
INTEGRA®

CEO Message to Shareholders

Dear Shareholders:

2023 was a year where we experienced several swings in the pendulum – a year filled with real successes and significant headwinds. While we worked hard to address the year's challenges, we never lost sight of our commitments to our customers and patients. With determination and strategic foresight, we embraced the opportunity to redefine our priorities and lay the groundwork for a stronger future, investing in business levers that drive mid- and long-term shareholder value.

Renewing Our Strategic Focus

At the beginning of last year, we reignited our company purpose, mission and vision, and reinvigorated our strategy. We centered our strategy around five key pillars: three core growth drivers – innovating for outcomes, growing internationally, and broadening our impact on care pathways – and two key enablers, driving operational and customer excellence, and cultivating a high-performance culture. These five strategic pillars will guide our efforts to accelerate growth in 2024.

In 2023, we performed with great determination and achieved significant milestones against these strategic pillars.

New products and new indications – and the clinical evidence to support regulatory approval and reimbursement globally – are an important part of our innovation focus. Last year, we began the integration of Surgical Innovation Associates (SIA) following its acquisition in 2022. The acquisition of SIA advanced our global strategy in breast reconstruction, expanding our plans to access the U.S. market, where SIA is pursuing pre-market approval for use in implant-based breast reconstruction for DuraSorb®, a resorbable synthetic matrix for plastic and reconstructive surgery. In June, we completed enrollment in the DuraSorb U.S. investigational device exemption clinical study for two-stage breast reconstruction and submitted the clinical premarket approval for SurgiMend®.

We also expanded our product offerings in our pioneering portfolio of neurosurgical technologies. In the U.S., we launched the CUSA® Clarity Bone Tip for controlled fragmentation, emulsification, and aspiration of bone as well as the launch of laparoscopic tip in international markets. With these product line extensions, we are broadening the clinical application areas for our leading CUSA tissue ablation platform. In late 2023, we also relaunched CereLink®, our next-generation neuro-monitoring platform, in select international markets, and early this year we received 510(k) approval for its U.S. market re-entry. Additionally, the Aurora platform for minimally invasive neurosurgery and treatment of intracranial hemorrhage is poised for full commercial launch now that we have obtained 510(k) approval for our next-generation surgiscope.

Internationally, we sustained double-digit growth by expanding our global footprint through new product introductions, registrations, and commercial partnerships, as well as by strengthening our commercial capabilities in local markets. We introduced several new products in global markets, including MicroMatrix® and Certas Plus® Programmable Valve, DuraGen products in China and Japan, and the CUSA laparoscopic tip in Australia, New Zealand, Japan, Canada, South Africa and Israel.

We also made significant headway in the build-out of our first China manufacturing facility to support the local market.

Late last year, we achieved another strategic milestone with the signing of a definitive agreement to acquire Acclarent, Inc., from Ethicon, Inc., a Johnson & Johnson MedTech company. This acquisition provides a unique opportunity to build scale and capture a leadership position in the promising ear, nose and throat (ENT) segment, thanks to Acclarent's commercial scale, strong brand recognition, differentiated portfolio, and robust innovation pipeline. The ENT category is an area of strategic interest and highly complementary to the neurosurgery segment. We closed this acquisition in April 2024.

Enabling Our Growth

For the full year 2023, organic revenues were $1.54 billion, flat on an organic basis and up 5.5% excluding the impact of the Boston recall. This demonstrates the continued robustness of our diverse portfolio and the markets we serve. Full-year organic growth in Codman Specialty Surgical (CSS) and Tissue Technologies was approximately 5% and 7%, respectively, in line with our growth expectations (and again, excluding the products manufactured in Boston).

Although the Boston recall weighed on our financial results for the year, we made significant and steady progress toward re-establishing the products manufactured at the facility. We are applying many of the learnings from this experience across our manufacturing operations as we focus on strengthening our quality management practices, building more responsive and scalable processes, enhancing the reliability of our supply chain, and driving productivity initiatives to build operational excellence and resiliency.

We remained focused on our drive for operational excellence and emerged from 2023 more robust and better prepared for the future. We fortified our quality systems across our manufacturing network and stayed focused on becoming a more predictable operator. We also made progress in expanding our capacity, such as initiating construction on a new Tissue Technologies manufacturing location in Braintree, Mass., validating additional manufacturing capacity in our Plainsboro, N.J., facility, and increasing cleanroom capacity in our Memphis, Tenn., location. Ongoing quality improvements and supply resilience remain our key priorities in 2024.

Fostering a High-Performance Culture

Our people strategy is focused on creating an empowered, agile culture built on the foundation of a diverse and inclusive workplace. Our programs and efforts are designed to help attract, develop, and retain top talent who bring different perspectives and skills, and who share our passion for our purpose, mission and vision. In 2023, these efforts led to Integra's recognition in several best workplace lists globally, including as a Great Place to Work in Greater China. Additionally, we advanced our environmental, social and governance (ESG) agenda to drive sustainability across the organization, as reflected in our second annual ESG report.

We also made several key executive leadership appointments in 2023. We welcomed Dr. Stuart Hart as corporate vice president and chief medical officer, responsible for our worldwide clinical development activities, including clinical research, clinical trial operations and medical affairs. Stuart is a talented medical professional with extensive clinical experience and a passion for innovation. Additionally, we appointed Lea Knight as executive vice president and chief financial officer. Lea has more than 30 years of experience in global companies with significant operating scale and complexity. She has led and developed high-performing teams and demonstrated success in combining financial acumen and business process leadership to deliver strong business outcomes. Finally, Chantal Veillon joined Integra as executive vice president and chief human resources officer. Chantal is an accomplished HR leader with more than 20 years of deep and broad experience in driving talent development and leading business transformations in global companies. The skills and perspectives these leaders bring will enable us to build high-performing teams, guided by our purpose and values, to successfully deliver our long-range plans.

Looking back at 2023, I am proud of everything we accomplished together, and I believe Integra's future is full of opportunities for success. Our company has more than $1.5 billion in global revenue, with market-leading brands sold in about 120 countries. We are a player with critical scale, which allows us to innovate, while staying focused on key differentiating capabilities and building commercial relationships that translate to recurring revenues. The markets we compete in – and our position in those markets – form a strong foundation for us to accelerate profitable growth in the coming years.

We are committed to executing our 2024 roadmap through operational excellence, particularly by strengthening our manufacturing and supply chain resilience. I look forward to working alongside the Board, the executive leadership team, and our Integra colleagues to fulfill our purpose and mission: to innovate treatment pathways and set new standards of care to restore patients' lives.

Jan De Witte
President and Chief Executive Officer

Executive Chairman Message to Shareholders

Dear Shareholders:

As I reflect on the remarkable journey of Integra since its inception in 1989, I'm filled with immense pride and gratitude for the unwavering support of our shareholders, customers, and employees. With each passing year, our company has evolved and adapted to meet the challenges of the healthcare industry, emerging as a global leader with a significant impact on patient care pathways.

As executive chairman during this pivotal time in our company's history, I am energized by the opportunity to guide Integra through a seamless transition as we welcome a new president and chief executive officer in the latter half of 2024. Having been intimately involved with Integra for over 25 years, including a tenure as CEO a decade ago, I am deeply committed to ensuring continuity in our strategic vision and relentless pursuit of excellence.

At Integra, we are steadfast in our commitment to execution, growth, and innovation. In the short run, we have stepped up our focus on improving our execution. The Integra team realizes the importance of more predictable and sustained performance. In the longer term, our strategic roadmap is anchored in delivering operational and customer excellence, fostering a high-performance culture, and expanding our global footprint. We believe these pillars will not only accelerate growth, but also enhance shareholder value.

Our robust product portfolio, coupled with our focus on differentiated technologies and innovation in both soft tissue regeneration and neurosurgery, positions us uniquely to address the evolving needs of healthcare providers and patients worldwide. As we look to the future, we are excited about the opportunities to broaden our impact and solidify our position as the preferred choice of clinicians and healthcare systems.

I want to express my appreciation to Jan for his leadership and commitment to Integra and for the role he has played in advancing our portfolio and building upon our legacy of innovation. Jan's tenure has been marked by significant contributions to the company, including the evolution of our strategy and an expansion of core capabilities. We appreciate Jan's commitment to a smooth transition and the execution of our roadmap for 2024 and beyond.

I am also proud to lead a diverse and seasoned Board of Directors who share our unwavering commitment to shareholder value. Together, we are focused on driving sustainable growth, executing on strategic acquisitions, and expanding our presence in high-growth markets.

The Board has a strong global track record in strategy, executive management, financial experience, digital innovation, strategic acquisitions and healthcare. Over the past few years, we have welcomed four new board members who bring diverse skills, perspectives and experiences to help Integra realize its full potential. Last year, we appointed Jeff Graves, Ph.D., president and chief executive officer of 3D Systems Corporation, to the company's Board. Jeff is a highly accomplished executive with a track record of leading and transforming technically complex businesses.

I am deeply grateful for the dedication and passion of our global team and their ongoing work to restore patients' lives as we embark on this new chapter. Their tireless efforts serve as a testament to the values that define Integra.

In closing, I want to express my sincere appreciation to our shareholders for your continued trust and support. We will navigate this transition period with confidence and determination, building upon our legacy of success and creating value for all stakeholders.

Stuart Essig
Executive Chairman
Board of Directors

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 10-K

(Mark One)

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

For the fiscal year ended December 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 NO. 000-26224

INTEGRA LIFESCIENCES HOLDINGS CORPORATION
(EXACT NAME OF REGISTRANT AS SPECIFIED IN ITS CHARTER)

Delaware	**51-0317849**
(STATE OR OTHER JURISDICTION OF INCORPORATION OR ORGANIZATION)	**(I.R.S. EMPLOYER IDENTIFICATION NO.)**
1100 Campus Road **Princeton , New Jersey** **(ADDRESS OF PRINCIPAL EXECUTIVE OFFICES)**	**08540** **(ZIP CODE)**

REGISTRANT'S TELEPHONE NUMBER, INCLUDING AREA CODE: (609) 275-0500

SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT:

Title of Each Class	Trading Symbol	Name of Exchange on Which Registered
Common Stock, Par Value $.01 Per Share	IART	Nasdaq Global Select Market

SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT:

NONE

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes ☐

No ☒

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

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

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

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to § 240.10D-1(b). ☐

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

As of June 30, 2023, the aggregate market value of the registrant's common stock held by non-affiliates was approximately $3,256.6 million based upon the closing sales price of the registrant's common stock on The Nasdaq Global Select Market on such date. The number of shares of the registrant's Common Stock, $0.01 par value, outstanding as of February 27, 2024 was 78,219,780.

DOCUMENTS INCORPORATED BY REFERENCE:

Certain portions of the registrant's definitive proxy statement relating to its scheduled May 9, 2024 Annual Meeting of Stockholders, which will be filed with the Securities and Exchange Commission, are incorporated by reference in Part III of this Annual Report on Form 10-K.

INTEGRA LIFESCIENCES HOLDINGS CORPORATION
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Unless otherwise stated or the context otherwise indicates, all references in this Annual Report on Form 10-K to “Integra LifeSciences,” “Integra,” “the Company,” “we,” “our,” and “us” refer to Integra LifeSciences Holdings Corporation, a Delaware corporation and its consolidated subsidiaries.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

We have made statements in this report, including statements under “Business” and “Management's Discussion and Analysis of Financial Condition and Results of Operations” that constitute forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, ("the Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended ("the "Exchange Act"). These forward-looking statements are subject to a number of risks, uncertainties and assumptions about us including, among other things:

- the on-going and possible future effects of global challenges, including macroeconomic uncertainties, such as supply chain disruptions, inflation, bank failures, rising interest rates and availability of capital markets, the Israel-Hamas and Ukraine-Russia wars, other economic disruptions and U.S. and global recession concerns, on our customers and suppliers, and on our business, financial condition, results of operations and cash flows;
- general economic and business conditions, both domestically and in our international markets, including the effect of the continuing worldwide macroeconomic uncertainty and increasing trade regulations and tariffs;
- our expectations and estimates concerning future financial performance, financing plans and the impact of competition;
- anticipated trends in our business;
- anticipated demand for our products, particularly capital equipment;
- our ability to produce and deliver products in sufficient quantities to meet sales demands;
- the ongoing and possible future effects of supply chain constraints, including the availability of critical raw materials and components, as well as cost inflation in materials, packaging and transportation;
- our expectations concerning our ongoing restructuring, integration and manufacturing transfer and expansion activities;
- existing and future regulations affecting our business, and enforcement of those regulations;
- conducting business internationally;
- our failure to comply with the substantial regulation related to quality standards applicable to our manufacturing and quality processes could have an adverse effect on our business, financial condition, or results of operations;
- our ability to remediate all matters identified in United States Food & Drug (the "FDA") observations and warning letters that we received or may receive;
- our ability to obtain additional debt and equity financing to fund capital expenditures, working capital requirements and acquisitions;
- physicians' willingness to adopt our recently launched and planned products, third-party payors' willingness to provide or continue reimbursement for any of our products and our ability to secure regulatory approval for products in development;
- initiatives launched by our competitors;
- our ability to protect our intellectual property, including trade secrets;
- our ability to complete acquisitions, integrate operations post-acquisition and maintain relationships with customers of acquired entities;
- the ability to successfully manage ongoing organizational and strategic changes, including our ability to attract, motivate and retain key employees and maintain engagement and efficiency in remote work environments;
- anticipated trends relating to our financial condition or results of operations, including the impact of interest rate and foreign currency exchange fluctuations;
- the effect of any future public health crises, including the timing, scope and effect of U.S. and international governmental, regulatory, fiscal, monetary and public health responses to such crises; and
- other risk factors described in Item 1A. "Risk Factors" in this Annual Report on Form 10-K.

Forward-looking statements can be identified by forward-looking words such as “believe,” “may,” “could,” “might,” “will,” “estimate,” “continue,” “anticipate,” “intend,” “seek,” “plan,” “expect,” “should,” “would,” “expect,” “target,” “pursue,” “forecast,” “hope” and similar expressions in this Annual Report on Form 10K. Forward-looking statements in this Annual Report on Form 10-K include, but are not limited to, statements regarding our five-pillar growth strategy; the closing of our pending acquisition of Acclarent, Inc. on anticipated terms and timing, or at all; the anticipated benefits of our pending acquisition of Acclarent, Inc.; expectations and plans with respect to strategic initiatives, product development and regulatory approvals, including the anticipated resumption of manufacturing at the Company’s Boston, Massachusetts facility. These statements are only predictions and involve known and unknown risks, uncertainties, and other factors that may cause our actual results, levels of activity, performance, or achievements to be materially different from any future results, levels of activity, performance, or achievements expressed or implied by such forward-looking statements. Given these uncertainties, you should not place undue reliance on these forward-looking statements. Also, these forward-looking statements represent our estimates and assumptions only as of the date of this report. Except as required by law, we undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. Factors that could cause or contribute to differences in our future financial results include the cautionary statements set forth herein and in our other filings with the Securities and Exchange Commission, including those set forth under “Risk Factors” set forth in Part I, Item 1A of this Annual Report on Form 10-K. We qualify all of our forward-looking statements by these cautionary statements.

