for sale under this quota. Future sales of da Vinci Surgical Systems under the quota are uncertain, as they are dependent on hospitals completing a tender process and receiving associated approvals. Additionally, any delays in the granting of a new quota in China will constrain our ability to further grow our installed base in China as well as limit our capacity for procedure growth in China.

Since 2022, several provinces, including the Hunan Provincial Healthcare Security Administration, have implemented significant limits on what hospitals can charge patients for surgeries using robotic surgical technology, including soft tissue surgery and orthopedics. These limits have significantly impacted the number of procedures performed in those provinces. As of the date of this report, these limits have not had a material impact our business, financial condition, or results of operations, as only a small portion of our installed base in China is currently located in the impacted provinces. Companies providing robotic surgical technology, including our joint venture in China, have been meeting with Chinese government healthcare agencies to discuss these developments and to provide feedback. We cannot assure you that additional provincial healthcare administrations will not impose similar limits.

The Japanese Ministry of Health, Labor, and Welfare (“MHLW”) considers reimbursement for procedures in April of even-numbered years. The process for obtaining reimbursement requires Japanese university hospitals and surgical societies, with our support, to seek reimbursement. There are multiple pathways to obtain reimbursement for procedures, including those that require in-country clinical data/economic data. In April 2012 and April 2016, the MHLW granted reimbursement status for prostatectomy and partial nephrectomy, respectively. Most prostatectomies and partial nephrectomies were open procedures prior to da Vinci reimbursement. Da Vinci procedure reimbursement for prostatectomy and partial nephrectomy procedures are higher than open and conventional laparoscopic procedure reimbursements. An additional 12 da Vinci procedures were granted reimbursement effective April 1, 2018, including gastrectomy, low anterior resection, lobectomy, and hysterectomy, for both malignant and benign conditions, and an additional seven da Vinci procedures were granted reimbursement effective April 1, 2020. An additional eight da Vinci procedures were granted reimbursement effective April 1, 2022, including colon resection. In addition, we received higher reimbursement for da Vinci gastrectomy procedures, as compared to open and conventional laparoscopic procedure reimbursements. The additional reimbursed procedures have varying levels of conventional laparoscopic penetration and will generally be reimbursed at rates equal to the conventional laparoscopic procedures. Given the reimbursement level and laparoscopic penetration for these additional procedures, there can be no assurance that the adoption pace for these procedures will be similar to prostatectomy or partial nephrectomy, given their higher reimbursement, or any other da Vinci procedure.

Recalls and Corrections

Medical device companies have regulatory obligations to correct or remove medical devices in the field that could pose a risk to health. The definition of “recalls and corrections” is expansive and includes repair, replacement, inspections, relabeling, and issuance of new or additional instructions for use or reinforcement of existing instructions for use and training when such actions are taken for specific reasons of safety or compliance. These field actions require stringent documentation, reporting, and monitoring worldwide. There are other actions that a medical device manufacturer may take in the field without reporting including, but not limited to, routine servicing and stock rotations.

As we determine whether a field action is reportable in any regulatory jurisdiction, we prepare and submit notifications to the appropriate regulatory agency for the particular jurisdiction. Regulators can require the expansion, reclassification, or change in scope and language of the field action. In general, upon submitting required notifications to regulators regarding a field action that is a recall or correction, we will notify customers regarding the field action, provide any additional documentation required in their national language, and arrange, as required, the return or replacement of the affected product or a field service visit to perform the correction.

Field actions, as well as certain outcomes from regulatory activities, can result in adverse effects on our business, including damage to our reputation, delays by customers of purchase decisions, reduction or stoppage of the use of installed systems, and reduced revenue as well as increased expenses.

Procedures

We model patient value as equal to *procedure efficacy / invasiveness*. In this equation, *procedure efficacy* is defined as a measure of the success of the surgery in resolving the underlying disease, and *invasiveness* is defined as a measure of patient pain and disruption of regular activities. When the patient value of a da Vinci procedure is greater than that of alternative treatment options, patients may benefit from seeking out surgeons and hospitals that offer da Vinci Surgery, which could potentially result in a local market share shift. Adoption of da Vinci procedures occurs procedure by procedure and market by market and is driven by the relative patient value and total treatment costs of da Vinci procedures as compared to alternative treatment options for the same disease state or condition.

We use the number and type of procedures as metrics for financial and operational decision-making and as a means to evaluate period-to-period comparisons. Management believes that the number and type of procedures provide meaningful supplemental information regarding our performance, as management believes procedure volume is an indicator of the rate of adoption of robotic-assisted surgery or bronchoscopy as well as an indicator of future revenue (including revenue from usage-based arrangements). Management believes that both it and investors benefit from referring to the number and type of procedures in assessing our performance and when planning, forecasting, and analyzing future periods. The number and type of procedures also facilitate management's internal comparisons of our historical performance. We believe that the number and type of procedures are useful to investors as metrics, because (1) they allow for greater transparency with respect to key metrics used by management in its financial and operational decision-making, and (2) they are used by institutional investors and the analyst community to help them analyze the performance of our business. The vast majority of our installed systems are connected via the internet. System logs can also be accessed by field engineers for systems that are not connected to the internet. We utilize certain methods that rely on information collected from the installed systems for determining the number and type of procedures performed that involve estimates and judgments, which are, by their nature, subject to substantial uncertainties and assumptions. Estimates and judgments for determining the number and type of procedures may be impacted over time by various factors, including changes in treatment modalities, hospital and distributor reporting behavior, and system internet connectivity. Such estimates and judgments are also susceptible to algorithmic or other technical errors. In addition, the relationship between the number and type of procedures and our revenues may fluctuate from period to period, and procedure volume growth may not correspond to an increase in revenue. The number and type of procedures are not intended to be considered in isolation or as a substitute for, or superior to, revenue or other financial information prepared and presented in accordance with GAAP.

Worldwide Procedures

Our systems and instruments are regulated independently in various countries and regions of the world. The discussion of indications for use and representative or target procedures is intended solely to provide an understanding of the market for our products and is not intended to promote for sale or use any Intuitive product outside of its licensed or cleared labeling and indications for use.

The adoption of robotic-assisted surgery using the da Vinci Surgical System has the potential to grow for those procedures that offer greater patient value than to non-da Vinci alternatives and competitive total economics for healthcare providers. Our da Vinci Surgical Systems are used primarily in general surgery, urologic surgery, gynecologic surgery, cardiothoracic surgery, and head and neck surgery. We focus our organization and investments on developing, marketing, and training products and services for procedures in which da Vinci can bring patient value relative to alternative treatment options and/or economic benefit to healthcare providers. Target procedures in general surgery include hernia repair (both ventral and inguinal), colorectal, cholecystectomy, and bariatric procedures. Target procedures in urology include prostatectomy and partial nephrectomy. Target procedures in gynecology include hysterectomy for both cancer and benign conditions and sacrocolpopexy. In cardiothoracic surgery, target procedures include lobectomy. In head and neck surgery, target procedures include transoral surgery. Not all indications, procedures, or products described may be available in a given country or region or on all generations of da Vinci Surgical Systems. Surgeons and their patients need to consult the product labeling in their specific country and for each product in order to determine the cleared uses, as well as important limitations, restrictions, or contraindications.

Similarly, the adoption of robotic-assisted bronchoscopy using the Ion system has the potential to grow if it can offer greater patient value than non-Ion alternatives and competitive total economics for healthcare providers.