PART I

ITEM 1. *BUSINESS*

OVERVIEW

Integra LifeSciences Holdings Corporation is a leading global medical technology company innovating treatment pathways to advance patient outcomes and set new standards of surgical, neurologic and regenerative care.

Founded in 1989 with the acquisition of an engineered collagen technology platform used to repair and regenerate tissue, our common stock trades on the Nasdaq Global Select Market ("Nasdaq") under the symbol "IART." We have developed numerous product lines from this technology for applications ranging from burn and deep tissue wounds to the repair of dura mater in the brain, as well as nerves and tendons. We have expanded our base regenerative technology business to include surgical instruments, neurosurgical products and advanced wound care through global acquisitions and product development to meet the evolving needs of our customers and enhance patient care.

Integra products are sold in more than 130 countries through a direct sales force as well as distributors and wholesalers. We manufacture and sell medical technologies and products in two reportable business segments: Codman Specialty Surgical ("CSS") and Tissue Technologies ("TT"). The CSS segment, which represents approximately two-thirds of our total revenue, consists of market-leading technologies and instrumentation used for a wide range of specialties, such as neurosurgery, neurocritical care and otolaryngology. We are the world leader in neurosurgery and one of the top three providers in instruments used in precision, specialty, and general surgical procedures. Our TT segment generates about one-third of our overall revenue and focuses on three main areas: complex wound surgery, surgical reconstruction, and peripheral nerve repair.

We have key manufacturing and research facilities located in California, Indiana, Maryland, Massachusetts, New Jersey, Ohio, Puerto Rico, Tennessee, Utah, France, Germany, Ireland and Switzerland. We source most of our handheld surgical instruments and dural sealant products through specialized third-party vendors.

Vision

We aspire to continue to be a worldwide leader in neurosurgery and reconstructive surgery with a portfolio of leading businesses that delivers outstanding customer experiences through innovation, execution and teamwork to positively impact the lives of millions of patients and their families.

Strategy

Following the completion of our strategic refresh in 2023, we refocused our strategies around five pillars. Of these five pillars, we have identified three core growth drivers: (1) innovating for outcomes, (2) growing internationally, and (3) broadening our impact on care pathways. Our execution of the core growth drivers is enabled by two key levers: (4) driving operational and customer excellence and (5) cultivating a high-performance culture. As outlined in greater detail below, we believe these five pillars will enable us to realize and advance our integrated growth strategy.

To this end, our executive leadership team has established the following key priorities aligned to the following five pillars:

Innovating for Outcomes. An important part of Integra's growth strategy is introducing new products to strengthen and expand our portfolio, including via acquisitions. For example, we entered into a stock purchase agreement to acquire Acclarent, Inc. ("Acclarent") from Ethicon, Inc., a subsidiary of Johnson & Johnson in December 2023. Acclarent is an innovator and market leader in ear, nose and throat ("ENT") procedures and we believe that the acquisition of Acclarent will provide Integra with the opportunity to become a leading provider of ENT products and technologies. Furthermore, we believe that, owing to the ENT segment being an anatomical adjacency to neurosurgery, the acquisition will allow Integra to deliver future innovation both within the ENT segment and across our other CSS technology platforms. Additionally, we seek clinical evidence to support regulatory approval and strong reimbursement of our product portfolio around the world, including new indications for existing technologies. For example, in 2021, we filed a pre-market approval ("PMA") application for a specific indication for Surgimend® in the use of post-mastectomy breast reconstruction. In 2022, we acquired SIA, which is also pursuing a pre-market approval for DuraSorb for use in implant-based breast reconstruction ("IBBR"), and in June 2023 we completed enrollment in the DuraSorb U.S. IDE clinical study for two-stage breast reconstruction; the primary follow-up period is one year after device implantation. We hope to obtain FDA approvals for both products in 2025. We also continued to advance the development of pioneering neurosurgical technologies with the expansion of our product offerings. In 2023 we launched the CUSA® Clarity Tips for use in surgical procedures requiring the controlled fragmentation, emulsification and aspiration of bone as well as in laparoscopic liver surgery.

Growing Internationally. Over the years, we have been significantly expanding our global footprint through investments in our commercial organization, the expansion and development of international markets and new product introductions. As part of our In-China-For-China strategy, we continue the build out of our assembly capabilities in our new facility in Suzhou, China. Several new products were introduced in select international markets in 2023, including MicroMatrix® and Certas Plus® Programmable Valve which were launched in Europe, and CUSA Clarity Laparoscopic tip which was launched in Australia,

New Zealand, Japan, Canada, South Africa and Israel. In addition, DuraGen Secure, received approval in Japan, while DuraGen Plus, an absorbable and sutureless collagen onlay indicated as a dura substitute for the repair of dura mater, was approved in China.

Broadening Impact on Care Pathways. We seek ways to develop products and technologies that impact the lives of patients, starting with the journey that a patient takes from diagnosis and treatment planning to surgery and postoperative care. We are well-established in acute care in the hospital setting and continue to leverage that strong position to grow in this segment and shape treatment pathways into preoperative care and additional sites of care.

Driving Operations and Customer Excellence. We have been making investments to build more responsive and scalable processes, enhance the reliability of our supply chain, and drive productivity initiatives to further supply and lower costs. Additionally, we continue to invest in technologies, systems and processes to enhance the customer experience. In 2023, we continued to invest in our capacity expansion. This includes ongoing projects of transferring our Boston manufacturing to a new location in Braintree, Massachusetts., validating manufacturing processes in our manufacturing facility in Plainsboro, New Jersey and increasing cleanroom capacity in our Memphis, Tennessee location.

Cultivating a High-Performance Culture. In seeking to sustain a culture of excellence and accountability, we have focused on employee empowerment and agility and building a diverse and inclusive workplace. These efforts resulted in our being named in several best workplace lists globally in 2023. Additionally, we have been making further strides in advancing our environmental, social and governance ("ESG") agenda to drive sustainability across the organization and recently published our second annual ESG report in the third quarter of 2023. For more information on our ESG strategy, goals, performance, and achievements, please visit “Our Company—ESG Report” at https://www.integralife.com/esg-report. Information on our website is not incorporated by reference herein and is not part of this Annual Report on Form 10-K.

BUSINESS SEGMENTS

We currently manufacture and sell our medical technologies and products in the following two reportable business segments: Codman Specialty Surgical and Tissue Technologies. We include financial information regarding our reportable business segments and certain geographic information under "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" and Note 16, *Segment and Geographic Information* to the Notes to Consolidated Financial Statements (Part IV, Item 15 of this Annual Report on Form 10-K).

Codman Specialty Surgical

Our CSS segment offers global, neurosurgery market-leading technologies, brands and instrumentation. The product portfolio represents a continuum of care from pre-operative, to the neurosurgery operating room, to the neuro-critical care unit and post care for both adult and pediatric patients suffering from brain tumors, brain injury, cerebrospinal fluid pressure complications and other neurological conditions. We offer leading technologies in dural repair, ultrasonic tissue ablation, intracranial pressure ("ICP") monitoring, hydrocephalus management, and cranial stabilization systems, while providing a rich research and development pipeline for growth.

Rounding out the portfolio is a catalog of surgical headlamps, surgical instrumentation, as well as after-market service. With thousands of surgical instrument products, including specialty surgical instruments, we call on the central sterile processing unit of hospitals and acute care surgical centers. Additionally, through a strong U.S. distribution model, we can serve the needs of hundreds of medical offices.

Our global commercial network includes clinical specialists, a large direct global sales force and strategic partnerships and distributors that serve hospitals, integrated health networks, group purchasing organizations, clinicians, surgery centers and health care providers. Outside the U.S., we have a combination of direct and indirect sales channels in international markets to sell certain product lines.

Tissue Technologies

Our TT segment focuses on three main areas: complex wound surgery, surgical reconstruction, and peripheral nerve repair and consists of five unique regenerative technology areas - highly engineered bovine collagen, bovine dermis, porcine urinary bladder, human amniotic tissue, and resorbable synthetic mesh. This broad regenerative platform, which includes multiple leading brands such as Integra® Dermal Matrices, AmnioExcel®, SurgiMend®, MicroMatrix® and NeuraGen®, primarily addresses the needs of plastic, reconstructive and general surgeons focused on the treatment of acute wounds, such as burns, chronic wounds, including diabetic foot ulcers, and surgical tissue repair, such as hernia, tendon, peripheral nerve repair and protection. Following our acquisition of SIA in 2022, we have also sought to expand our IBBR product offerings and in June 2023 we completed enrollment in the DuraSorb U.S. IDE clinical study for two-stage breast reconstruction.

We have a specialized sales organization composed of directly employed sales representatives, as well as specialty distributors, organized based upon their call point. Our wound reconstruction sales representatives call on surgeons doing procedures in limb salvage, trauma, wound reconstruction and burns, and chronic wounds primarily in the inpatient wound care clinic setting. We

also have a dedicated surgical reconstruction sales team focused on plastic and reconstructive surgery and hernia procedures with differentiated products. Finally, we have a distributor network focused on biologics. Outside the U.S., we have a combination of direct and indirect sales channels in international markets to sell certain product lines.

This business segment also includes private-label sales of a broad set of our regenerative and wound care technologies. Our customers are other medical technology companies that sell to end markets primarily in spine, surgical and wound care.

COMPETITION

The healthcare industry is highly competitive and characterized by continual change and improvements in technology. This is particularly the case in the market segments in which we operate. A number of companies have developed or are expected to develop products that compete or will compete with our products. Many of these competitors offer a broader product portfolio and have greater brand recognition than we do, which may make these competitors more attractive to hospitals, group purchasing organizations, laboratories, physicians and other potential customers. Competitors may develop superior products or products of similar quality for sale at the same or lower prices. Moreover, our products could be rendered obsolete by changes to industry standards or guidelines or advances in technology. We can give no assurance that we will be able to compete successfully with existing or new competitors

Our competitors for CSS include divisions within Medtronic, Inc., Stryker Corporation, Steris PLC, and B. Braun Medical, Inc. In addition, we compete with many smaller specialized companies and larger companies that do not otherwise focus on the offerings of Codman Specialty Surgical technologies. We rely on the depth and breadth of our sales and marketing organization, our innovative technologies, and our procurement and manufacturing operations to maintain our competitive position.

Our competitors for TT include Smith & Nephew plc, Organogenesis Holdings Inc., MiMedx Group, Inc., Allergan PLC, Becton Dickinson and Company, and Axogen, Inc. We compete with additional companies who partially participate in soft tissue reconstruction of complex wounds, peripheral nerve repair and surgical reconstruction. In addition, our products also compete against medical practices that treat a condition without using a medical device or any particular product, such as medical practices that utilize autograft tissue instead of our dermal regeneration products, duraplasty products and nerve repair products. Depending on the product line, we compete based on our products' features, strength of our sales force or distributors, sophistication of our technology and cost effectiveness of our solution.

We believe that the success of our products depends on our ability to differentiate ourselves and to demonstrate that our products deliver the clinical and operational attributes that are most important and cost-effective to customers. These attributes include, but are not limited to, superiority in efficacy, ease of use, reliability, accuracy, quality and cost. We believe our continued success depends in large part upon our ability to invest in product enhancements and technologies that will help us distinguish our product portfolio from our competitors.

RESEARCH AND DEVELOPMENT STRATEGY

Our research and development activities focus on identifying unmet surgical needs and addressing those needs with innovative solutions and products. The markets in which we participate are characterized by rapid technological change, frequent product introductions and evolving customer requirements. Investment in research and development is critical to driving our future growth. Our research and development efforts are focused on the further development and improvement of our existing products, the design and development of new innovative medical technologies and regulatory compliance across all our business segments. We apply our core competency in regenerative technology to innovate products for neurosurgical, wound applications, plastic surgery, and reconstructive surgery and we have extensive R&D development programs for our core platforms of electromechanical technologies. Additionally, we conduct products and clinical studies to generate efficacy and health economic evidence.

Regenerative Technologies. We were the first company to receive an FDA claim for regeneration of dermal tissue and are a world leader in regenerative technology. Our regenerative technology development program applies our expertise in bioengineering to a range of biomaterials including natural materials such as purified collagen, intact human or animal tissues, honey as well as resorbable synthetic polymers with our DuraSorb and DuraSeal product lines. These unique product designs are used for neurosurgical and reconstructive surgical applications, as well as dermal regeneration, including the healing of chronic and acute wounds, tendon and nerve repair. Our regenerative technology platform includes our legacy Integra® Dermal Regeneration Template ("IDRT") products and complementary technologies that we have acquired. Our collagen manufacturing capability, combined with our history of innovation, including our launch of NeuraGen 3D, provides us with strong platform technologies for multiple indications.

In the second quarter of 2023, after consultation with the FDA, The Company initiated a voluntary global recall of all products manufactured at the Boston facility, including Primatrix®, Surgimend®, Revize™, and TissueMend™, distributed between March 1, 2018 and May 22, 2023. See Item 1A. Risk Factors, under the heading Risks Related to our Regulatory Environment and under Item 7. General Management's Discussion and Analysis of Financial Condition and Results of Operations - FDA Matters of this Annual Report on Form 10-K for further discussion.

In the third quarter of 2021, we filed a PMA application for a specific indication for Surgimend® in the use of post-mastectomy breast reconstruction. In 2022, we acquired SIA, which is also PMA for DuraSorb with IBBR, and in June 2023 we completed enrollment in the DuraSorb U.S. IDE clinical study for two-stage breast reconstruction; the primary follow-up period is one year after device implantation. By offering two distinct product solutions, we believe we have the opportunity to build a leading position in the IBBR market. We hope to obtain FDA approvals in 2025.

Additionally, in 2022 we launched NeuraGen 3D Nerve Guide Matrix, a resorbable implant for repair of peripheral nerve discontinuities and engineered to create an optimized environment for nerve regeneration. Following the completion of design control activities in 2022, we launched both Cytal and MicroMatrix in Europe in 2023. In 2023, the Company received 510(k) clearance from the FDA for MicroMatrix® Flex.

Electromechanical Technologies and Instrumentation. The CSS business consists of a broad portfolio of market-leading brands, such as Codman®, DuraGen®, DuraSeal®, CUSA®, Mayfield®,Bactiseal®, and Certas® Plus,which are used for the management of multiple disease states, including brain tumors, traumatic brain injury, hydrocephalus and other neurological conditions. The growth in this business in recent years has been fueled by geographic expansion and new product registrations in markets, such as China, Japan, and Europe, which we expect to continue in the near-to-long term. Because our electromechanical products and instruments address significant needs in surgical procedures and limit uncertainty for surgeons, we continue to invest in registrations, clearances, and approvals for new indications and next generation improvements to our market-leading products. We have several active programs focused on life cycle management and innovation for capital and disposable products in our portfolio. Our product development efforts are focused on core clinical applications in cerebrospinal fluid ("CSF") management, neuro-critical care monitoring, minimally invasive instruments and electrosurgery and ultrasonic medical technologies, as well as our ambition to transform the standard of care in neurosurgery with product advancements in minimally invasive surgery ("MIS") and the surgical management of intracerebral hemorrhage ("ICH"). Our lighting franchise is among the most dynamic in the industry.

We are focused on the development of core clinical applications in our electromechanical technologies portfolio. We continue to update our CUSA Clarity platform by incorporating new ultrasonic handpiece and integrated electrosurgical capabilities. In 2022, we made progress to several enhancements to our CUSA Clarity Tissue Ablation System. The extended laparoscopic tip was launched in the U.S. to enhance laparoscopic liver procedures. In addition, a single-sided bone tip received 510(k) clearance from the FDA. Commercial launch was completed successfully in early 2023. In August 2023, we launched a modified 23 kHz CUSA Electrosurgery Module (CEM) for Clarity handpieces that can be used with additional electrosurgery generators. We continue to work with several instrument partners to bring new surgical instrument platforms to the market.

Throughout 2023 we also continued to advance the early-stage technology platforms we acquired in 2019. Through the acquisition of Arkis Biosciences, Inc. ("Arkis") we added a platform technology, CerebroFlo® external ventricular drainage ("EVD"), catheter with Endexo® technology, a permanent additive designed to reduce the potential for catheter obstruction due to thrombus formation. The CerebroFlo EVD catheter has demonstrated an average of 99% less thrombus accumulation onto its surface, in vitro, compared to a market leading EVD catheter. Our work to combine our Bactiseal® antimicrobial technology with the Endexo anti-occlusive technology continues to progress for both a silicone-based hydrocephalus and EVD project.

Throughout 2023, we continued to advance our innovation from the Rebound Therapeutics Corporation ("Rebound Therapeutics"), which was acquired in 2019. Rebound Therapeutics specializes in a single-use medical device, known as the Aurora Surgiscope, which is the only tubular retractor system designed for cranial surgery with an integrated access channel, camera and lighting. The 9mm Surgiscope received 510(k) clearance from the FDA in the fourth quarter of 2023.

In the third quarter of 2021, we launched our CereLink ICP Monitor System in the U.S. and Europe and continued the global rollout in the first half of 2022. On August 18, 2022, the Company, after consultation with the FDA and other regulatory authorities outside of the United States, initiated an immediate voluntary global product removal of all CereLink® intracranial pressure monitors. We believe that the out-of-range readings are principally caused by a combined interaction of electrical noise (originating from sources such as electrical components in the device, other devices set up near the CereLink Monitor, and the hospital power grid) and an electrical potential difference between the patient and monitor. We submitted a traditional 510(k) submission to the FDA on September 15, 2023 as a result of customer reports about monitors whose pressure readings were out of range. We have received 510(k) clearance from the FDA on February 4th, 2024. We plan to resume shipments of CereLink monitors in the U.S. in the first quarter of 2024. Shipments resumed in international markets with a limited release in the third quarter of 2023. See Item 1A. Risk Factors, under the heading Risks Related to our Regulatory Environment and under Item 7. General Management's Discussion and Analysis of Financial Condition and Results of Operations - FDA Matters of this Annual Report on Form 10-K for further discussion.

MANUFACTURE AND AVAILABILITY OF RAW MATERIALS

We manufacture products at manufacturing facilities located in various countries throughout the world. We purchase many of the components and raw materials used in manufacturing our products from numerous suppliers in various countries.

In general, raw materials essential to our businesses are readily available from multiple sources. For reasons of quality assurance, availability, or cost effectiveness, certain components and raw materials are available only from one or a limited number of suppliers. We have established long-term supply contracts with many of our suppliers and our practice is to maintain sufficient inventory of components so that our production will not be significantly disrupted even if a particular component or material is not available for a period of time. Due to the high standards and FDA requirements applicable to manufacturing our products, such as the FDA's Quality System Regulation and Good Manufacturing Practices, we may not be able to quickly establish additional or replacement sources for certain components or materials. Some of our manufacturing operations are located outside of the U.S., including in Puerto Rico, Switzerland, Ireland and France. Those manufacturing operations are also subject to additional challenges and risks associated with international operations described under the caption “Risk Factors” set forth in Part I, Item 1A of this Annual Report on Form 10-K. In the event we are unable to obtain sufficient quantities of raw materials or components on commercially reasonable terms or in a timely manner, our ability to manufacture our products on a timely and cost-competitive basis may be compromised, which may have a material adverse effect on our business, financial condition and results of operations.

Certain of our products, including but not limited to our dermal regeneration products, duraplasty products, wound care products, and nerve and tendon repair products, contain material derived from bovine tissue. We take great care to provide products that are safe and free of agents that can cause disease. In particular, the collagen used in the products that we manufacture is derived from the deep flexor tendon of cattle less than 24-months old from New Zealand, a country that has never had a reported case of bovine spongiform encephalopathy ("BSE") (otherwise known as mad cow disease), from the U.S. or from fetal bovine dermis. The World Health Organization classifies different types of cattle tissue for relative risk of BSE transmission. Deep flexor tendon and fetal bovine skin are in the lowest-risk category for BSE transmission, and therefore considered to have a negligible risk of containing the agent that causes BSE.

INTELLECTUAL PROPERTY

We seek patent and trademark protection for our key technology, products and product improvements, both in the U.S. and in selected foreign countries. When determined appropriate, we have enforced and plan to continue to enforce and defend our patent and trademark rights. In general, however, we do not rely solely on our patent and trademark estate to provide us with any significant competitive advantages as it relates to our existing product lines. We also rely upon trade secrets and continuing technological innovations to develop and maintain our competitive position. In an effort to protect our trade secrets, we have a policy requiring our employees, consultants and advisors to execute proprietary information and invention assignment agreements upon commencement of employment or consulting relationships with us. These agreements also provide that all confidential information developed or made known to the individual during the course of their relationship with us must be kept confidential, except in specified circumstances.

AccuDrain®, AmnioExcel®, Aquasonic®, Auragen®, Aurora® Surgiscope®, Bactiseal®, BioDFence®, BioDOptix®, Brainet®, Budde®, Buzz™, CereLink®, CerebroFlo® EVD Catheter with Endexo® Technology, Codman®, Codman Accu-Flo®, Codman Bicol®, Codman® Certas® Plus, Codman® Hakim®Programmable valve, Codman Holter®, Codman ICP Express®, Codman Microsensor®, Codman VersaTru®, Codman VPV®, Contour-Flex®, Cranioplastic®, CRW®, CRW Precision™, Ctherm™, CUSA®, Cytal®, DirectLink®, DuraGen®, DuraSeal®, DuraSorb®, Gentrix®, HeliCote®, HeliPlug®, HeliTape®, HeliMend®, Helistat®, Helitene®, Hermetic™, Hy-Tape®, Integra®, IntegraLink®, Isocool®, Jarit®, Lead-Lok™, Licox®, LimiTorr™,

Luxtec®, Mayfield®, MatriStem UBM™, MediHoney®, MicroFrance®, MicroMatrix®, Miltex®, Mischler™, MoniTorr ICP™, Natus®, NeuraGen®, NeuraWrap™, Nicolet®, Omnigraft®, Omni-Tract®, OSV II®, Padgett®, PriMatrix®, Pureflow™, Q-Snor™, Redmond™, Revize™, Ruggles®, Signacreme®, SurgiMend®, TCC-EZ®, TenoGlide®, TissueMend®, Ultra VS™, VersaTru®, Xtrasorb®, zRIP™, and the Integra logo are some of the material trademarks of Integra LifeSciences Corporation and its subsidiaries. MAYFIELD® is a registered trademark of SM USA, Inc., and is used by Integra under license.

SEASONALITY

Revenues during our fourth quarter tend to be stronger than other quarters because many hospitals increase their purchases of our products during the fourth quarter to coincide with the end of their budget cycles in the U.S. In general, our first quarter usually has lower revenues than the preceding fourth quarter, the second and third quarters have higher revenues than the first quarter, and the fourth quarter revenues are the highest in the year. The main exceptions to this pattern occur because of material acquisitions.

GOVERNMENT REGULATION AND COMPLIANCE

We are a manufacturer and marketer of medical devices and Human Tissue and Cell Based Products ("HCT/Ps") and therefore are subject to extensive regulation by the FDA, the Center for Medicare Services of the U.S. Department of Health and Human Services ("HHS"), other federal governmental agencies and, in some jurisdictions, by state and foreign governmental authorities. These regulations govern the introduction of new medical devices and HCT/Ps, the observance of certain standards with respect to the design, manufacture, testing, labeling, promotion and sales of the products, the maintenance of certain records, the ability to track devices, the reporting of potential product defects, the import and export of products, and other matters. FDA product approvals may be withdrawn or suspended if compliance with regulatory standards is not maintained or if problems occur following initial marketing.

Our business is also affected by patient and data privacy laws and government payer cost containment initiatives, as well as environmental health and safety laws and regulations.

United States Food and Drug Administration

Our products are subject to extensive regulation particularly as to safety, efficacy and adherence to FDA Quality System Regulation, and related manufacturing standards. Medical device products are subject to rigorous FDA and other governmental agency regulations in the United States and similar regulations of foreign agencies abroad. The FDA regulates the design, development, research, preclinical and clinical testing, introduction, manufacture, advertising, labeling, packaging, marketing, distribution, import and export, and record keeping for such products, in order to ensure that medical products distributed in the United States are safe and effective for their intended use. In addition, the FDA is authorized to establish special controls to provide reasonable assurance of the safety and effectiveness of most devices. Non-compliance with applicable requirements can result in import detentions, fines, civil and administrative penalties, injunctions, suspensions or losses of regulatory approvals, recall or seizure of products, operating restrictions, refusal of the government to approve product export applications or allow us to enter into supply contracts, and criminal prosecution. The regulatory process for obtaining product approvals and clearances can be onerous and costly.

Under the Federal Food, Drug and Cosmetic Act (the "FD&C Act"), authorization to commercially distribute a new medical device in the U.S. is generally obtained in one of two primary ways. The first, known as pre-market notification or the 510(k) process, requires us to demonstrate that our medical device is substantially equivalent to a legally marketed medical device. A 510(k) pre-market notification filing must contain information establishing that the device to be sold is substantially equivalent to a device commercially distributed prior to May 28, 1976 or to a device that has been determined by the FDA to be substantially equivalent. The second, more rigorous process, known as pre-market approval ("PMA") requires us to independently demonstrate that a medical device is safe and effective for its intended use. This process is generally much more time-consuming and expensive than the 510(k) process. The PMA process involves a complex and lengthy testing process that is subject to review by the FDA and may require several years to obtain. We may need to first obtain an investigational device exemption (for significant risk devices), known as an IDE, in order to conduct extensive clinical testing of the device to obtain the necessary clinical data for submission to the FDA. The FDA will approve a PMA only if after evaluating the supporting technical data it finds that the PMA contains sufficient, valid scientific evidence to assure that the device is safe and effective for its intended use(s). This approval may be granted with post-approval requirements including inspection of manufacturing facilities and/or additional patient follow-up for an indefinite period of time.

The FDA also may require a post-approval clinical study as a condition of approval. To perform clinical trials for significant risk devices in the U.S. on an unapproved product, we are required to obtain an IDE from the FDA. The FDA also may require a filing for approval prior to marketing products that are modifications of existing products or new indications for existing products. Moreover, after clearance/approval is given, if the product is shown to be hazardous or defective, the FDA and foreign regulatory agencies have the power to withdraw the clearance or approval, as the case may be, or require us to change the device, its manufacturing process or its labeling, to supply additional proof of its safety and effectiveness or to recall, repair,

replace or refund the cost of the medical device. Because we currently export medical devices manufactured in the U.S. that have not been approved by the FDA for distribution in the U.S., we are required to obtain approval/registration in the country to which we are exporting and maintain certain records relating to exports and make these available to the FDA for inspection, if required.

Human Cells, Tissues and Cellular and Tissue-Based Products

Integra, through its wholly-owned subsidiary BioD LLC ("BioD"), is involved with the recovery, processing, storage, transportation and distribution of donated amniotic tissue. The FDA has specific regulations governing HCT/Ps. An HCT/P is a product containing, or consisting of, human cells or tissue intended for transplantation into a human patient. Examples of HCTPs include bone, ligament, skin and cornea.

Some HCT/Ps fall within the definition of a biological product, medical device or drug regulated under the FD&C Act. These biologic, device or drug HCT/Ps must comply both with the requirements exclusively applicable to HCT/Ps and, in addition, with requirements applicable to biologics, devices or drugs, including premarket clearance or approval from the FDA.

Section 361 of the Public Health Service Act ("Section 361") authorizes the FDA to issue regulations to prevent the introduction, transmission or spread of communicable disease. HCT/Ps regulated as "361" HCT/Ps are subject to requirements relating to registering facilities and listing products with the FDA, screening and testing for tissue donor eligibility, and Good Tissue Practices when processing, storing, labeling, and distributing HCT/Ps, including required labeling information, stringent record keeping, and adverse event reporting.

The American Association of Tissue Banks ("AATB") has issued operating standards for tissue banking. Compliance with these standards is a requirement in order to become an AATB-accredited tissue establishment. In addition, some states have their own tissue banking regulations. We are licensed or have permits for tissue banking in California, Delaware, Illinois, Maryland, New York, Oregon, and Tennessee. In Tennessee, we are registered with the FDA Center for Biological Evaluations and Research.

Procurement of certain human organs and tissue for transplantation is subject to the restrictions of the National Organ Transplant Act, which prohibits the transfer of certain human organs, including skin and related tissue for valuable consideration, but permits the reasonable payment associated with the removal, transportation, implantation, processing, preservation, quality control and storage of human tissue and skin. BioD is a registered Tissue Bank and is involved with the recovery, storage and transportation of donated human amniotic tissue.