In 2022, approximately 1,875,000 surgical procedures were performed with da Vinci Surgical Systems, compared to approximately 1,594,000 and 1,243,000 surgical procedures performed with da Vinci Surgical Systems in 2021 and 2020, respectively. The increase in our overall procedure volume in 2022 reflects the disruption caused by the COVID-19 pandemic

in 2022 and 2021, as noted in the *COVID-19 Pandemic* section above, and was driven by growth in U.S. general surgery, OUS urology, and OUS general surgery (particularly cancer) procedures.

In 2022, approximately 23,500 biopsy procedures were performed with Ion systems, compared to approximately 7,400 and 1,700 biopsy procedures performed with Ion systems in 2021 and 2020, respectively. The increase in our overall procedure volume in 2022 reflects a larger installed base of approximately 321 systems, an increase of 149% compared to the installed base of approximately 129 systems as of 2021. Currently, the vast majority of Ion biopsy procedures are performed in the U.S.

U.S. da Vinci Procedures

Overall U.S. procedure volume with da Vinci Surgical Systems grew to approximately 1,282,000 in 2022, compared to approximately 1,109,000 in 2021 and approximately 876,000 in 2020. General surgery was our largest and fastest growing U.S. specialty in 2022 with procedure volume that grew to approximately 720,000 in 2022, compared to approximately 588,000 in 2021 and approximately 434,000 in 2020. Gynecology was our second largest U.S. surgical specialty in 2022 with procedure volume that grew to approximately 341,000 in 2022, compared to approximately 316,000 in 2021 and approximately 267,000 in 2020. Urology was our third largest U.S. surgical specialty in 2022 with procedure volume that grew to approximately 162,000 in 2022, compared to approximately 153,000 in 2021 and approximately 134,000 in 2020.

OUS da Vinci Procedures

Overall OUS procedure volume with da Vinci Surgical Systems grew to approximately 593,000 in 2022, compared to approximately 485,000 in 2021 and approximately 367,000 in 2020. Urology was our largest OUS specialty in 2022 with procedure volume that grew to approximately 316,000 in 2022, compared to approximately 264,000 in 2021 and approximately 215,000 in 2020. General surgery was our second largest OUS specialty in 2022 with procedure volume that grew to approximately 133,000 in 2022, compared to approximately 101,000 in 2021 and approximately 68,000 in 2020. Gynecology procedures also contributed to OUS procedure growth.

Recent Business Events and Trends

Procedures

Overall. Total da Vinci procedures performed by our customers grew approximately 26% for the three months ended March 31, 2023, compared to approximately 19% for the three months ended March 31, 2022. The first quarter procedure results (and comparative first quarter 2022 procedure results) reflect disruption caused by the COVID-19 pandemic, as noted in the *COVID-19 Pandemic* section above, which impacted our procedures in geographies and markets where there was a resurgence of the virus. The first quarter 2023 procedure growth was largely attributable to growth in U.S. general surgery, OUS urology, U.S. gynecology, and OUS general surgery.

U.S. Procedures. U.S. da Vinci procedures grew approximately 26% for the three months ended March 31, 2023, compared to approximately 16% for the three months ended March 31, 2022. The first quarter 2022 procedure results reflect disruption caused by the COVID-19 pandemic, as noted in the *COVID-19 Pandemic* section above, which negatively impacted our procedures. The first quarter 2023 U.S. procedure growth was largely attributable to growth in general surgery procedures, most notably hernia repair, cholecystectomy, and bariatric procedures. Growth in the more mature gynecologic and urologic procedure categories was more moderate.

OUS Procedures. OUS da Vinci procedures grew approximately 28% for the three months ended March 31, 2023, compared to approximately 25% for the three months ended March 31, 2022. The first quarter procedure results for both periods reflect disruption caused by the COVID-19 pandemic, as noted in the *COVID-19 Pandemic* section above, which negatively impacted our procedures. The first quarter 2023 OUS procedure growth was driven by continued growth in urologic procedures, including prostatectomies and partial nephrectomies, and earlier stage growth in general surgery (particularly colorectal), gynecologic, and thoracic procedures. The first quarter 2023 OUS procedure growth rate reflects continued da Vinci adoption in European and Asian markets. We saw strong procedure growth in Japan, Germany, and the UK during the first quarter of 2023. However, our procedure volume in China was impacted by an increase in COVID-19 cases, particularly in January 2023 and March 2022. We believe that growth in these global markets is being driven by increased acceptance among surgeons and health systems, supported by expanded global evidence validating the clinical and economic value of da Vinci procedures as well as increased surgeon training.

System Demand

We placed 312 da Vinci Surgical Systems in the first quarter of 2023, compared to 311 systems in the first quarter of 2022. System placements were flat, reflecting an increase in demand for additional capacity by our customers as a result of procedure growth, which offset the impacts of a smaller number of third generation da Vinci systems available for trade-in and the macroeconomic challenges impacting our customers. We continue to see our customers challenged by staffing shortages, inflation, debt servicing costs, and other financial pressures, particularly in the U.S. As a result, we expect our customers to continue to be cautious in their overall capital spending.

We expect that future placements of da Vinci Surgical Systems will be impacted by a number of factors: supply chain risks; economic and geopolitical factors; inflationary pressures; rising interest rates; hospital staffing shortages; the impact of the current COVID-19 pandemic, as noted in the *COVID-19 Pandemic* section above; hospital response to the evolving healthcare environment; procedure growth rates; hospital consolidation trends; evolving system utilization and point of care dynamics; capital replacement trends, including a declining number of older generation systems available for trade-in transactions; additional reimbursements in various global markets, including Japan; the timing around governmental tenders and authorizations, including China; the timing of when we receive regulatory clearance in our other OUS markets for our da Vinci Xi Surgical System, da Vinci X Surgical System, and da Vinci SP Surgical System, and related instruments; and market response. Market acceptance of our da Vinci SP Surgical System and the nature and timing of additional da Vinci SP regulatory indications may also impact future system placements.

Demand may also be impacted by competition, including from companies that have introduced products in the field of robotic-assisted medical procedures or have made explicit statements about their efforts to enter the field including, but not limited to, the following companies: Asensus Surgical, Inc.; avateramedical GmbH; CMR Surgical Ltd.; Johnson & Johnson; Medicaroid Corporation; Medrobotics Corporation; Medtronic plc; meerecompany Inc.; Olympus Corporation; Samsung Electronics Co., Ltd; Shandong Weigao Group Medical Polymer Company Ltd.; and Shanghai Microport Medbot (Group) Co., Ltd.

Many of the above factors will also impact future demand for our Ion system, as we extend our commercial offering into diagnostics, along with additional factors associated with a new product introduction, including, but not limited to, our ability to optimize manufacturing and our supply chain, competition, clinical data to demonstrate value, and market acceptance.

Recent Product Introductions

SureForm 30 Curved-Tip Stapler and Reloads. In December 2021, we obtained FDA clearance for our 8 mm SureForm 30 Curved-Tip Stapler and reloads (gray, white, and blue) for use in general, thoracic, gynecologic, urologic, and pediatric surgery. We designed this instrument to help surgeons better visualize and reach anatomy through a combination of the 8 mm diameter instrument shaft and jaws, 120-degree cone of wristed articulation, and the curved tip. As it fits through the 8 mm da Vinci surgical system instrument cannula, the stapler allows different angles for surgeons to approach patient anatomy. Consistent with our other SureForm staplers, the 8 mm SureForm 30 Curved-Tip Stapler integrates SmartFire technology, which makes automatic adjustments to the firing process as staples are formed and the transection is made. The technology makes more than 1,000 measurements per second, helping achieve a consistent staple line. We completed initial evaluations of the 8 mm SureForm 30 stapler with certain customers in the U.S. in 2022. The full U.S. product launch is expected to occur in 2024, with other countries to follow. In October 2022, we received regulatory clearance in Japan to market our 8 mm SureForm 30 Curved-Tip and Straight-Tip Stapler instruments and reloads for use in general, thoracic (except for cardiac), gynecologic, and urologic surgery.