Medical Device Regulations

The FDA requires that a manufacturer obtain 510(k) clearance or a PMA for a variety of reasons, such as introducing a new medical device or new indication for use of an existing medical device, before introducing it into the U.S. market. The type of marketing authorization is generally linked to the classification of the device. The FDA classifies medical devices into three classes based on risk. Regulatory control increases from Class I (lowest risk) to Class III (highest risk). The FDA generally must clear or approve the commercial sale of new medical devices in Classes II and III. Commercial sales of our Class II medical devices (except for Class II exempt devices) and Class III medical devices within the U.S. must be preceded by either a pre-market notification filing pursuant to Section 510(k) of the FD&C Act (Class II) or the granting of a pre-market approval, or PMA (Class III).

The process of obtaining a Section 510(k) clearance generally requires the submission of performance data and may require clinical data, which in some cases can be extensive, to demonstrate that the device is "substantially equivalent" to another device that is currently marketed under a 510(k); a device that is referred to as "predicate device." As a result, FDA clearance requirements may extend the development process for a considerable length of time. In the case of a PMA, the FDA may require additional review by an advisory panel, which can further lengthen the process. The PMA process, which is reserved for new devices that are not substantially equivalent to any predicate device and for high-risk devices (i.e., Class III devices) that are used to support or sustain human life or which present a potential, unreasonable risk of illness or injury, may take several years and requires the submission of extensive performance and clinical information.

Medical devices can be marketed only for the indications for which they are cleared or approved. After a device has received 510(k) clearance for a specific intended use, any change or modification that significantly affects its safety or effectiveness, such as a significant change in the design, materials, method of manufacture or intended use, may require a new 510(k) clearance or PMA approval and payment of an FDA user fee. The determination as to whether or not a modification could significantly affect the device's safety or effectiveness is initially left to the manufacturer using available FDA guidance; however, the FDA may review this determination to evaluate the regulatory status of the modified product at any time and may require the manufacturer to cease marketing and recall the modified device until 510(k) clearance or PMA approval is obtained. The manufacturer may also be subject to significant regulatory fines or penalties.

We also are required to register with the FDA as a medical device manufacturer and any devices we manufacture and distribute pursuant to clearance or approval by the FDA are subject to pervasive and continuing regulation by the FDA and certain state agencies. These include product listing and establishment registration requirements, which help facilitate FDA inspections and other regulatory actions, and our manufacturing sites are subject to periodic inspection by the FDA for compliance with the FDA's Quality System Regulations. These regulations require that we manufacture our products and maintain our documents in a prescribed manner with respect to design, manufacturing, testing and control activities. Further, we are required to comply with various FDA requirements and other legal requirements for labeling and promotion. FDA regulates unclassified devices via the 510(k) process and has the authority to classify these devices and/or require Special Controls, additional testing and submission of a new 510(k) as part of the classification process for unclassified devices that are currently on the market as 510(k) cleared products. If the FDA believes that a company is not in compliance with applicable regulations, it may issue a warning letter, institute proceedings to detain or seize products, issue a recall order, impose operating restrictions, enjoin future violations and assess civil penalties against that company, its officers or its employees and may recommend criminal prosecution to the U.S. Department of Justice. The majority of Integra manufacturing facilities participate in the Medical Device Single Audit Program and are audited annually for compliance with the Quality System for US FDA, Canada, Australia, Brazil, and Japan.

Medical device regulations also are in effect in many of the countries in which we do business outside the U.S. In the European Economic Area ("EEA"), which is comprised of the 27 member states of the European Union (the "EU") plus Norway, Iceland and Liechtenstein, medical devices need to comply with specific requirements. These requirements were previously known as "Essential Requirements" under the former EU Medical Devices Directive (Council Directive 93/42/EEC, or MDD) and are now defined "General Safety and Performance Requirements (GSPR)" under the new EU Medical Devices Regulation (Regulation (EU) 2017/745, or "EU MDR"). Although the requirements set forth in the EU MDR are generally consistent with those laid out in the MDD (with a few exceptions), the EU MDR is intended, among other things, to establish a uniform, transparent, predictable and sustainable regulatory framework across the EEA for medical devices and ensure a high level of safety and health while supporting innovation. These laws range from comprehensive medical device approval and Quality System requirements for some or all of our medical device products to simpler requests for product data or certifications. Under the MDD, medical devices must meet the MDD standards and receive CE Mark Certification prior to marketing in the EEA. Although we continue to transition our certification profile to meet the new EU MDR requirements, these stricter regulations set forth in the EU MDR may pose additional challenges for Integra to continue marketing products in the EU as these regulations come into force. See “Item 1A. Risk Factors - *We are subject to stringent domestic and foreig*n medical device regulations and oversight and any adverse action may adversely affect our ability to compete in the marketplace and our financial condition and business operations” of this Annual Report on Form 10-K.

CE Mark Certification requires a comprehensive quality system program, technical documentation, clinical evaluation and data on the product which are then reviewed, by a Notified Body. A Notified Body is an organization designated by the national governments of the EU member states to make independent judgments about whether a product complies with the requirements established by each CE marking directive. The MDD, MDR, ISO 9000 series and ISO 13485 are recognized international quality standards that are designed to ensure that we develop and manufacture quality medical devices. Other countries are also instituting regulations regarding medical devices or interpreting and enforcing existing regulations more strictly. Compliance with these regulations requires extensive documentation and clinical reports for our products, revisions to labeling, and other requirements such as facility inspections to comply with the registration requirements. A recognized Notified Body audits our facilities annually to verify our compliance with the ISO 13485 Quality System standard.

Certain countries, as well as the EU, have issued regulations that govern products that contain materials derived from animal sources. Regulatory authorities are particularly concerned with materials infected with the agent that causes BSE. These regulations affect our dermal regeneration products, duraplasty products, hernia repair products, biomaterial products for the spine, nerve and tendon repair products and certain other products, all of which contain material derived from bovine tissue. Although we take great care to provide that our products are safe and free of agents that can cause disease, products that contain materials derived from animals, including our products, may become subject to additional regulation, or even be banned in certain countries, because of concern over the potential for prion transmission. Significant new regulations, a ban of our products, or a movement away from bovine-derived products because of an outbreak of BSE could have a material, adverse effect on our current business or our ability to expand our business. See “Item 1A. Risk Factors – *Risks Related to our Regulatory Environment*" of this Annual Report on Form 10-K.

Postmarket Requirements. After a device is cleared or approved for commercial distribution, numerous regulatory requirements apply. These include the FDA Quality System Regulations which cover the procedures and documentation of the design, testing, production, control, quality assurance, labeling, packaging, sterilization, storage and shipping of medical devices; the FDA's general prohibition against promoting products for unapproved or 'off-label' uses; the Medical Device Reporting regulation, which requires that manufacturers report to the FDA if their device 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; and the Reports of Corrections and Removals regulation, which require manufacturers to report recalls and field corrective actions

to the FDA if initiated to reduce a risk to health posed by the device or to remedy a violation of the FD&C Act. Postmarket requirements are also followed globally where our products are registered and approved. These foreign jurisdictions have similar requirements to the FDA which include reporting requirements such as adverse events and recalls.

Regulations Governing Reimbursement

Market acceptance of our medical products in the U.S. and other countries is dependent upon the purchasing and procurement practices of our customers and patient need for our products and procedures and, the coverage and reimbursement of patients' medical expenses by government healthcare programs, private insurers or other healthcare payors. The delivery of our devices is subject to regulation by the HHS and comparable state and non-U.S. agencies responsible for reimbursement and regulation of healthcare items and services. Healthcare providers that purchase medical devices generally rely on third-party payors, including, in the U.S., the Medicare and Medicaid programs and private payors, such as indemnity insurers, employer group health insurance programs and managed care plans, to reimburse all or part of the cost of the products. As a result, demand for our products is and will continue to be dependent in part on the coverage and reimbursement policies of these payors. The manner in which reimbursement is sought and obtained varies based upon the type of payor involved and the setting in which the product is furnished and utilized. Reimbursement from Medicare, Medicaid and other third-party payors may be subject to periodic adjustments as a result of legislative, regulatory and policy changes, as well as budgetary pressures. Possible reductions in, or eliminations of, coverage or reimbursement by third-party payors, or denial of, or provision of uneconomical reimbursement for new products may affect our customers' revenue and ability to purchase our products. Any changes in the healthcare regulatory, payment or enforcement landscape relative to our customers' healthcare services have the potential to significantly affect our operations and revenue.

Implementation of legislative or regulatory reforms to reimbursement systems, including price regulation, competitive bidding and tendering, coverage and payment policies, comparative effectiveness of therapies, technology assessments and managed-care arrangements, or adverse decisions relating to our products by administrators of these systems in coverage or reimbursement, could significantly reduce reimbursement or result in the denial of coverage, which could have an impact on the acceptance of and demand for our products and the prices that our customers are willing to pay for them.

Other regulations

Anti-Bribery Laws. In the U.S., we are subject to laws and regulations pertaining to healthcare fraud and abuse, including anti-kickback laws and physician self-referral laws that regulate the means by which companies in the health care industry may market their products to hospitals and health care professionals and may compete by discounting the prices of their products. Similar anti-bribery laws exist in many of the countries in which we sell our products outside the U.S., as well as the United States Foreign Corrupt Practices Act (the "FCPA") which addresses the activities of U.S. companies in foreign markets. Our products also are subject to regulation regarding reimbursement, and U.S. healthcare laws apply when a customer submits a claim for a product that is reimbursed under a federally funded healthcare program. These global laws require that we exercise care in designing our sales and marketing practices, including interactions with healthcare professionals, and customer discount arrangements. See "Item 1A. Risk Factors – *We are exposed to a variety of risks relating to our international sales and operations*" of this Annual Report on Form 10-K for further details.

Import-export. Our international operations subject us to laws regarding sanctioned countries, entities and persons, customs, and import-export. Among other things, these laws restrict, and in some cases can prevent, U.S. companies from directly or indirectly selling goods, technology or services to people or entities in certain countries. In addition, these laws require that we exercise care in our business dealings with entities in and from foreign countries. In addition to our need to comply with such regulations in connection with our direct activities, we also sell and provide goods, technology and services to agents, representatives and distributors who may export such items to customers and end-users. If we, or the third parties through which we do business, are not in compliance with applicable import, export control or economic sanctions laws and regulations, we may be subject to civil or criminal enforcement action, and varying degrees of liability. Such actions may disrupt or delay sales of our products or services or result in restrictions on our distribution and sales of products or services that may materially impact our business

Environmental Health and Safety. Our research, development and manufacturing processes involve the controlled use of certain hazardous materials. We are subject to country-specific, federal, state and local laws and regulations governing the use, manufacture, storage, handling and disposal of these materials and certain waste products. We believe that our environmental, health and safety procedures for handling and disposing of these materials comply with the standards prescribed by the controlling laws and regulations. However, risk of accidental releases or injury from these materials is possible. These risks are managed to minimize or eliminate associated business impacts. In the event of this type of accident, we could be held liable for damages and face a liability that could exceed our resources. We could be subject to a regulatory shutdown of a facility that could prevent the distribution and sale of products manufactured there for a significant period of time, and we could suffer a casualty loss that could require a shutdown of the facility in order to repair it, any of which could have a material, adverse effect on our business. Although we continuously strive to maintain full compliance with respect to all applicable global

environmental, health and safety laws and regulations, we could incur substantial costs to fully comply with future laws and regulations, and our operations, business or assets may be negatively affected. Furthermore, global environmental, health and safety compliance is an ongoing process. We have compliance procedures in place for compliance with Employee Health & Safety laws, driven by a centrally led organizational structure that ensures proper implementation, which is essential to our overall business objectives.

In addition, we are subject to numerous federal, state, foreign and local laws relating to safe working conditions, environmental protection and fire hazard control, among others. We may be required to incur significant costs to comply with these laws and regulations in the future and complying with these laws may result in a material adverse effect upon our business, financial condition and results of operations.

Data Privacy and Cybersecurity Laws and Regulations. As a business with a significant global footprint, compliance with evolving regulations and standards in data privacy and cybersecurity (relating to the confidentiality and security of our information technology systems, products such as medical devices, and other services provided by us) may result in increased costs, lower revenue, new complexities in compliance, new challenges for competition, and the threat of increased regulatory enforcement activity. Our business relies on the secure electronic transmission, storage and hosting of sensitive information, including personal information, financial information, intellectual property, and other sensitive information related to our customers and workforce.

For example, in the U.S., the collection, maintenance, protection, use, transmission, disclosure and disposal of certain personal information and the security of medical devices are regulated at the U.S. federal and state, and industry levels. U.S. federal and state laws protect the confidentiality of certain patient health information, including patient medical records, and restrict the use and disclosure of patient health information by health care providers. For example, in the U.S. we are obligated to comply with the requirements of the Health Insurance and Portability Act of 1996, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 (collectively, "HIPPA"). Under HIPAA, the HHS has issued regulations, including the HIPAA Privacy, Security and Breach Notification Rules, to protect the privacy and security of protected health information used or disclosed by covered entities including health care providers and their business associates, as well as covered subcontractors. HIPAA also regulates standardization of data content, codes and formats used in health care transactions and standardization of identifiers for health plans and providers. Penalties for violations of HIPAA regulations include significant civil and criminal penalties for each violation. In addition, the FDA has issued guidance advising manufacturers to take cybersecurity risks into account in product design for connected medical devices and systems, to assure that appropriate safeguards are in place to reduce the risk of unauthorized access or modification to medical devices that contain software and reduce the risk of introducing threats into hospital systems that are connected to such devices. The FDA also issued guidance on post market management of cyber security in medical devices.

Outside the U.S., we are impacted by the privacy and data security requirements at the international, national and regional level, and on an industry specific basis. Legal requirements in these countries relating to the collection, storage, handling and transfer of personal data and, potentially, intellectual property continue to evolve with increasingly strict enforcement regimes. In Europe, for example, we are subject to EU General Data Protection Regulation ("GDPR") which requires member states to impose minimum restrictions on the collection, use and transfer of personal data and includes, among other things, a requirement for prompt notice of data breaches to data subjects and supervisory authorities in certain circumstances and significant fines for non-compliance. The GDPR also requires companies processing personal data of individuals residing in the EU to comply with EU privacy and data protection rules.

Please refer to "Item 1A. Risk Factors – *Failure to comply with laws relating to the confidentiality of sensitive personal information or standards related to the transmission of electronic health data, may require us to make significant changes to our products, or incur penalties or other liabilities*" of this Annual Report on Form 10-K for additional discussion of the risks accompanying compliance with data privacy and cybersecurity laws and regulations.