First Quarter 2023 Operational and Financial Highlights

- Total revenue increased by 14% to $1.70 billion for the three months ended March 31, 2023, compared to $1.49 billion for the three months ended March 31, 2022.
- Approximately 540,000 da Vinci procedures were performed during the three months ended March 31, 2023, an increase of 26% compared to approximately 428,000 da Vinci procedures for the three months ended March 31, 2022.
- Approximately 10,200 Ion procedures were performed during the three months ended March 31, 2023, an increase of 162% compared to approximately 3,900 Ion procedures for the three months ended March 31, 2022.
- Instruments and accessories revenue increased by 22% to $986 million for the three months ended March 31, 2023, compared to $810 million for the three months ended March 31, 2022.
- Systems revenue was $427 million for the three months ended March 31, 2023, compared to $428 million during the three months ended March 31, 2022.
- During the three months ended March 31, 2023, we placed 312 da Vinci Surgical Systems compared to 311 systems during the three months ended March 31, 2022.
- As of March 31, 2023, we had a da Vinci Surgical System installed base of approximately 7,779 systems, an increase of 12% compared to the installed base of approximately 6,920 systems as of March 31, 2022.
- Utilization of da Vinci Surgical Systems, measured in terms of procedures per system per year, increased 13% relative to the first quarter of 2022.
- During the three months ended March 31, 2023, we placed 55 Ion systems, an increase of 62% compared to 34 systems during the three months ended March 31, 2022.
- As of March 31, 2023, we had an Ion system installed base of approximately 376 systems, an increase of 131% compared to the installed base of approximately 163 systems as of March 31, 2022.
- Gross profit as a percentage of revenue was 65.6% for the three months ended March 31, 2023, compared to 67.9% for the three months ended March 31, 2022.
- Operating income decreased by 5% to $388 million for the three months ended March 31, 2023, compared to $408 million during the three months ended March 31, 2022. Operating income included $141 million and $121 million of share-based compensation expense related to employee stock plans and $5.0 million and $13.9 million of intangible asset-related charges for the three months ended March 31, 2023, and 2022, respectively.
- As of March 31, 2023, we had $6.58 billion in cash, cash equivalents, and investments. Cash, cash equivalents, and investments decreased by $0.16 billion, compared to $6.74 billion as of December 31, 2022, primarily as a result of cash used for share repurchases of $0.35 billion, capital expenditures, and taxes paid related to net share settlements of equity awards, partially offset by cash provided by operating activities, proceeds from stock option exercises and employee stock purchases, as well as unrealized gains on interest-bearing debt securities classified as available for sale.

Results of Operations

The following table sets forth, for the periods indicated, certain unaudited Condensed Consolidated Statements of Income information (in millions, except percentages):

	Three Months Ended March 31,			
	2023	% of total Revenue	2022	% of total Revenue
Revenue:				
Product	$ 1,413.0	83 %	$ 1,238.4	83 %
Service	283.2	17 %	249.3	17 %
Total revenue	1,696.2	100 %	1,487.7	100 %
Cost of revenue:				
Product	493.0	29 %	397.3	27 %
Service	90.2	5 %	80.7	5 %
Total cost of revenue	583.2	34 %	478.0	32 %
Product gross profit	920.0	54 %	841.1	56 %
Service gross profit	193.0	12 %	168.6	12 %
Gross profit	1,113.0	66 %	1,009.7	68 %
Operating expenses:				
Selling, general and administrative	480.5	28 %	391.1	26 %
Research and development	244.9	15 %	210.5	15 %
Total operating expenses	725.4	43 %	601.6	41 %
Income from operations	387.6	23 %	408.1	27 %
Interest and other income (expense), net	34.2	2 %	(5.7)	— %
Income before taxes	421.8	25 %	402.4	27 %
Income tax expense	61.0	4 %	33.0	2 %
Net income	360.8	21 %	369.4	25 %
Less: net income attributable to noncontrolling interest in joint venture	5.5	— %	3.8	— %
Net income attributable to Intuitive Surgical, Inc.	$ 355.3	21 %	$ 365.6	25 %

Total Revenue

Total revenue increased by 14% to $1.7 billion for the three months ended March 31, 2023, compared to $1.5 billion for the three months ended March 31, 2022, resulting from 22% higher instruments and accessories revenue, driven by approximately 26% higher da Vinci procedure volume, partially offset by customer buying patterns and foreign currency impacts, 14% higher service revenue, and flat systems revenue, driven by higher leasing revenue, partially offset by a higher proportion of da Vinci system placements under operating leases (despite flat da Vinci system placements).

Revenue denominated in foreign currencies as a percentage of total revenue was approximately 24% and 26% for the three months ended March 31, 2023, and March 31, 2022, respectively. We generally sell our products and services in local currencies where we have direct distribution channels. Foreign currency rate fluctuations, as determined by comparing current period revenue in USD to current period revenue in local currency using the same foreign exchange rates as the prior year same period, net of the impacts from foreign currency hedging, had an unfavorable impact on OUS total revenue of $34 million for the three months ended March 31, 2023. Foreign currency rate fluctuations, net of the impacts from foreign currency hedging, had an unfavorable impact on OUS total revenue of $18 million for the three months ended March 31, 2022.

Revenue generated in the U.S. accounted for 65% of total revenue for both of the three months ended March 31, 2023, and March 31, 2022. We believe that U.S. revenue has accounted for the majority of total revenue due to U.S. patients' ability to choose their provider and method of treatment, reimbursement structures supportive of innovation and MIS, and our initial investments focused on U.S. infrastructure. We have been investing in our business in OUS markets, and our OUS procedures have grown faster in proportion to U.S. procedures. We expect that our OUS procedures and revenue will make up a greater portion of our business in the long term.

The following table summarizes our revenue and system unit placements for the three months ended March 31, 2023, and 2022, respectively (in millions, except percentages and unit placements):

	Three Months Ended March 31,	
	2023	2022
Revenue		
Instruments and accessories	$ 985.6	$ 810.3
Systems	427.4	428.1
Total product revenue	1,413.0	1,238.4
Services	283.2	249.3
Total revenue	$ 1,696.2	$ 1,487.7
U.S.	$ 1,109.9	$ 964.8
OUS	586.3	522.9
Total revenue	$ 1,696.2	$ 1,487.7
% of Revenue – U.S.	65%	65%
% of Revenue – OUS	35%	35%
Instruments and accessories	$ 985.6	$ 810.3
Services	283.2	249.3
Operating lease revenue	112.0	83.2
Total recurring revenue	$ 1,380.8	$ 1,142.8
% of Total revenue	81%	77%
Da Vinci Surgical System Placements by Region		
U.S. unit placements	141	186
OUS unit placements	171	125
Total unit placements*	312	311
*Systems placed under operating leases (included in total unit placements)	131	108
Da Vinci Surgical System Placements involving System Trade-ins		
Unit placements involving trade-ins	67	108
Unit placements not involving trade-ins	245	203
Ion System Placements**	55	34
**Systems placed under operating leases (included in total unit placements)	31	15

Product Revenue

Three Months Ended March 31, 2023

Product revenue increased by 14% to $1.41 billion for the three months ended March 31, 2023, compared to $1.24 billion for the three months ended March 31, 2022.

Instruments and accessories revenue increased by 22% to $986 million for the three months ended March 31, 2023, compared to $810 million for the three months ended March 31, 2022. The increase in instruments and accessories revenue was driven primarily by da Vinci procedure growth of approximately 26% and incremental sales of our advanced instruments, partially offset by customer buying patterns and foreign currency impacts. The first quarter 2023 U.S. da Vinci procedure growth was approximately 26%, driven by growth in general surgery procedures, most notably hernia repair, cholecystectomy, and bariatric procedures, as well as moderate growth in the more mature gynecologic and urologic procedure categories. The first quarter 2023 OUS da Vinci procedure growth was approximately 28%, driven by continued growth in urologic procedures, including prostatectomies and partial nephrectomies, and earlier stage growth in general surgery (particularly colorectal), gynecologic, and thoracic procedures. Both growth rates were impacted by the disruption caused by the COVID-19 pandemic

in the three months ended March 31, 2022, as noted in the *COVID-19 Pandemic* section above. Geographically, the first quarter 2023 OUS da Vinci procedure growth was driven by procedure expansion in a number of markets with particular strength in Japan, Germany, and the UK.

Systems revenue was $427 million for the three months ended March 31, 2023, compared to $428 million for the three months ended March 31, 2022. The flat first quarter 2023 systems revenue was primarily driven by higher operating lease revenue and higher lease buyout revenue, offset by a higher proportion of da Vinci system placements under operating leases (despite flat da Vinci system placements), lower first quarter 2023 ASPs, and lower sales-type lease revenue.

During the first quarter of 2023, 312 da Vinci Surgical Systems were placed compared to 311 systems during the first quarter of 2022. By geography, 141 systems were placed in the U.S., 101 in Europe, 56 in Asia, and 14 in other markets during the first quarter of 2023, compared to 186 systems placed in the U.S., 78 in Europe, 42 in Asia, and 5 in other markets during the first quarter of 2022. The change in system placements was primarily driven by the demand for additional capacity by our customers due to the procedure growth, offset by a smaller number of third generation da Vinci systems available for trade-in. The incremental system placements reflect continued procedure growth and further customer validation that robotic-assisted surgery addresses their quadruple aim objectives. As of March 31, 2023, we had a da Vinci Surgical System installed base of approximately 7,779 systems, compared to an installed base of approximately 6,920 systems as of March 31, 2022.

We placed 145 and 128 da Vinci Surgical Systems under lease or usage-based arrangements, of which 131 and 108 systems were classified as operating leases for the three months ended March 31, 2023, and 2022, respectively. Operating lease revenue, including the contribution from Ion systems, was $112 million for the three months ended March 31, 2023, compared to $83 million for the three months ended March 31, 2022. Da Vinci Surgical Systems placed as operating leases represented 42% of total placements during the first quarter of 2023, compared to 35% during the first quarter of 2022. A total of 1,780 da Vinci Surgical Systems were installed at customers under operating lease or usage-based arrangements as of March 31, 2023, compared to 1,377 systems as of March 31, 2022. Revenue from Lease Buyouts was $23.9 million for the three months ended March 31, 2023, compared to $15.5 million for the three months ended March 31, 2022. We expect revenue from Lease Buyouts to fluctuate from period to period depending on the timing of when, and if, customers choose to exercise the buyout options embedded in their leases.

The da Vinci Surgical System ASP, excluding systems placed under operating lease or usage-based arrangements and Ion systems, was approximately $1.47 million for the three months ended March 31, 2023, compared to approximately $1.54 million for the three months ended March 31, 2022. The lower first quarter 2023 ASP was largely driven by higher pricing discounts, foreign currency impacts, and an unfavorable product mix, partially offset by fewer trade-ins and a favorable geographic mix. ASP fluctuates from period to period based on geographic and product mix, product pricing, systems placed involving trade-ins, and changes in foreign exchange rates.

During the first quarter of 2023, 55 Ion systems were placed compared to 34 systems during the first quarter of 2022. As of March 31, 2023, we had an Ion system installed base of approximately 376 systems, compared to an installed base of approximately 163 systems as of March 31, 2022. We placed 34 and 19 Ion systems under lease or usage-based arrangements, of which 31 and 15 systems were classified as operating leases for the three months ended March 31, 2023, and 2022, respectively. Ion systems placed as operating leases represented 56% of total placements during the first quarter of 2023, compared to 44% during the first quarter of 2022. A total of 155 Ion systems were installed at customers under operating or usage-based arrangements as of March 31, 2023, compared to 70 systems as of March 31, 2022.

Service Revenue

Service revenue increased by 14% to $283 million for the three months ended March 31, 2023, compared to $249 million for the three months ended March 31, 2022. The increase in service revenue was primarily driven by a larger installed base of systems producing service revenue.

Gross Profit

Product gross profit for the three months ended March 31, 2023, increased by 9% to $920 million, representing 65.1% of product revenue, compared to $841 million, representing 67.9% of product revenue, for the three months ended March 31, 2022. The higher product gross profit for the three months ended March 31, 2023, was primarily driven by higher product revenue, partially offset by lower product gross profit margin. The lower product gross profit margin for the three months ended March 31, 2023, was primarily driven by higher scrap costs and increased inventory reserves, as well as higher component costs, higher labor costs, unfavorable foreign currency impacts, and lower first quarter 2023 system ASPs.

Product gross profit for the three months ended March 31, 2023, and 2022, included share-based compensation expense of $16.8 million and $18.7 million, respectively, and intangible assets amortization expense of $3.2 million and $3.6 million, respectively.

Service gross profit for the three months ended March 31, 2023, increased by 14% to $193 million, representing 68.1% of service revenue, compared to $169 million, representing 67.6% of service revenue, for the three months ended March 31, 2022. The higher service gross profit for the three months ended March 31, 2023, was primarily driven by higher service revenue, reflecting a larger installed base of systems, and higher service gross profit margin. The higher service gross profit margin for the three months ended March 31, 2023, was primarily driven by favorable impacts from the volume and mix of repairs and lower freight costs, partially offset by higher infrastructure costs and unfavorable foreign currency impacts.

Service gross profit for the three months ended March 31, 2023, and 2022, included share-based compensation expense of $7.0 million and $5.6 million, respectively, and intangible assets amortization expense of $0.2 million and $0.2 million, respectively.

Selling, General and Administrative Expenses

Selling, general and administrative expenses include costs for sales, marketing, and administrative personnel, sales and marketing activities, trade show expenses, legal expenses, regulatory fees, and general corporate expenses.

Selling, general and administrative expenses for the three months ended March 31, 2023, increased by 23% to $481 million, compared to $391 million for the three months ended March 31, 2022. The increase in selling, general and administrative expenses for the three months ended March 31, 2022, was primarily driven by higher headcount, resulting in increased fixed and share-based compensation expense as well as variable compensation expense, and higher legal, travel, marketing, and training expenses.

Selling, general and administrative expenses for the three months ended March 31, 2023, and 2022, included share-based compensation expense of $66.7 million and $60.3 million, respectively, and intangible assets amortization expense of $0.9 million and $1.6 million, respectively.

Research and Development Expenses

Research and development costs are expensed as incurred. Research and development expenses include costs associated with the design, development, testing, and significant enhancement of our products.