These laws and regulations impact the ways in which we use and manage personal data, protected health information, and our information technology systems. They also impact our ability to move, store, and access data across geographic boundaries. Compliance with these requirements may require changes in business practices, complicate our operations, and add complexity and additional management and oversight needs. They also may complicate our clinical research activities, as well as product offerings that involve transmission or use of clinical data.

HUMAN CAPITAL

Our people are our greatest asset and we view human capital management and the strength of our employees as integral to the long-term success of our business. We understand that we rely on our employees worldwide to propel our organization forward with great ideas, innovations and leadership.

Workforce Demographics

As of December 31, 2023, we had approximately 3,946 regular full and part time employees and 1383 contingent, subcontracted, and outsourced partners.

Approximately 70% of our employees are located in the United States, 21% in Europe, 2% in Latin America and Canada and 7% in Asia Pacific which includes Australia and New Zealand.

Diversity and Inclusion

A diverse workforce and an inclusive culture and work environment is a business priority and a key to our long-term success. We believe our company is stronger when we build diverse teams and leverage broad perspectives. Diverse teams meet the needs of our shareholders, customers, colleagues and communities we serve. Our commitment to diversity and inclusion starts at the top with our Board of Directors and Chief Executive Officer. At all levels of the Company, we focus on attracting, retaining, and developing our diverse talent. We have implemented initiatives to promote awareness of our corporate commitment to diversity and inclusion and employ trainings and other educational programs to inform and educate our workforce – forming communities of advocates and allies to help advance a culture of inclusion – develop inclusive leadership skills and identify and minimize the impact of unconscious bias. Through our Employee Resource Groups (ERGs), leadership councils and external partnerships, we provide opportunities for colleagues to create a welcoming culture, advance diversity and inclusion in the workplace and to provide feedback to our executive team. In fiscal year 2023, we expanded the number of Integra-sponsored ERGs to seven (7) as we believe our ERGs, which are employee-led groups, provide career and leadership development and networking opportunities for members and strengthen ties between employees of many different backgrounds, cultures, and interests.

Compensation and Benefits

Our compensation philosophy is designed to reinforce and align with our mission, business strategy, and financial needs. We invest in the physical, emotional and financial well-being of our employees through our robust compensation and benefit programs. We provide market-competitive compensation and benefits based on benchmarking surveys we conduct regularly for all position levels against relevant peer companies. Our annual and long-term incentive packages are linked directly to business and individual performance, with a balance of short- and long-term financial and strategic objectives. We have an employee stock purchase plan. Eligibility for non-salary benefits such as salary continuance, life insurance, health insurance, and similar benefits, follows local regulations and practices.

We are a pay-for-performance company committed to fair pay. All compensation decisions are made without regard to personal characteristics such as, but not limited to, gender, race, color, national or ethnic origin, age, disability, sexual orientation, gender identity or expression, genetic information, religion, or veteran status. As part of our commitment to compensation equity, Integra regularly conducts a pay equity analysis, reviewing how our organization compensates employees against external and internal data in conjunction with the role and scope of each position and making adjustments if necessary.

Talent Development and Retention

We have comprehensive and effective human capital development programs in place because we believe that the personal success of our employees is critical to the overall success of our business. To build a diverse and talented organization, we have invested in honing our recruiting and hiring processes to attract top talent and engage new hires from the very beginning of their experience at Integra.

We offer a variety of opportunities for our employees to learn and grow. Continued learning and development is a critical component of employee job satisfaction, retention, and career advancement—and ultimately, a driver of business success. We encourage and promote experiential, collaborative, and formal learning programs. Employees are also encouraged to discuss with their managers the skills, training, and experience needed to grow and develop. In addition to several skills-based trainings available (technical, sales, leadership ability) to all employees, managers may recommend external job-specific development programs to employees. These programs are paid for directly by Integra.

Employee Health and Safety:

We are committed to providing a safe environment for all employees and visitors. We rely on our environmental, health and safety management systems as well as entrusting our managers to oversee and ensure health and safety at their respective sites and foster a workplace culture to achieve that end. We implement our approach globally by our systems and support at regional and country levels from colleagues that implement proper safety protocols, identify and correct hazards, and remain safety conscious at all times. Managers are expected to enforce health and safety regulations, including compliance with applicable federal, state and local laws. Our Environmental Health and Safety ("EH&S") organizational structure incorporates both

workplace EH&S coordinators and compliance teams. We have developed an Incident Procedure Policy and General Safety Rules that guide our colleagues to improve our workplace environment, improve safety, and reduce risk and costs.

Employee Engagement and Wellbeing

We regularly seek employee feedback and sentiment about our workplace through global engagement surveys conducted on at least a bi-annual basis. After each survey is complete, we share detailed results with senior management and all employees within each department. We are incorporating employee survey results into our corporate strategies – across company, division and function levels – and have further used this employee feedback to modify corporate programs and initiatives. We believe this process enables us to monitor employee engagement and create a continuously improving, satisfying work environment for our employees.

We are committed to improving the quality of life of our employees and their families. Our health and wellbeing programs differ by country and typical benefits include comprehensive health insurance, disability coverage, workplace accommodations, parental leave and other leaves of absence based on health or life events (e.g., bereavement), employee assistance programs, fitness reimbursement, and flu shots. We also provide on-demand health advocates to help employees navigate the health insurance system, access to digital health solutions, a weight management program, smoking cessation assistance, a substance use disorder helpline, a diabetes health program and other similar programs to drive healthy behaviors and awareness.

FINANCIAL INFORMATION ABOUT GEOGRAPHIC AREAS

Financial information about our geographical areas is set forth in our financial statements Note 16, *Segment and Geographic Information*, to the Notes to Consolidated Financial Statements (Part IV, Item 15 of this Annual Report on Form 10-K).

AVAILABLE INFORMATION

We are subject to the informational requirements of the Exchange Act of 1934. In accordance with the Exchange Act, we file annual reports on Form 10K, quarterly reports on Form 10Q, current reports on Form 8-K, and any amendments to those reports, proxy statements and other information with the Securities and Exchange Commission, ("the SEC"). Our financial information may be viewed, including the information contained in this report, and other reports we file with the SEC, on the Internet, without charge as soon as reasonably practicable after we file them with the SEC, in the “SEC Filings” page of the Investor Relations section of our website at investor.integralife.com. A copy may also be obtained for any of these reports, without charge, from our Investor Relations department, 1100 Campus Road, Princeton, NJ 08540. Alternatively, reports filed may be viewed or obtained through the SEC's website at www.sec.gov.

Investors and others should note that we announce material financial information to our investors using our investor relations website (investor.integralife.com), SEC filings, press releases, public conference calls and webcasts. We use these channels as well as social media to communicate with the public about our Company, our services and other issues. It is possible that the information we post on social media could be deemed to be material information. Therefore, we encourage investors, the media, and others interested in our Company to review the information we post on the social media channels listed on our investor relations website. We have used, and intend to continue to use, our investor relations website as means of disclosing material non-public information and for complying with our disclosure obligations under Regulation FD. Additional corporate governance information, including our certificate of incorporation, bylaws, corporate governance guidelines, board committee charters, and global code of conduct, is also available on our investor relations website under the heading “Corporate Governance.” The contents of our websites are not intended to be incorporated by reference into this Annual Report on Form 10-K or in any other report or document we file with the SEC, and any references to our website are intended to be inactive textual references only.

ITEM 1A. *RISK FACTORS*

GLOBAL CHALLENGES AND MACROECONOMIC CONDITIONS

The continuing worldwide macroeconomic and geopolitical uncertainty may adversely affect our business and prospects.

Geopolitical instability and other macroeconomic factors, including inflation, supply chain disruptions, interest rate and foreign currency rate fluctuations, and volatility in the capital markets could negatively impact our business, financial condition, and results of operations. Global economic disruptions have continued to impact the global supply chain, primarily through constraints on raw materials and electronic components. Additionally, we have observed a reduction in both inbound and outbound transportation capacity as a result of port closures, shipping lane disruptions and delays since the Coronavirus Disease ("COVID-19") pandemic, all of which is causing longer lead times in receiving raw materials, as well as increased freight costs. These highly competitive and constrained supply chain conditions are increasing our cost of sales, which has and may continue to adversely impact our profitability.

Continued concerns about the systemic impact of potential long-term and wide-spread recession and geopolitical issues, including wars and acts of terrorism, have contributed to increased market volatility and diminished expectations for economic growth in the world. Our business and results of operations have been and may continue to be adversely impacted by changes in macroeconomic conditions, including inflation, rising interest rates, bank failures and the accessibility of capital markets. Uncertainty about global economic conditions may also cause decreased demand for our products and services and increased competition, which could result in lower sales volume and downward pressure on the prices for our products, longer sales cycles, and slower adoption of new technologies. A weakening of macroeconomic conditions may also adversely affect our suppliers, which could result in interruptions in supply.

Market acceptance of our medical products in the U.S. and other countries is dependent upon the medical equipment purchasing and procurement practices of our customers, patient need for our products and procedures and the reimbursement of patients' medical expenses by government healthcare programs and third-party payors. The continuing uncertainty surrounding global economic conditions and financial markets may cause the purchasers of medical equipment to decrease their procurement activities. Economic uncertainty, an increase in unemployment rates, as well as increasing health insurance premiums, co-payments and deductibles may adversely affect demand for our products and procedures. Furthermore, governments and other third-party payors around the world facing tightening budgets could move to further reduce the reimbursement rates or the scope of coverage offered, which could adversely affect sales of our products.

RISKS RELATING TO OUR BUSINESS

Our operating results may fluctuate.

Our operating results, including components of operating results such as gross margin and operating expenses, may fluctuate from time to time. Our operating results have fluctuated in the past and can be expected to do so from time to time in the future. Some of the factors that may cause these fluctuations include:

- economic conditions worldwide, which could affect the ability of hospitals and other customers to purchase our products and could result in a reduction in elective and non-reimbursed operative procedures;
- the impact of acquisitions, our ability to integrate acquisitions, and our restructuring activities including portfolio rationalization, and divestitures;
- expenditures for major initiatives, including acquired businesses and integrations thereof and restructuring;
- the timing of significant customer orders, which tend to increase in the fourth quarter coinciding with the end of budget cycles;
- increased competition for a wide range of customers across all our product lines in the markets our products are sold;
- market acceptance of our existing products, as well as products in development;
- retention of current employees and recruiting of new employees in light of market competition for talent and relevant skills;
- the timing of regulatory approvals as well as changes in country-specific regulatory requirements;
- changes in the exchange rates between the U.S. dollar and foreign currencies of countries in which we do business;
- changes in the variable interest rates of our debt instruments which could impact debt service requirements;
- potential backorders, lost sales and expenses incurred in connection with product recalls or field corrective actions;
- disruption of our operations and sales resulting from political instability, war, insurrections, extreme weather conditions, the outbreak of disease, natural disasters, or other events outside our control that damage our manufacturing, distribution, or infrastructure of those facilities, or the suppliers and service providers for those facilities;
- our ability to manufacture and ship our products efficiently or in sufficient quantities to meet sales demands;
- changes in the cost or decreases in the supply of raw materials and services, including sterilization, energy, steel and honey;
- the timing of our research and development expenditures;
- reimbursement for our products by third-party payors such as Medicare, Medicaid, private and public health insurers and foreign governmental health systems;
- risks related to epidemics or similar widespread health concerns;
- the ability to maintain existing distribution rights to and from certain third parties;
- the ability to maintain business if or when we opt to convert such business from distributors to a direct sales model;
- the ability of our commercial sales representatives to obtain sales targets in a reasonable time frame;

- the impact of changes to our sales organization, continued channel expansion, including increased specialization;
- peer-reviewed publications discussing the clinical effectiveness of the products we sell;
- inspections of our manufacturing facilities for compliance with Quality System Regulations (Good Manufacturing Practices), which could result in Form 483 observations, warning letters, injunctions or other adverse findings from the FDA or from equivalent regulatory bodies, and corrective actions, procedural changes and other actions that we determine are necessary or appropriate to address the results of those inspections, any of which may affect production and our ability to supply our customers with our products;
- changes in regulations or guidelines that impact the sales and marketing practices for products that we sell;
- the increased regulatory scrutiny of certain of our products, including products which we manufacture for others, could result in removal from the market or involve field corrective actions that could affect the marketability of our products;
- enforcement or defense of intellectual property rights;
- changes in tax laws, or their interpretations; and
- the impact of goodwill and intangible asset impairment charges if future operating results of the acquired businesses are significantly less than the results anticipated at the time of the acquisitions.

Fluctuations in our operating results, including any of the above factors, may cause the market price of our common stock to fluctuate.

The industry and market segments in which we operate are highly competitive, and we may be unable to compete effectively with other companies.

There is intense competition among medical device companies. We compete with established medical technology companies in many of our product areas. Competition also comes from early-stage companies, universities, research institutions and other non-profit entities. In certain cases, our products compete primarily against medical practices that treat a condition without using a device or any particular product, such as the medical practices that use autograft tissue instead of our dermal regeneration products, duraplasty products and nerve repair products, or that use other technologies that cost less than our products. Many of our competitors have access to greater financial, technical, research and development, marketing, manufacturing, sales, distribution, administrative, consulting and other resources than we do. Our competitors may be more effective at developing commercial products or navigating the regulatory approval process in the markets in which we operate. They may be able to gain market share by offering lower-cost products or products that enjoy better reimbursement from third-party payors and foreign governmental health systems.

Our competitive position depends on our ability to achieve market acceptance for our products, develop new products, enhance existing products, implement marketing plans, secure regulatory approval for products under development and maintain previously-obtained approvals, demonstrate clinical and economic effectiveness, obtain and maintain reimbursement coverage and funding under third-party payors and foreign governmental health systems, obtain patent protection and produce products consistently in sufficient quantities to meet demand. We may need to develop new applications for our products to remain competitive. Technological advances by one or more of our current or future competitors or their achievement of superior reimbursement from third-party payors and foreign governmental health systems could render our present or future products obsolete or uneconomical. Our future success will depend upon our ability to compete effectively against current technology as well as to respond effectively to technological advances, changes in customers' requirements or in payor or regulatory evidence requirements. Additionally, purchasing decisions of our customers may be based on clinical evidence or comparative effectiveness studies and, because of our vast array of products, we might not be able to fund the studies necessary to gain entry or maintain our position or provide the required information to compete effectively. Other companies may have more resources available to fund such studies. For example, competitors have launched and are developing products to compete with our dural repair products, regenerative skin, neuro critical care monitors and ultrasonic tissue ablation devices, among others. In the current environment of managed care, consolidation among health care providers, increased competition, and declining reimbursement rates, we have been increasingly required to compete on the basis of price. Competitive pressures could adversely affect our profitability. Given these factors, we cannot guarantee that we will be able to compete effectively or continue our level of success in the areas in which we compete.

Changes in the healthcare industry may require us to decrease the selling price for our products, may reduce the size of the market for our products, or may eliminate a market, any of which could have a negative impact on our financial performance.

Trends toward managed care, healthcare cost containment and other changes in government and private sector initiatives in the U.S. and other countries in which we do business are placing increased emphasis on the delivery of more cost-effective medical therapies that could adversely affect the sale and/or the prices of our products. For example:

- third-party payors of hospital services and hospital outpatient services, including Medicare, Medicaid, private and public health insurers and foreign governmental health systems, annually revise their payment methodologies, which can result in stricter standards for reimbursement of hospital charges for certain medical procedures or the elimination of reimbursement;
- several foreign countries have implemented reforms of their respective healthcare sectors in an effort to reduce healthcare spending, including restricting funding to only those medical technologies and procedures with proven effectiveness, increasing patient co-payments and providing for payback measures. Governmental health systems have revised and continue to consider revisions of healthcare budgets, which could result in stricter standards for implementing certain medical procedures, increased scrutiny of medical devices, and downward pricing pressure;
- Medicare, Medicaid, private and public health insurer and foreign governmental cutbacks could create downward pricing pressure on our products;
- in the U.S., Medicare and Medicaid coverage as well as commercial payor coverage determinations could reduce or eliminate reimbursement or coverage for certain of our wound matrix, amniotic, surgical reconstruction and advanced wound dressing products as well as other products in most regions, negatively affecting our market for these products, and future determinations could reduce or eliminate reimbursement or coverage for these products in other regions and could reduce or eliminate reimbursement or coverage for other products;
- there has been a consolidation among healthcare facilities and purchasers of medical devices in the U.S., some of whom prefer to limit the number of suppliers from whom they purchase medical products, and these entities may decide to stop purchasing our products or demand discounts on our prices;
- in the U.S., we are party to contracts with group purchasing organizations, which negotiate pricing for many member hospitals, require us to discount our prices for certain of our products and limit our ability to raise prices for certain of our products, particularly surgical instruments;
- there is economic pressure to contain healthcare costs in domestic and international markets, and, regardless of the consolidation discussed above, providers generally are exploring ways to cut costs by eliminating purchases or driving reductions in the prices that they pay for medical devices, implementing national and provincial tender pricing, as recently implemented in China, or increasing clinical or economic evidence thresholds for product formularies;
- there are proposed and existing laws, regulations and industry policies in domestic and international markets regulating the sales and marketing practices and the pricing and profitability of companies in the healthcare industry;
- proposed laws or regulations may permit hospitals to provide financial incentives to doctors for reducing hospital costs, will award physician efficiency, and will encourage partnerships with healthcare service and goods providers to reduce prices; and
- there have been initiatives by third-party payors and foreign governmental health systems to challenge the prices charged for medical products that could affect our ability to sell products on a competitive basis.

Any and all of the above factors could materially and adversely affect our levels of revenue and our profitability.

Our current strategy involves growth through acquisitions, which requires us to incur substantial costs and potential liabilities for which we may never realize the anticipated benefits, and also requires us to successfully integrate acquired businesses into our business operations in order to avoid our business being materially and adversely affected.

In addition to internally generated growth, our current strategy involves growth through acquisitions. Between January 1, 2021 and December 31, 2023, we have acquired two businesses at a total cost of approximately $358.4 million which amount includes our acquisition of ACell, Inc. in January 2021 for $306.9 million and our acquisition of Surgical Innovation Associates, Inc. for $51.5 million in December 2022. Both of these acquisitions added products to our complex wound management and plastic and reconstructive surgery product portfolios, respectively, and provides additional growth opportunities for our TT segment.

In December 2023, we entered into a definitive agreement to acquire Acclarent from Johnson & Johnson, for $275.0 million in cash, subject to customary purchase price adjustments, and a cash payment of $5.0 million upon the achievement of a regulatory milestone. Completion of our pending acquisition of Acclarent is conditioned upon the receipt of certain regulatory approvals, and we cannot provide assurance that these approvals will be obtained. If any conditions, including with respect to divestitures, or changes to the proposed structure of the acquisition are required to obtain these regulatory approvals, they may have the effect of jeopardizing or delaying completion of the pending acquisition or reducing the anticipated benefits of the pending acquisition. If we are required to agree to any material conditions in order to obtain any approvals required to complete the pending acquisition, the business and results of operations of our company following the closing may be adversely affected.

We may be unable to continue to implement our growth strategy and it may ultimately be unsuccessful. A significant portion of our growth in revenues has resulted from, and is expected to continue to result from, the acquisition of businesses or products complementary to our own. We engage in evaluations of potential acquisitions and are in various stages of discussion regarding possible acquisitions, certain of which, if consummated, could be significant to us. Failure to complete the Acclarent acquisition, on a timely basis or at all, could negatively impact our future business and financial results and those of the acquired business. Any new acquisition could result in material transaction expenses, increased operating, amortization and interest expenses, and possible in-process research and development charges for acquisitions that do not meet the definition of a "business," any of which could have a material, adverse effect on our operating results. Certain businesses that we acquire may not have adequate financial, disclosure, regulatory, quality or other compliance controls at the time we acquire them and could require significant expenditures to address those controls or subject us to increased risk. As we grow by acquisition, we must manage and integrate the new businesses to bring them into our systems for financial, disclosure, compliance, regulatory and quality control, realize economies of scale, and control costs. Failure to integrate acquired businesses and operations (including acquired employees and systems), retain key customers and suppliers of any acquired business or manage the cost of providing our products or price our products appropriately could preclude realization of the full benefits that we expect from there transactions. Our failure to meet the challenges involved in integrating the business in order to realize the anticipated benefits of the acquisitions could cause an interruption of, or loss of momentum in, our activities and could materially and adversely affect our results of operations. In addition, acquisitions involve other risks, including diversion of management resources otherwise available for the running of our business and the development of our business as well as risks associated with entering markets in which our marketing teams and sales force has limited experience or where experienced distribution alliances are not available. Some acquisitions may include the need for ongoing product development to occur consistent with time sensitive milestones in order for the Company to achieve its commercial projections for the acquisition. Our future profitability will depend in part upon our ability to develop our resources to adapt to these new products or business areas and to identify and enter into or maintain satisfactory distribution networks. As a result of our acquisitions of other healthcare businesses, we may be subject to the risk of unanticipated business uncertainties, regulatory and other compliance matters or legal liabilities relating to those acquired businesses for which the sellers of the acquired businesses may not indemnify us, for which we may not be able to obtain insurance (or adequate insurance), or for which the indemnification may not be sufficient to cover the ultimate liabilities. We may not be able to identify suitable acquisition candidates in the future, obtain acceptable financing or consummate any future acquisitions. Certain potential acquisitions are subject to antitrust and competition laws, which laws could impact our ability to pursue strategic acquisitions and could result in mandated divestitures. If we are unsuccessful in our acquisition strategy, we may be unable to meet our financial targets and our financial performance could be materially and adversely affected. In addition, dispositions of certain key products, technologies and other rights, including pursuant to conditions imposed on us to obtain regulatory approvals, may affect our business operations.

These risks may be heightened in cases where a substantial portion of an acquired businesses' operations, employees or customers are located outside the U.S. Any one or all of these factors could complicate the integration of acquired employees and operations, increase operating costs or lower anticipated financial performance. Many of these factors are also outside of our control. For example, following the anticipated consummation of the Acclarent acquisition, the ongoing conflict in Israel, including any escalation or expansion thereof, and the measures enacted by the Israeli and other governments in response may make it more difficult for us to both integrate Acclarent and realize the anticipated benefits of the acquisition.

Even if the operations of the businesses are integrated successfully, we may not realize the full benefits of the acquisition, including the synergies, cost savings or sales or growth opportunities that we expect. These benefits may not be achieved within the anticipated time frame, or at all. Additional unanticipated costs could be incurred in the integration of the businesses. All of these factors could cause a reduction to our earnings per share, decrease or delay the expected accretive effect of the transaction, and negatively impact the price of our common stock.

Our global business exposes us to operational and economic risks.

A significant portion of our current operations are conducted and located outside the United States, and our growth strategy involves expanding our existing foreign operations and entering into new foreign jurisdictions. We have significant manufacturing and distribution sites in North America and Europe.

Our international operations subject us to laws regarding sanctioned countries, entities and persons, customs, import-export, laws regarding transactions in foreign countries, the U.S. Foreign Corrupt Practices Act and local anti-bribery and other laws regarding interactions with healthcare professionals, and product registration requirements. Among other things, these laws restrict, and in some cases prevent, U.S. companies from directly or indirectly selling goods, technology or services to people or entities in certain countries. In addition, these laws require that we exercise care in structuring our sales and marketing practices and effecting product registrations in foreign countries.

As we seek to continue to expand and strengthen our international operations, we may experience difficulty in growing our sales in certain new markets and other international markets in which we are attempting to increase our presence due to, among other things, customer acceptance, undeveloped and/or unfamiliar distribution channels, regulatory restrictions and changes, and business knowledge of these markets.

From time to time, proposals are made to significantly change existing trade agreements and relationships between the U.S. and other countries. In recent years, the U.S. government has implemented substantial changes to U.S. trade policies, including import restrictions, increased import tariffs and changes in U.S. participation in multilateral trade agreements, such as the United States-Mexico-Canada Agreement to replace the former North American Free Trade Agreement. The ongoing global economic competition and trade tensions between the U.S. and China has resulted in the U.S. government assessing supplemental tariffs on certain goods imported from China and China's assessment of retaliatory tariffs on certain imports of U.S. goods into China. In addition, the United States has assessed or proposed supplemental tariffs and quantitative restrictions on U.S. imports of certain products from other countries as well. Owing to the complex relationships between the U.S. and such other countries, political, diplomatic, military, or other events could result in business disruptions, including increased regulatory enforcement against companies, tariffs, trade embargoes, export restrictions and the termination or modification of existing trade agreements. The imposition of such restrictions could increase the cost of the Company's products and the components and raw materials that go into making them, require the Company to change its operations and the products it offers and negatively impact consumer confidence and spending, all of which, both individually and in the aggregate, could materially and adversely affect our business, results of operations and financial condition.

The Russia-Ukraine conflict and resulting sanctions and export restrictions are creating barriers to doing business in Russia and adversely impacting global supply chains. While we have no manufacturing, distribution or direct material suppliers in the region, we are closely monitoring the potential raw material or supplier impact in both Russia and Ukraine. Materials like palladium and neon, which are both dependent on Russian supply, are part of broader semiconductor shortages in industry. Additional sanctions, export restrictions, and potential countermeasures within Russia may lead to greater uncertainty and geopolitical shifts in Asia that could cause additional adverse impacts on global supply chains and our business, results of operations, financial condition and cash flows.

Exchange rate fluctuations and foreign currency hedges could adversely affect our financial results.

We generate significant revenues outside the U.S. in multiple foreign currencies, and in U.S. dollar-denominated transactions conducted with customers who generate revenue in currencies other than the U.S. dollar. For those foreign customers who purchase our products in U.S. dollars, currency fluctuations between the U.S. dollar and the currencies in which those customers do business may have a negative impact on the demand for our products in foreign countries where the U.S. dollar has increased in value compared to the local currency.

Since we have operations based outside the U.S. and we generate revenues and incur operating expenses in multiple foreign currencies, we experience currency exchange risk with respect to those foreign currency-denominated revenues and expenses. Our most significant currency exchange risk relates to transactions conducted in Australian dollars, British pounds, Canadian dollars, Chinese yuan, Euros, Japanese yen, and Swiss francs.

We cannot predict the consolidated effects of exchange rate fluctuations upon our future operating results because of the number of currencies involved, the variability of currency exposure and the potential volatility of currency exchange rates. Although we address currency risk management through regular operating and financing activities, and, on a limited basis, through the use of derivative financial instruments, those actions may not prove to be fully effective. For a description of our use of derivative financial instruments, see Note 6, Derivative Instruments to the Notes to Consolidated Financial Statements (Part IV, Item 15 of this Annual Report on Form 10-K).

Our future financial results could be adversely affected by impairments or other charges.

We are required to test both goodwill and indefinite-lived intangible assets for impairment on an annual basis based upon a fair value approach, rather than amortizing them over time. We are also required to test goodwill and indefinite-lived intangible assets for impairment between annual tests if an event occurs such as a significant decline in revenues or cash flows for certain products, or the discount rates used in the calculations of discounted cash flows change significantly, or circumstances change that would more likely than not reduce our enterprise fair value below its book value. If such a decline, rate change or circumstance were to materialize, we may record an impairment of these intangible assets that could be material to the financial

statements. See Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations - Critical Accounting Estimates" of this Annual Report on Form 10K, and Note 7, Goodwill and Other Intangible Assets to the Notes to Consolidated Financial Statements (Part IV, Item 15 of this Annual Report on Form 10-K).

The guidance on long-lived assets requires that we assess the impairment of our long-lived assets, including finite-lived intangible assets, whenever events or changes in circumstances indicate that the carrying value may not be recoverable as measured by the sum of the expected future undiscounted cash flows.

Also, Company decisions and other economic factors relating to our trade names may occur over time. For instance, we may discontinue certain products in the future as we continue to assess the profitability of our product lines. As a result, we may need to record impairment charges or accelerate amortization on certain trade names or technology-related intangible assets in the future.

The value of a medical device business is often volatile, and the assumptions underlying our estimates made in connection with our assessments under the guidance may change as a result of that volatility or other factors outside our control and may result in impairment charges. The amount of any such impairment charges could be significant and have a material, adverse effect on our reported financial results for the period in which the charge is taken and could have an adverse effect on the market price of our securities, including the notes and the common stock into which they may be converted.

Lack of market acceptance for our products or market preference for technologies that compete with our products could reduce our revenues and profitability.

Market acceptance of our products depends on many factors, including our ability to convince prospective customers that our technology is an attractive alternative to other technologies, to manufacture products in sufficient quantities and at acceptable costs, and to supply and service sufficient quantities of our products directly or through our distribution alliances. For example, the use of autograft tissue is a well-established means for repairing the dermis, and it competes for acceptance in the market with our collagen-based wound care products. In addition, unfavorable payment amounts or adverse coverage determinations of third-party payors, including Medicare, Medicaid, private and public health insurers, and foreign governmental health systems, regarding our products or third-party determinations that favor a competitor's product over ours, could harm acceptance or continued use of our products. For example, greater market acceptance of our wound graft products may ultimately depend on our ability to demonstrate that coverage and reimbursement are available and favorable, or because they are an attractive, cost-effective alternative to other treatment options.