Research and development expenses for the three months ended March 31, 2023, increased by 16% to $245 million, compared to $211 million for the three months ended March 31, 2022. The increase in research and development expenses for the three months ended March 31, 2023, was primarily driven by higher personnel-related expenses, including share-based compensation expense, and other project costs incurred to support a broader set of product development initiatives, including future generations of robotics, Ion and SP platform investments, and digital investments, partially offset by lower intangible asset-related charges.

Research and development expenses for the three months ended March 31, 2023, and 2022, included share-based compensation expense of $50.1 million and $36.8 million, respectively, and intangible asset-related charges of $0.7 million and $8.5 million, respectively.

Research and development expenses fluctuate with project timing. Based upon our broader set of product development initiatives and the stage of the underlying projects, we expect to continue to make substantial investments in research and development and anticipate that research and development expenses will continue to increase in the future.

Interest And Other Income (Expense), Net

Interest and other income (expense), net, for the three months ended March 31, 2023, and 2022, was $34.2 million, and $(5.7) million, respectively. The change in interest and other income (expense), net, for the three months ended March 31, 2023, was primarily driven by unrealized gains on investments resulting from strategic arrangements (compared to unrealized losses on investments resulting from strategic arrangements in the three months ended March 31, 2022), higher interest income earned, despite lower cash and investment balances, due to an increase in average interest rates, and foreign exchange gains (compared to foreign exchange losses in three months ended March 31, 2022).

Income Tax Expense

Income tax expense for the three months ended March 31, 2023, was $61.0 million, or 14.5% of income before taxes, compared to $33.0 million, or 8.2% of income before taxes, for the three months ended March 31, 2022.

Our effective tax rate for the three months ended March 31, 2023, and 2022, differed from the U.S. federal statutory rate of 21% primarily due to the tax benefits associated with employee equity plans, the effect of income earned by certain overseas entities being taxed at rates lower than the federal statutory rate, and the federal research and development credit benefit, partially offset by U.S. tax on foreign earnings and state income taxes (net of federal benefit).

The increase in income tax expense for the three months ended March 31, 2023, was primarily due to lower excess tax benefits, as discussed below.

Our provision for income taxes for the three months ended March 31, 2023, and 2022, included excess tax benefits associated with employee equity plans of $22.5 million and $53.0 million, respectively, which reduced our effective tax rate by 5.3 and 13.2 percentage points, respectively. The amount of excess tax benefits or deficiencies will fluctuate from period to period based on the price of our stock, the volume of share-based awards settled or vested, and the value assigned to employee equity awards under GAAP, which results in increased income tax expense volatility.

On August 16, 2022, the Inflation Reduction Act was enacted in the U.S. and introduced a 15% alternative minimum tax based on the financial statement income of the CAMT, effective January 1, 2023. There is no impact on our provision for income taxes from the CAMT for the three months ended March 31, 2023.

We file federal, state, and foreign income tax returns in many jurisdictions in the U.S. and OUS. Years before 2016 are considered closed for most significant jurisdictions. Certain of our unrecognized tax benefits could change due to activities of various tax authorities, including evolving interpretations of existing tax laws in the jurisdictions we operate, potential assessment of additional tax, possible settlement of audits, or through normal expiration of various statutes of limitations, which could affect our effective tax rate in the period in which they change. Due to the uncertainty related to the timing and potential outcome of audits, we cannot estimate the range of reasonably possible changes in unrecognized tax benefits that may occur in the next 12 months.

We are subject to the examination of our income tax returns by the Internal Revenue Service and other tax authorities. The outcome of these audits cannot be predicted with certainty. Management regularly assesses the likelihood of adverse outcomes resulting from these examinations to determine the adequacy of our provision for income taxes. If any issues addressed in our tax audits are resolved in a manner not consistent with management's expectations, we could be required to adjust our provision for income taxes in the period such resolution occurs.

Net Income Attributable to Noncontrolling Interest in Joint Venture

Net income attributable to noncontrolling interest in Joint Venture for the three months ended March 31, 2023, and 2022, was $5.5 million and $3.8 million, respectively. The increase in net income attributable to noncontrolling interest in Joint Venture was primarily due to an increase in sales, partially offset by an increase in selling, general and administrative expenses in China during the three months ended March 31, 2023.

Liquidity and Capital Resources

Sources and Uses of Cash and Cash Equivalents

Our principal source of liquidity is cash provided by operations and by the issuance of common stock through the exercise of stock options and our employee stock purchase program. Cash and cash equivalents plus short- and long-term investments decreased by $0.16 billion to $6.58 billion as of March 31, 2023, from $6.74 billion as of December 31, 2022, primarily from cash used in share repurchases, capital expenditures, and taxes paid related to net share settlements of equity awards, partially offset by cash provided by operating activities, proceeds from stock option exercises and employee stock purchases, as well as unrealized gains on interest-bearing debt securities classified as available for sale.

Our cash requirements depend on numerous factors, including market acceptance of our products, the resources we devote to developing and supporting our products, and other factors. We expect to continue to devote substantial resources to expand procedure adoption and acceptance of our products. We have made substantial investments in our commercial operations, product development activities, facilities, and intellectual property. Based on our business model, we anticipate that we will continue to be able to fund future growth through cash provided by our operations. We believe that our current cash, cash equivalents, and investment balances, together with income to be derived from the sale of our products, will be sufficient to meet our liquidity requirements for the foreseeable future. However, we may experience reduced cash flow from operations as a result of the risk of a recession along with other macroeconomic and geopolitical headwinds.

See "Item 7A. Quantitative and Qualitative Disclosures About Market Risk" in our Form 10-K for the fiscal year ended December 31, 2022, for discussion on the impact of interest rate risk and market risk on our investment portfolio.

Condensed Consolidated Cash Flow Data

The following table summarizes our cash flows for the three months ended March 31, 2023, and 2022 (in millions):

	Three Months Ended March 31,	
	2023	2022
Net cash provided by (used in):		
Operating activities	$ 371.4	$ 223.0
Investing activities	573.1	(214.7)
Financing activities	(381.2)	(199.9)
Effect of exchange rates on cash, cash equivalents, and restricted cash	1.8	3.8
Net increase (decrease) in cash, cash equivalents, and restricted cash	$ 565.1	$ (187.8)

Operating Activities

For the three months ended March 31, 2023, net cash provided by operating activities of $371 million exceeded our net income of $361 million, primarily due to the following factors:

1. Our net income included non-cash charges of $254 million, consisting primarily of the following significant items: share-based compensation of $140 million; depreciation expense and losses on the disposal of property, plant, and equipment of $88 million; and deferred income taxes of $9 million.

2. The non-cash charges outlined above were partially offset by changes in operating assets and liabilities that resulted in $244 million of cash used in operating activities during the three months ended March 31, 2023. Inventory, including the transfer of equipment from inventory to property, plant, and equipment, increased by $127 million, primarily to address the growth in the business as well as to mitigate risks of disruption that could arise from global supply chain shortages. Refer to Note 4 to the Financial Statements for further details in the supplemental cash flow information. Prepaid expenses and other assets increased by $27 million, primarily due to an increase in cloud computing implementation costs and right-of-use assets. Accrued compensation and employee benefits decreased by $141 million, primarily due to payments of 2022 incentive compensation. The unfavorable impact of these items on cash provided by operating activities was partially offset by a $24 million increase in deferred revenue, primarily due to the timing of services billings, and a $17 million decrease in accounts receivable, primarily due to timing of billing and collections. Accounts payable increased by $17 million, primarily due to the timing of billing and payments.