If there are negative events in the healthcare industry, whether real or perceived, there could be a negative impact on the industry as a whole. The industry is subject to rapid and continuous change arising from, among other things, consolidation, technological improvements, the pressure on governments, third-party payors and providers to reduce healthcare costs, and healthcare reform legislation and initiatives domestically and internationally. In addition, our future success depends, in part, on our ability to license and develop additional products. Even if we determine that a product candidate has medical benefits, the cost of commercializing, either through internal development or payments associated with licensing arrangements, could be too high to justify development and we could ultimately face competitors with more effective products and better reimbursement status that cost less and are ready for commercial introduction before our products. If we are unable to develop additional commercially viable products, our future prospects could be materially and adversely affected.

One or more of these factors could vary unpredictably, and such variations could have a material, adverse effect on our competitive position. We may not be able to adjust our contemplated plan of development to meet changing market demands.

It could be difficult to replace some of our suppliers.

Outside vendors, some of whom are sole-source suppliers, provide key components and raw materials used in the manufacture of our products. Although we believe that alternative sources for many of these components and raw materials are available, any interruption in supply of a limited or sole-source component or raw material could harm our ability to manufacture our products until a new or alternative source of supply is identified and qualified. In addition, an uncorrected defect or supplier's variation in a component or raw material, either unknown to us or incompatible with our manufacturing process, could harm our ability to manufacture products. We may not be able to find a sufficient alternative supplier in a reasonable time period, or on commercially reasonable terms, if at all, and our ability to produce and supply our products could be impaired. We believe that these factors are most likely to affect the following products that we sell:

- our collagen-based products and bovine-based products, such as the Integra Dermal Regeneration Template and wound matrix products, the DuraGen® family of products, our Absorbable Collagen Sponges, PriMatrix® and SurgiMend products;
- our products made from silicone, such as our neurosurgical shunts and drainage systems and hemodynamic shunts;

- products which use many different specialty parts, electrical components, or chemicals from numerous suppliers, such as our intracranial monitors, shunts, catheters, tissue ablation, and headlights;
- our biosynthetic products, including the DuraSeal sealant system and DuraSorb biosynthetic mesh scaffold;
- products which are amniotic tissue-based
- products which are porcine tissue-based;
- products that use medical grade leptospermum honey, such as our Medihoney products; and
- our TCC-EZ® total contact cast system products.

The availability of amniotic tissue-based products depends upon, among other factors, the availability of tissue from human donors. Access to donated amniotic tissue could also be adversely impacted by regulatory changes or evolving public perceptions of the donor process.

Additionally, many of our products require sterilization by third-party suppliers. To the extent these suppliers are unable to provide sterilization services, whether due to lack of capacity, regulatory requirements, environmental concerns such as those relating to ethylene oxide or otherwise, we may be unable to transition sterilization to other suppliers in a timely or cost effective manner, or at all, which could have an adverse impact on our operating results.

Our supply chain and our cost of goods also may be negatively impacted by unanticipated price increases due to factors such as global economic disruptions, electronic component shortages, fear of future or ongoing pandemics, inflation, including wage inflation, recessionary conditions and geopolitical events, including the wars in Ukraine and Israel, all of which are beyond our control or the control of our suppliers.

While it is our policy to maintain sufficient inventory of components so that our production will not be significantly disrupted even if a particular component or material is not available for a period of time, we remain at risk that we will not be able to qualify new components or materials quickly enough to prevent a disruption if one or more of our suppliers ceases production of important components or materials.

We may experience difficulties, delays, performance impact or unexpected costs from consolidation of facilities and transfer of manufacturing facilities.

In recent years, we consolidated several facilities or transferred manufacturing operations from third parties to our existing internal manufacturing facilities and may further undertake similar consolidations or transfers in the future in order to improve our cost structure, achieve increased operating efficiencies, and improve our competitive standing or results of operations and/or to address unfavorable economic conditions. As part of these initiatives, we may also lose favorable tax incentives or not be able to renew leases on acceptable terms. We may further reduce staff, make changes to certain capital projects, close certain production operations and abandon leases for certain facilities that will not be used in our operations. In conjunction with any actions, we will continue to make significant investments and build the framework for our future growth. We may not realize, in full or in part, the anticipated benefits and savings from these efforts because of unforeseen difficulties, delays, implementation issues or unexpected costs. If we are unable to achieve or maintain all of the resulting savings or benefits to our business or other unforeseen events occur, our business and results of operations may be adversely affected.

If any of our facilities or those of our suppliers were damaged and/or our manufacturing or business processes interrupted, we could experience lost revenues and our business could be seriously harmed.

Damage to our manufacturing, distribution, development and/or research facilities because of fire, extreme weather conditions, natural disaster, power loss, communications failure, geopolitical disruption, unauthorized entry or other events, such as a flu or other health epidemic, could significantly disrupt our operations, the operations of suppliers and critical infrastructure and delay or prevent product manufacture and shipment during the time required to repair, rebuild or replace the damaged facilities. Certain of our manufacturing facilities are located in Puerto Rico, which in the past has experienced both severe hurricanes and other natural disasters. Climate change may increase both the frequency and severity of extreme weather conditions and natural disasters and, consequently, risks to our operations and growth. Although we maintain property damage and business interruption insurance coverage on these facilities, our insurance might not cover all losses under such circumstances, and we may not be able to renew or obtain such insurance in the future on acceptable terms with adequate coverage or at reasonable costs.

Global supply constraints have and may continue to adversely affect our ability to meet customer demand, and increase our costs to manufacture, transport and warehouse a certain subset of our products. In addition, global supply constraints have resulted in increases to the costs of production of certain of our products that we may not be able to pass on to our customers. We expect these factors will continue to impact us in the future and obtaining alternative sources of raw materials and components could involve significant costs and regulatory challenges and may not be available to us on commercially reasonable terms, if at all.

We may have significant product liability exposure and our insurance may not cover all potential claims.

We are exposed to product liability and other claims if our technologies or products are alleged to have caused harm. We may not be able to obtain insurance for the potential liability on acceptable terms with adequate coverage or at reasonable costs. Any potential product liability claims could exceed the amount of our insurance coverage or may be excluded from coverage under the terms of the policy. Our insurance may not be renewed at a cost and level of coverage comparable to that then in effect.

Economic and political instability around the world could adversely affect the ability of hospitals, other customers, suppliers and distributors to access funds or otherwise have available liquidity, which could reduce orders for our products or interrupt our production or distribution or result in a reduction in elective and non-reimbursed operative procedures.

Economic and political instability around the world could adversely affect the ability of hospitals and other customers to access funds to enable them to fund their operating and capital budgets. As a result, hospitals and other customers could reduce budgets or put all or part of their budgets on hold or close their operations, which could have a negative effect on our sales, particularly the sales of capital equipment such as our ultrasonic surgical aspirators, neuro monitors and cranial stabilization products, or result in a reduction in elective and non-reimbursed procedures. The occurrence of those economic conditions could make it more difficult for us to accurately forecast and plan our future business activities and depending on their severity, could have a material, adverse effect on our business, financial condition and results of operations.

Our private label product lines depend significantly on key relationships with third parties, which we could be unable to establish and maintain.

Our private label business depends in part on entering into and maintaining long-term supply agreements with third parties. The third parties with whom we have entered into agreements might terminate these agreements for a variety of reasons, including developing other sources for the products that we supply. In addition, the voluntary global recall of all products manufactured in our Boston, Massachusetts facility ("the Boston recall") and manufacturing stoppage impacted certain of our private label products and, following the anticipated resumption of the commercialization of products manufactured at the Boston facility, we are unable to predict the effect that the Boston recall will have on our relationships for such private label products. The diminution or termination of our most important relationships could adversely affect our expectations for the growth of private label products.

RISKS RELATED TO OUR REGULATORY ENVIRONMENT

We are subject to stringent domestic and foreign medical device regulations and oversight and any adverse action may adversely affect our ability to compete in the marketplace and our financial condition and business operations.

Our medical devices and technologies, development activities and manufacturing processes are subject to extensive and rigorous regulation by numerous government agencies, including the FDA and comparable foreign agencies, as discussed in "Part 1, Item 1. Business – Government Regulation" of this Annual Report on Form 10-K. To varying degrees, each of these agencies monitors and enforces our compliance with laws and regulations governing the development, testing, manufacturing, labeling, marketing and distribution of our medical devices. We are also subject to regulations that may apply to certain of our products that are Drug/Device Combination products or are considered to be subject to pharmaceutical regulations outside the U.S. Before a new medical device, or a new use of an existing product can be marketed in the United States, it must first receive either premarket clearance under Section 510(k) of the FD&C Act, a grant of a request for de novo classification, or a PMA from the FDA, unless an exemption applies. The process of obtaining marketing approval or clearance from the FDA and comparable foreign regulatory agencies for new products, or for enhancements or modifications to existing products could be costly, time consuming and burdensome, lead to failed clinical trials or weakened clinical evidence, involve modifications, repairs or replacements of our products and result in limitations on the indicated use of our products, which may negatively impact our ability to market our products and services, result in delays or prevent full commercial realization of future products or service. Furthermore, failure to obtain timely approvals or renewals may result in significant penalties and fines. Additional regulations govern the approval, initiation, conduct, monitoring, documentation and reporting of clinical studies to regulatory agencies in the countries or regions in which they are conducted. Failure to comply, could subject us to significant enforcement actions and sanctions, including halting the study, rejection of data generated in the study, seizure of investigational devices or data, sanctions against investigators, civil or criminal penalties, and other actions. In addition, without the data from one or more clinical studies, it may not be possible for us to secure the data necessary to support certain regulatory submissions, to secure reimbursement or demonstrate other requirements. We cannot assure that access to clinical investigators, sites and subjects, documentation and data will be available on the terms and timeframes necessary.

We are subject to extensive complex regulatory requirements by domestic and foreign government agencies and any failure to comply with our ongoing responsibilities under their applicable laws and regulations could result in a material adverse impact on our business. Failure to comply with applicable regulations could result in future product recalls, injunctions preventing the shipment of products or other enforcement actions that could have a material adverse effect on our business. In addition, the FDA has taken the position that device manufacturers are prohibited from promoting their products other than for the uses and indications set forth in the approved product labeling, and any failure to comply could subject us to significant civil or criminal

exposure, administrative obligations and costs, and/or other potential penalties from, and/or agreements with, the federal government.

We also are subject to the European Medical Device Regulation ("MDR"), which was adopted by the European Union ("EU") as a common legal framework for all EU member states. The implementation for Class I products occurred on May 26, 2021 and the European Commission recently extended the implementation period to the end of 2027 for high-risk devices and to the end of 2028 for medium and low risk devices. Under the EU MDR, companies that wish to manufacture and distribute medical devices in EU member states must meet certain quality system, and safety requirements as well as ongoing product monitoring responsibilities. Companies must also obtain a "CE" marking (i.e., a mandatory conformity marking for certain products sold within the European Economic Area) for their products. Complying with the requirements of these regulations may require us to incur significant expenditures. Expenditures for EU MDR compliance activities amounted to $46.6 million for the year ended December 31, 2023 and we anticipate incurring additional expenditures in connection with our on-going efforts to obtain certification for our products under the European Medical Device Regulation. Various penalties exist for non-compliance with the laws implementing the European Medical Device Regulations which if incurred, could have a material adverse impact on our business, results of operations and cash flows.

Further, the regulatory environment in China continues to evolve, and officials in the Chinese government exercise broad discretion in deciding how to interpret and apply regulations. It is possible that the Chinese government's current or future interpretation and application of existing or new regulations will negatively impact our China operations, result in regulatory investigations or lead to fines or penalties.

Should we delay or fail to comply with one or more of the regulatory requirements we could have reduced sales, increased costs, delays to new product introductions, enhancements or our strategic plans, or harm to our reputation or competitiveness, which could have a material adverse effect on our business and financial results.

In addition, maintaining compliance with multiple regulators, and multiple centers within the FDA, adds complexity and cost to our manufacturing processes. Our manufacturing facilities and those of our contract manufacturers are subject to periodic regulatory inspections by the FDA and other regulatory agencies, and these facilities are subject to the FDA's Quality System Regulation and Good Manufacturing Practices. Please refer to "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations – FDA Matters" (Part II, Item 7 of this Annual Report on Form 10-K) for more information relating to the warning letter we received from the FDA related to inspection observations of the quality systems at our Boston, Massachusetts manufacturing facility and our remediation efforts and expectations regarding the resumption of commercial distribution of products manufactured at the Boston facility. We or our contractors may fail to satisfy these regulatory requirements in the future, and any failure to do so may prevent us from selling our products.

Some of our activities may subject us to risks under federal and state laws prohibiting "kickbacks" and false or fraudulent claims.

We are subject to laws and regulations that govern the means by which companies in the healthcare industry may market their products to healthcare professionals and may compete by discounting the prices of their products, including for example, the federal Anti-Kickback Statute, the federal False Claims Act, the federal Health Insurance Portability and Accountability Act of 1996 ("HIPAA"), state law equivalents to these federal laws that are meant to protect against fraud and abuse and analogous laws in foreign countries. Violations of these laws are punishable by criminal and civil sanctions, including, but not limited to, in some instances civil and criminal penalties, damages, fines, and exclusion from participation in federal and state healthcare programs, including Medicare and Medicaid.

Our international operations are subject to the provisions of the U.S. Foreign Corrupt Practices Act of 1977, as amended ("FCPA"), which prohibits U.S. companies and their representatives from offering or making improper payments to foreign officials for the purpose of obtaining or retaining business. In many countries, the healthcare professionals we regularly interact with may meet the definition of a foreign official for purposes of the FCPA. Our international operations are also subject to various other international anti-bribery laws such as the UK Anti-Bribery Act. In addition, the Chinese government recently launched a campaign to combat corruption in healthcare with a focus on pharmaceutical and medical device companies covering production, supply, sales, usage, and reimbursement. The target of the campaign is kickbacks to hospitals and healthcare professionals with a focus on transfers of value to healthcare professionals in the form of grants, donations, event sponsorships, honoraria, and consulting fees. Despite meaningful measures that we undertake to facilitate lawful conduct, which include training and compliance programs and internal policies and procedures, we may not always prevent unauthorized, reckless or criminal acts by our employees or agents, or employees or agents of businesses or operations we may acquire. Violations of these laws, or allegations of such violations, could disrupt our operations, involve significant management distraction and have a material adverse effect on our business, financial condition and results of operations. We also could be subject to adverse publicity, severe penalties, including criminal and civil penalties, disgorgement, further changes or enhancements to our procedures, policies and controls, personnel changes and other remedial actions. Moreover, our failure to comply with domestic or foreign laws could result in various adverse consequences, including possible delay in approval or refusal to approve a product, recalls, seizures, and withdrawal of an approved product from the market.