Investing Activities

Net cash provided by investing activities for the three months ended March 31, 2023, consisted primarily of proceeds from maturities and sales of investments, net of purchases, of $767 million, partially offset by $194 million paid for the acquisition of property, plant, and equipment. We invest predominantly in high quality, fixed income securities. Our investment portfolio may, at any time, contain investments in U.S. treasury and U.S. government agency securities, taxable and tax-exempt municipal notes, corporate notes and bonds, commercial paper, non-U.S. government agency securities, cash deposits, and money market funds.

Financing Activities

Net cash used in financing activities during the three months ended March 31, 2023, consisted primarily of cash used in the repurchase of approximately 1.5 million shares of our common stock for $350 million and taxes paid on behalf of employees related to net share settlements of equity awards of $130 million, partially offset by proceeds from stock option exercises and employee stock purchases of $100 million.

Capital Expenditures

Our capital expenditures are increasing as we continue to build the Company to supply our customers with highly differentiated products manufactured in highly automated factories to facilitate outstanding performance in product quality, availability, and cost. A significant portion of this investment involves the construction of facilities to expand our manufacturing and commercial capabilities. We have also been vertically integrating key technologies to develop a more robust supply chain and bring important products to market at attractive price points. These investments include increased ownership of our imaging pipelines and investments in strategic instruments and accessories technologies that allow us to serve our customers better. We expect these capital investments to increase significantly in 2023 to a range between $800 million and $1 billion, over half of which will be facilities-related investments. We intend to fund these capital investments with cash generated from operations.

Critical Accounting Estimates

The discussion and analysis of our financial condition and results of operations are based upon our Financial Statements, which have been prepared in accordance with GAAP. The preparation of these Financial Statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues, and expenses. On an ongoing basis, we evaluate our critical accounting estimates. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. There have been no new or material changes to the critical accounting estimates discussed in our Annual Report on Form 10-K for the fiscal year ended December 31, 2022, that are of significance, or potential significance, to the Company.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

There have been no material changes in our market risk during the three months ended March 31, 2023, compared to the disclosures in Part II, Item 7A of our Annual Report on Form 10-K for the year ended December 31, 2022.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our Exchange Act reports 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 our principal executive officer and principal financial officer, as appropriate, to allow for timely decisions regarding required disclosure.

As required by SEC Rule 13a-15(b), we carried out an evaluation, under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures as of the end of the period covered by this report. Based on the foregoing, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures were effective at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

There has been no change in our internal control over financial reporting that occurred during our most recent fiscal quarter 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

The information included in Note 8 to the Condensed Consolidated Financial Statements (Unaudited) included in Part I, Item 1 of this quarterly report is incorporated herein by reference.

ITEM 1A. RISK FACTORS

You should carefully consider the factors discussed in Part I, "Item 1A. Risk Factors" in our Annual Report on Form 10-K for the fiscal year ended December 31, 2022, which could materially affect our business, financial position, or future results of operations. The risks described in our Annual Report on Form 10-K for the fiscal year ended December 31, 2022, are not the only risks we face. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial position, or future results of operations. The risk factors set forth below update, and should be read together with, the risk factors described in our Annual Report on Form 10-K for the fiscal year ended December 31, 2022.

RISKS RELATING TO OUR BUSINESS

MACROECONOMIC CONDITIONS COULD HAVE A MATERIALLY ADVERSE IMPACT ON OUR BUSINESS, FINANCIAL CONDITION, OR RESULTS OF OPERATIONS.

Macroeconomic conditions, such as high inflation, changes to monetary policy, increasing interest rates, volatile currency exchange rates, credit and sovereign debt concerns in certain European countries, concerns about slowed growth in China and other OUS markets, decreasing consumer confidence and spending, including capital spending, concerns about the stability and liquidity of certain financial institutions, and global or local recessions can adversely impact demand for our products, which could negatively impact our business, financial condition, or results of operations. Recent macroeconomic conditions have been adversely impacted by political instability and military hostilities in multiple geographies (including the conflict between Ukraine and Russia), monetary and financial uncertainties, and the ongoing COVID-19 pandemic. The results of these macroeconomic conditions, and the actions taken by governments, central banks, companies, and consumers in response, have and may continue to result in higher inflation in the U.S. and globally, which is likely, in turn, to lead to an increase in costs and may cause changes in fiscal and monetary policy, including increased interest rates. Other adverse impacts of recent macroeconomic conditions have been and may continue to be supply chain constraints, logistics challenges, liquidity concerns in the broader financial services industry, and fluctuations in labor availability.

Adverse developments that affect financial institutions, transactional counterparties, or other third parties, or concerns or rumors about these events, 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 closed by the California Department of Financial Protection and Innovation, which appointed the U.S. Federal Deposit Insurance Corporation ("FDIC") as receiver. Similarly, other institutions have been and may continue to be swept into receivership. We have no borrowing or deposit exposure to directly impacted institutions and have not experienced an adverse impact to our liquidity or to our business operations, financial condition, or results of operations as a result of these recent events. However, uncertainty may remain over liquidity concerns in the broader financial services industry, and there may be unpredictable impacts to our business and our industry.

In a higher inflationary environment, we may be unable to raise the prices of our products and services sufficiently to keep up with the rate of inflation. Impacts from inflationary pressures could be more pronounced and materially adversely impact aspects of our business where revenue streams and cost commitments are linked to contractual agreements that extend further into the future, as we may not be able to quickly or easily adjust pricing, reduce costs, or implement countermeasures. A higher inflationary environment can also negatively impact raw material, component, and logistics costs that, in turn, may increase the costs of producing and distributing our products. Recently, the costs of raw materials, transportation, construction, services, and energy necessary for the production and distribution of our products have increased significantly.

Furthermore, hospitals and distributors may choose to postpone or reduce spending due to financial difficulties or difficulties in obtaining credit to finance purchases of our products due to increased interest rates and restraints on credit. Hospitals and distributors may also be adversely affected by the liquidity concerns in the broader financial services industry, as described above, that could result in delayed access or loss of access to uninsured deposits or loss of their ability to draw on existing credit facilities involving a troubled or failed financial institution. Hospitals, in particular, are experiencing and may continue to experience financial and operational pressures as a result of staffing shortages, the supply chain environment, and increased inflation, which could impact their ability to access capital markets and other funding sources, increase the cost of funding, or impede their ability to comply with debt covenants, all of which could impede their ability to provide patient care, defer elective surgeries, and impact their profitability. To the extent that hospitals face financial pressures, delayed access or loss of access to uninsured deposits, delayed access or loss of ability to draw on existing credit facilities, reductions in

government spending, or higher interest rates, hospitals' ability or willingness to spend on capital equipment may be adversely impacted, all of which could have a material adverse effect on our business, financial condition, or results of operations.

We are unable to predict the impact of efforts by central banks and federal, state, and local governments to combat elevated levels of inflation. If their efforts to create downward pressure on inflation are too aggressive, they may lead to a recession. Alternatively, if they are insufficient or are not sustained long enough to bring inflation to lower, more acceptable levels, hospitals' ability or willingness to spend on capital equipment may be impacted for a prolonged period of time. If a recession occurs, economies weaken, or inflationary trends continue, our business and operating results could be materially adversely affected.

In addition, in early 2023, the U.S. Government reached its existing statutory limit on the amount of permissible federal debt, and this limit must be raised in order for the U.S. Government to continue to pay its obligations on a timely basis. If the debt ceiling is not raised, it is unclear how the U.S. Government would prioritize its payments towards its various programs, which could have a significant impact on the overall economy as well as on medical procedures performed.

Also, we have and may continue to experience supply chain constraints due to the current supply chain environment and logistic challenges, including difficulties obtaining a sufficient supply of component materials used in our products. If interest rates continue to rise, access to credit may become more difficult, which may result in the insolvency of key suppliers, including single-source suppliers, which would exacerbate supply chain challenges. Such supply chain constraints could cause us to fail to meet product demand, which could result in deferred or canceled procedures.

OUR RELIANCE ON SOLE-SOURCED AND SINGLE-SOURCED SUPPLIERS AND ABILITY TO PURCHASE AT ACCEPTABLE PRICES A SUFFICIENT SUPPLY OF MATERIALS, PARTS, AND COMPONENTS COULD HARM OUR ABILITY TO MEET PRODUCT DEMAND IN A TIMELY MANNER OR WITHIN BUDGET.

Some of the components necessary for the assembly of our products are currently provided to us by sole-sourced suppliers or single-sourced suppliers. We generally purchase components through purchase orders rather than long-term supply agreements and generally do not maintain large volumes of inventory. While alternative suppliers exist and could be identified for single-sourced components, the disruption or termination of the supply of components, or inflationary pressure in our supply chain, could cause a significant increase in the costs of these components, which could affect our operating results. Certain of our sole-sourced suppliers or single-sourced suppliers could be adversely affected by the macroeconomic conditions, such as liquidity concerns in the broader financial services industry, that could result in delayed access or loss of access to their uninsured deposits or loss of their ability to draw on existing credit facilities involving a troubled or failed financial institution. A disruption or termination in the supply of components could also result in our inability to meet demand for our products, which could harm our ability to generate revenues, lead to customer dissatisfaction, and damage our reputation and our brand. Furthermore, if we are required to change the manufacturer of a key component of our products, we may be required to verify that the new manufacturer maintains facilities and procedures that comply with quality standards and with all applicable regulations and guidelines. The time and processes associated with the verification of a new manufacturer could delay our ability to manufacture our products on schedule or within budget, which may have a material adverse impact on our business, financial condition, or results of operations.

In addition, our ability to meet customers' demands depends, in part, on our ability to timely obtain an adequate delivery of quality materials, parts, and components from our suppliers. An information technology systems interruption, including cyberattacks, could adversely affect the ordering, distribution, and manufacturing processes of our suppliers. Difficulties remain in obtaining a sufficient supply of semiconductor and other component materials, and we expect such difficulties to persist in the foreseeable future. Prices of such materials have also increased, and global supply has become significantly constrained due to the increased demand for materials, including semiconductors, to support expansion of server and cloud networks as a greater proportion of the global population worked remotely, the introduction of 5G, and the continued electrification of vehicles. We engage in activities to seek to mitigate such supply disruptions by, for example, increasing our communications with our suppliers and modifying our purchase order coverage and inventory levels. Such global shortages in important components have resulted in, and will continue to cause, inflationary pressure in our supply chain, which would impact our profits and profit margin. If shortages and price increases in important supply-chain materials in the semiconductor or other markets continue, we could also fail to meet product demand, which would adversely impact our business, financial condition, or results of operations.

INFORMATION TECHNOLOGY SYSTEM FAILURES, CYBERATTACKS, OR DEFICIENCIES IN OUR CYBERSECURITY COULD HARM OUR BUSINESS, CUSTOMER RELATIONS, FINANCIAL CONDITION, OR RESULTS OF OPERATIONS.

Our information technology systems are critical to the success of our products, help us operate effectively and efficiently, interface with customers, maintain our supply chain and manufacturing operations, maintain financial accuracy and efficiency, and help us produce our Consolidated Financial Statements. If we do not allocate and effectively manage the resources necessary to build and sustain the proper information technology infrastructure, we could be subject to transaction errors,

processing inefficiencies, the loss of existing customers, difficulty attracting new customers, business operation disruptions, diversion of the attention of management and key information technology resources, security breaches, or the unauthorized access to, loss of, or damage to intellectual property, confidential information, or personal information. Our information technology systems and those of our third-party service providers, strategic partners, and other contractors or consultants are vulnerable to attack, damage, or interruption from a variety of sources. These sources include computer viruses and malware (e.g., ransomware), malicious code, natural disasters, terrorism, war, telecommunication and electrical failures, hacking, cyberattacks, phishing attacks and other social engineering schemes, employee theft or misuse, human error, fraud, denial or degradation of service attacks, sophisticated nation-state and nation-state-supported actors, or unauthorized access or use by persons inside our organization, or persons with access to systems inside our organization. If our information technology systems do not effectively and securely collect, store, process, and report relevant data for the operation of our business, our ability to effectively plan, forecast, and execute our business plan and comply with applicable laws and regulations could be impaired. Any such impairment could materially and adversely affect our financial condition, results of operations, and the timeliness with which we report our internal and external operating results.

Our business requires us to use and store customer, employee, and business partner personal information. This may include names, addresses, phone numbers, email addresses, contact preferences, tax identification numbers, and payment account information. We require usernames and passwords in order to access our information technology systems. We also use encryption and authentication technologies to secure the transmission and storage of data. These security measures may be compromised as a result of security breaches by unauthorized persons, employee error, malfeasance, faulty password management, or other irregularity and result in persons obtaining unauthorized access to our data or accounts. Third parties may attempt to fraudulently induce employees or customers into disclosing usernames, passwords, or other sensitive information, which may, in turn, be used to access our information technology systems. In addition, our employees, third-party service providers, strategic partners, or other contractors or consultants may input inappropriate or confidential information into an artificial intelligence system (in particular, a system that is managed, owned, or controlled by a third party), thereby compromising our business operations, which may cause business operation disruptions, diversion of the attention of management and key information technology resources, and possibly lead to security breaches of, or the unauthorized access to, our confidential information or other business data. As a result of the COVID-19 pandemic, we may also face increased cybersecurity risks due to our reliance on internet technology and the number of our employees who are working remotely, which may create additional opportunities for cybercriminals to exploit vulnerabilities.

In addition, unauthorized persons may attempt to hack into our products or systems to obtain personal data relating to patients or employees, our confidential or proprietary information, or confidential information we hold on behalf of third parties. If the unauthorized persons successfully hack into or interfere with our connected products or services, they may create issues with product functionality that could pose a risk of the loss of data, a risk to patient safety, and a risk of product recall or field action, which could adversely impact our business and reputation. We have programs in place to detect, contain, and respond to data security incidents, and we make ongoing improvements to our information-sharing products in order to minimize vulnerabilities, in accordance with industry and regulatory standards. However, because the techniques used to obtain unauthorized access to or steal personal information or intellectual property, or sabotage systems containing personal information or intellectual property, change frequently and may originate from less regulated and remote areas of the world and be difficult to detect, we may not be able to anticipate and prevent these intrusions or mitigate them when and if they occur. Even if identified, we may be unable to adequately investigate or remediate incidents or breaches due to attackers increasingly using tools and techniques that are designed to circumvent controls, avoid detection, and remove or obfuscate forensic evidence.

We also rely on external vendors to supply and/or support certain aspects of our information technology systems. The systems of these external vendors may contain defects in design or manufacture or other problems that could unexpectedly compromise the security of our own information technology systems, and we are dependent on these third parties to deploy appropriate security programs to protect their systems. In addition to potential exposure to data breaches, security and cybersecurity incidents, or other actions that may compromise the security of or interfere with the function of our systems, defects or vulnerabilities in the software or systems of our external vendors may expose failures in our internal controls and risk management processes, which may adversely impact our business, financial condition, or results of operations and may also harm our reputation, brand, and customer relationships.

While we devote significant resources to network security, data encryption, and other security measures to protect our systems and data, these security measures cannot provide absolute security. We and certain of our service providers are, from time to time, subject to cyberattacks and security breaches and incidents. We consider such cyberattacks or security breaches and incidents to be in the ordinary course of business for a company of our size in our industry. While we do not believe that we have experienced any significant system failure, accident, or security breach to date, if such an event were to occur, it could impair our ability to attract and retain customers for our products, impact the price of our stock, materially damage commercial relationships, and expose us to litigation or government investigations, which could result in penalties, fines, or judgments against us. The costs to us to eliminate or alleviate network security problems, bugs, viruses, worms, ransomware and other

malicious software programs, and security vulnerabilities could be significant. Our efforts to address these problems may not be successful and could result in unexpected interruptions, delays, cessation of service, and harm to our business operations. Moreover, if a security breach affects our systems or results in the unauthorized release of personal information, our reputation and brand could be materially damaged, and use of our products and services could decrease. We would also be exposed to a risk of loss, litigation and potential liability, and regulatory scrutiny, which could have a material adverse impact on our business, financial condition, or results of operations.

Globally, attacks are expected to continue accelerating in both frequency and sophistication with increasing use of tools and techniques that are designed to circumvent controls, avoid detection, and remove or obfuscate forensic evidence, all of which hinders our ability to identify, investigate, and recover from incidents.

Furthermore, due to the political uncertainty involving Russia and Ukraine, there is also an increased likelihood that the tensions could result in cyberattacks or cybersecurity incidents that could either directly or indirectly impact our operations. Any attempts by cyber-attackers to disrupt our services or information technology systems or the services or information technology systems of our third-party service providers, strategic partners, and other contractors or consultants, if successful, could harm our business, result in the misappropriation of funds, be expensive to remedy, and damage our reputation or brand.

While we maintain cyber insurance coverage that is intended to address data security risks, such insurance coverage may be insufficient to cover all losses or claims that may arise.

WE ARE EXPOSED TO CREDIT RISK AND FLUCTUATIONS IN THE MARKET VALUE OF OUR INVESTMENTS.

Our investment portfolio includes both domestic and international investments. The credit ratings and pricing of our investments can be negatively affected by liquidity concerns, credit deterioration, financial results, economic risk, political risk, or other factors. As a result, the value and liquidity of our cash equivalents and marketable securities could fluctuate substantially. Our other income and expense could also vary materially from expectations depending on gains or losses realized on the sale or exchange of investments, impairment charges resulting from revaluations of debt and equity securities and other investments, changes in interest rates, increases or decreases in cash balances, volatility in foreign exchange rates, and changes in the fair value of derivative instruments. Increased volatility in the financial markets and overall economic uncertainty could increase the risk that actual amounts realized on our investments may differ significantly from the fair values currently assigned to them.

The value of our investments may also decline due to instability in the global financial markets, which may reduce the liquidity of securities included in our portfolio. The closure of SVB and other institutions swept into receivership and the appointment of the FDIC as receiver created bank-specific and broader financial institution liquidity risk and concerns. Although the U.S. Department of the Treasury, the Federal Reserve, and the FDIC jointly released a statement that depositors at SVB and other banks that have been similarly swept into receivership would have access to their funds, even those in excess of the standard FDIC insurance limits, under a systemic risk exception, future adverse developments with respect to specific financial institutions or the broader financial services industry may impair our ability to access capital needed to support near-term working capital needs, whether from our existing investment and deposit accounts and credit facilities or otherwise, and may lead to market-wide liquidity shortages and create additional market and economic uncertainty. Any decline in available funding or access to our cash and liquidity resources could also result in breaches of our financial and/or contractual obligations.

Our Intuitive Ventures fund plans to invest in early-stage companies, which involve substantial risks and uncertainties. These risks and uncertainties include, among other things, uncertainties inherent in research and development; uncertainties regarding the ability of Intuitive Ventures to identify investment candidates; uncertainties regarding the success of Intuitive Ventures' investments; uncertainties and variables inherent in the operating and financial performance in investments made, including, among other things, competitive developments and general economic, political, business, industry, regulatory and market conditions; future exchange and interest rates; and changes in tax and other laws, regulations, rates and policies.

While we have not realized any significant losses on our cash equivalents, marketable securities, or other investments, future fluctuations in their value could have a material adverse impact on our business, financial condition, or results of operations.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

There were no unregistered sales of equity securities during the period covered by this report.

(c) Issuer Purchases of Equity Securities

The table below summarizes our stock repurchase activity for the quarter ended March 31, 2023:

Fiscal Period	Total Number of Shares Repurchased	Average Price Paid Per Share	Total Number of Shares Purchased As Part of a Publicly Announced Program	Approximate Dollar Amount of Shares That May Yet be Purchased Under the Program [1]
January 1 to January 31, 2023	146,165	$ 243.80	146,165	$ 1.5 billion
February 1 to February 28, 2023	1,323,691	$ 237.51	1,323,691	$ 1.1 billion
March 1 to March 31, 2023	—	$ —	—	$ 1.1 billion
Total during quarter ended March 31, 2023	1,469,856	$ 238.14	1,469,856	

(1) Since March 2009, we have had an active stock Repurchase Program. As of March 31, 2023, our Board had authorized an aggregate amount of up to $10.0 billion for stock repurchases, of which the most recent authorization occurred in July 2022, when our Board increased the authorized amount available under our stock Repurchase Program to $3.5 billion. The remaining $1.1 billion represents the amount available to repurchase shares under the authorized stock Repurchase Program as of March 31, 2023. The authorized stock Repurchase Program does not have an expiration date.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

None.

ITEM 6. EXHIBITS

Exhibit Number	Exhibit Description
3.1(1)	Amended and Restated Certificate of Incorporation of the Company, as Amended.
3.2(2)	Amendment to Amended and Restated Certificate of Incorporation of the Company.
3.3(3)	Amended and Restated Bylaws of the Company.
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification of Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101	The following materials from Intuitive Surgical, Inc.'s Quarterly Report on Form 10-Q for the quarter ended March 31, 2023, formatted in Inline XBRL (Extensible Business Reporting Language): (i) the unaudited Condensed Consolidated Balance Sheets, (ii) the unaudited Condensed Consolidated Statements of Comprehensive Income, (iii) the unaudited Condensed Consolidated Statements of Cash Flows, and (iv) Notes to Condensed Consolidated Financial Statements (unaudited), tagged at Level I through IV.
104	The cover page from the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2023, formatted in Inline XBRL and contained in Exhibit 101.

1. Incorporated by reference to Exhibit 3.1 filed with the Company's Quarterly Report on Form 10-Q filed on July 23, 2020 (File No. 000-30713).
2. Incorporated by reference to Exhibit 3.1 filed with the Company's Quarterly Report on Form 10-Q filed on October 20, 2021 (File No. 000-30713).
3. Incorporated by reference to Exhibit 3.1 filed with the Company's Current Report on Form 8-K filed on February 1, 2021 (File No. 000-30713).

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

INTUITIVE SURGICAL, INC.

By: /s/ JAMIE E. SAMATH

Jamie E. Samath
Senior Vice President and Chief Financial Officer
(Principal Financial Officer and duly authorized signatory)

Date: April 20, 2023