We have in place policies and procedures for compliance that we believe are at least as stringent as those set forth in the AdvaMed Code of Ethics which was developed by AdvaMed, a trade association that represents the medical device industry, and which is intended to represent best practices with respect to medical device companies' interactions with healthcare providers. We regularly train our sales and marketing personnel on our policies regarding sales and marketing practices. Pursuant to the AdvaMed Code, we have certified our adoption of the AdvaMed Code. The sales and marketing practices of our industry have been the subject of increased scrutiny from federal and state government agencies, and we believe that this trend will continue. Various hospital organizations, medical societies and trade associations are establishing their own practices that may require detailed disclosures of relationships between healthcare professionals and medical device companies or ban or restrict certain marketing and sales practices such as gifts and business meals. Since these laws, regulations and ultimate enforcement continue to evolve, we cannot predict with certainty, what, if any, impact, changes to them may have on our business or our customers.

Our medical device products are subject to reporting requirements and recalls, even after receiving regulatory clearance, approval or certification, which could harm our reputation, business and financial results.

Both before and after a device is placed on the market, numerous regulatory requirements apply, which require manufacturers to follow, among other things, design, testing, production, control, documentation and other quality assurance procedures during the manufacturing process; labeling regulations, which prohibit the promotion of products for unapproved or "off-label" uses and impose other restrictions on labeling; and medical device reporting regulations that require us to report to FDA or similar governmental bodies in other countries if our products are ineffective or may have caused or contributed to a death or serious injury or malfunction in a way that would be reasonably likely to contribute to death or serious injury if the malfunction were to recur. The FDA and similar governmental bodies in other countries have the authority to require the recall, repair, replacement, or refund of such products, refuse to grant pending pre-market approval applications or require certificates of non-U.S. governments for exports, and/or require us to notify health professionals and others that the devices present unreasonable risks of substantial harm to the public health, and in certain rare circumstances, ban medical devices. We may, under own initiative, recall a product if a reasonable possibility of serious injury or any material deficiency in a device is found, or withdraw a product to improve device performance or for other reasons. For example, in May 2023, after consultation with the FDA, we initiated a voluntary global recall of all products manufactured in our Boston, Massachusetts facility distributed between March 1, 2018 and May 22, 2023. For more information concerning the Boston recall, including our remediation efforts and expectations regarding the resumption of commercial distribution of products manufactured at the Boston facility, please see "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - FDA Matters" in this Annual Report on Form 10-K.

Recalls of any of our products may divert managerial and financial resources and have an adverse effect on our financial condition and results of operations and cash flows. A recall could harm our reputation with customers and consumers which could reduce the sales of our products. In addition, the FDA or other foreign governmental agencies may implement enforcement actions Any adverse regulatory action, depending on its magnitude, may restrict us from effectively marketing and selling our products and limit our ability to obtain future pre-market clearances or approvals, and could result in a substantial modification to our business practices and operations.

The adoption of healthcare reform in the U.S. and initiatives sponsored by other governments may adversely affect our business, results of operations and/or financial condition.

Our operations may be substantially affected by potential fundamental changes in the global political, economic and regulatory landscape of the healthcare industry. Government and private sector initiatives to limit the growth of healthcare costs are continuing in the U.S., and in many other countries in which we do business, causing the marketplace to put increased emphasis on the delivery of more cost-effective treatments. These initiatives include price regulation, competitive pricing, coverage and payment policies, comparative effectiveness of therapies, technology assessments and managed-care arrangements. For example, Congress also drafts and introduces, from time to time, legislation that could significantly change the statutory provisions governing the regulation of medical devices. In addition, the FDA may change its clearance and approval policies, adopt additional regulations or revise existing regulations, or take other actions, which may prevent or delay approval or clearance of our future products under development or impact our ability to modify our currently cleared products on a timely basis. For example, over the last several years, the FDA has proposed reforms to its 510(k) clearance process, and such proposals could include increased requirements for clinical data and a longer review period, or could make it more difficult for manufacturers to utilize the 510(k) clearance process for their products. The adoption of some or all of these initiatives could have a material, adverse effect on our financial condition and results of operations.

We cannot predict what impact ongoing uncertainty regarding federal and state health reform proposals, instability of the insurance markets, changes in the U.S. administration and policy, an expansion in government's role in and/or additional proposals and/or changes to the U.S. health care system or its legislation will have on our customer's purchasing decisions and/or reimbursement which could have a material adverse effect on our business. We expect that additional state and federal and

foreign health care reform measures will be adopted in the future, including those initiatives affecting coverage and reimbursement for our products, any of which could limit the amounts that federal and state governments will pay for health care products and services, which could adversely affect the growth of the market for our products or demand for our products, or result in additional pricing pressures. We cannot predict the ultimate content, timing or effect of any healthcare reform legislation or the impact of potential legislation on us. We continue to monitor the implementation of such legislation and, to the extent new market or industry trends or new governmental programs evolve, we will consider implementing or implement programs in response.

Certain of our products contain materials derived from animal sources and may become subject to additional regulation.

Certain of our products are derived from bovine or porcine tissue sources. As a result, we may experience difficulties in processing and producing our bovine and porcine tissue products at scale, including problems related to yields, quality control and assurance, tissue availability, adequacy of control policies and procedures and availability of skilled personnel.

With respect to bovine, among other products, our dermal regeneration products, duraplasty products, wound care products, bone void fillers, nerve and tendon repair products and certain other products, contain material derived from bovine tissue. In 2023, 43.4% of our revenues derived from products containing material derived from bovine tissue. Products that contain materials derived from animal sources, including food, pharmaceuticals and medical devices, are subject to scrutiny in the media and by regulatory authorities. Regulatory authorities are concerned about the potential for the transmission of disease from animals to humans via those materials. This public scrutiny has been particularly acute in Japan and Western Europe with respect to products derived from animal sources, because of concern that materials infected with the agent that causes bovine spongiform encephalopathy, otherwise known as BSE or mad cow disease, may, if ingested or implanted, cause a variant of the human Creutzfeldt-Jakob Disease, an ultimately fatal disease with no known cure. The World Organization for Animal Health recognizes the U.S. as having a negligible risk for BSE, which is the highest status available.

We take care to provide that our products are safe and free of agents that can cause disease. In particular, we qualified a source of collagen from a country outside the U.S. that is considered BSE/TSE-free. The World Health Organization classifies different types of bovine tissue for relative risk of BSE transmission. Deep flexor tendon and bovine fetal skin, which are used in our products, are in the lowest-risk categories for BSE transmission and are therefore considered to have a negligible risk of containing the agent that causes BSE (an improperly folded protein known as a prion). Nevertheless, products that contain materials derived from animals, including our products, could become subject to additional regulation, or even be banned in certain countries, because of concern over the potential for the transmission of prions. Significant new regulations, or a ban of our products, could have a material, adverse effect on our current business or our ability to expand our business.

Certain countries, such as Japan, China, Taiwan and Argentina, have issued regulations that require our collagen products be sourced from countries where no cases of BSE have occurred, and the EU has requested that our dural replacement products and other products that are used in neurological tissue be sourced from a country where no cases of BSE have occurred. Currently, we source bovine fetal hides from the U.S. and purchase tendon from the U.S. and New Zealand. New Zealand has never had a case of BSE. We received approval in the U.S., the EU, Japan, Taiwan, China, Argentina as well as other countries for the use of New Zealand-sourced tendon in the manufacturing of our products. If we cannot continue to use or qualify a source of tendon from New Zealand or another country that has never had a case of BSE, we could be prohibited from selling our collagen products in certain countries.

We are subject to current and potential future requirements relating to protection of the environment, such as hazardous materials regulations, which may impose significant compliance or other costs on us.

Certain of our processes in manufacturing and research and development involve the controlled use of certain hazardous materials. In addition, we own and/or lease a number of facilities at which hazardous materials have been used in the past. Finally, we have acquired various companies that historically have used certain hazardous materials and that have owned and/or leased facilities at which hazardous materials have been used. For all of these reasons, we are subject to federal, state, foreign, and local laws and regulations governing the use, manufacture, storage, transportation, handling, treatment, remediation, and disposal of hazardous materials and certain waste products ("Environmental, Health, Safety and Transportation Laws"). Although we believe that our procedures for handling, transporting, and disposing of hazardous materials comply with the Environmental, Health, Safety and Transportation Laws, such laws may be amended in ways that increase our cost of compliance, perhaps materially.

Furthermore, the potential risk of accidental contamination or injury from these materials cannot be eliminated, and there is also a risk that such contamination previously has occurred in connection with one of our facilities or in connection with one of the companies we have purchased. In the event of such an accident or contamination, we could be held liable for any damages that result and any related liability could exceed the limits or fall outside the coverage of our insurance and could exceed our resources and could have a material impact on our operations and cash flows. We may not be able to maintain insurance on acceptable terms or at all.

Our business and operations are subject to risks related to climate change.

The long-term effects of global climate change present both physical risks (from the increased frequency of extreme weather conditions or natural disasters) and transition risks (from regulatory requirements or technology changes). Such extreme weather conditions could pose physical risks to our facilities and disrupt operation of our supply chain and may impact operational costs. Concern over global climate change could result in new legal or regulatory requirements designed to mitigate the effects of climate change on the environment. If such laws or regulations are more stringent than current legal or regulatory requirements, we may experience increased compliance burdens and costs to meet the regulatory obligations and such measures may interrupt our operations or the operations of our suppliers, potentially leading to higher costs, and therefore negatively impact our results of operations.

Environmental, social and corporate governance (ESG) issues, including those related to climate change and sustainability, may have an adverse effect on our business, financial condition and results of operations and damage our reputation.

There is an increasing focus from certain investors, customers, consumers, employees and other stakeholders concerning ESG matters. Additionally, public interest and legislative pressure related to public companies' ESG practices continue to grow. While we may create and publish voluntary disclosures regarding ESG matters from time to time, many of the statements in those voluntary disclosures are based on hypothetical expectations and assumptions that may or may not be representative of current or actual risks or events or forecasts of expected risks or events, including the costs associated therewith. Such expectations and assumptions are necessarily uncertain and may be prone to error or subject to misinterpretation given the long timelines involved and the lack of an established single approach to identifying, measuring and reporting on many ESG matters. If we do not adapt to or comply with new regulations, or fail to meet evolving investor, industry or stakeholder expectations and concerns regarding ESG issues, investors may reconsider their capital investment in our Company, and customers may choose to stop purchasing our products, which could have a material adverse effect on our reputation, business or financial condition.

If we do not retain our key personnel and attract and retain other highly skilled employees, our business could suffer.

If we fail to recruit, develop and retain the necessary personnel, our business and our ability to obtain new customers, develop new products and provide acceptable levels of customer service could suffer. The success of our business is heavily dependent on the leadership of our key management personnel. Our success also depends on our ability to recruit, develop and retain and motivate highly skilled sales, marketing, manufacturing and scientific personnel. Competition for these persons in our industry is intense, and we may not be able to successfully recruit, train or retain qualified personnel. In addition, we recognize that attracting, retaining and developing a diverse workforce is a critical success factor for our business. In that regard, we are continuously facing significant competition in our markets and at all levels in the workforce. We also continue to face the challenges of maintaining employee well-being, recognizing that the continued additional financial, family and health burdens that many employees may be experiencing due to macroeconomic uncertainties, including inflation, and other factors, may adversely impact job performance, employee engagement and employee retention. Additionally, in our industry, there is substantial competition for key personnel in the regions in which we operate. Labor shortages and competition for qualified personnel, particularly as employees are increasingly able to work remotely, could cause disruptions in our business operations. If we fail to effectively manage any organizational and/or strategic changes, our financial condition, results of operations, and reputation, as well as our ability to successfully attract, motivate and retain key employees, could be harmed.

RISKS RELATED TO TAX AND DEBT

We may have additional tax liabilities.

We are subject to income taxes in the U.S. and many foreign jurisdictions and are commonly audited by various tax authorities. In the ordinary course of our business, there are many transactions and calculations where the ultimate tax determination is uncertain. Significant judgment is required in determining our worldwide provision for income taxes. Although we believe that our tax estimates are reasonable, tax authorities may disagree with certain positions we have taken and the final determination of tax audits and any related litigation could be materially different from our historical income tax provisions and accruals. In addition, economic and political pressures to increase tax revenue in various jurisdictions may make resolving tax disputes favorably more difficult. The results of an audit or litigation could have a material, adverse effect on our financial statements in the period or periods for which that determination is made and could result in the imposition of fines and penalties.

Changes in tax laws or exposures to additional tax liabilities could negatively impact the Company's operating results.

We are subject to income taxes, as well as taxes that are not income-based, in both the U.S. and many foreign jurisdictions. Taxes could significantly increase due to changes in tax laws or changes in our interpretation of those laws. For example, the Organization for Economic Co-operation and Development, a global policy forum, released model rules related to a new 15% global minimum tax regime. Several of the jurisdictions that we operate in have already adopted these rules, which could impact the amount of taxes that we pay. Taxes could also significantly increase due to changes in accounting guidance. Our future effective tax rate could be unfavorably affected by numerous factors including a change in, or the interpretation of, tax rules and regulations in the jurisdictions in which we operate (including changes in legislation currently being considered), the expiration of or disputes

about certain tax agreements in a particular jurisdiction, a change in our geographic earnings mix, and/or to the jurisdictions in which we operate, or a change in the measurement of our deferred taxes.

Our leverage and debt service obligations could adversely affect our business.

Our leverage and debt service obligations could adversely affect our business. As of December 31, 2023, our total consolidated external debt was approximately $1.4 billion (See Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations and Note 5, *Debt*, to the Notes to Consolidated Financial Statements (Part IV, Item 15 of this Annual Report on Form 10-K) for a discussion of our consolidated external debt). We may also incur additional indebtedness in the future. Our substantial indebtedness could have material, adverse consequences, including:

- making it more difficult for us to satisfy our financial obligations;
- increasing our vulnerability to adverse economic, regulatory and industry conditions, and placing us at a disadvantage compared to our competitors that are less leveraged;
- limiting our ability to compete and our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate; and
- limiting our ability to borrow additional funds for working capital, capital expenditures, acquisitions and general corporate or other purposes.

Our debt service obligations will require us to use a portion of our operating cash flow to pay interest and principal on indebtedness instead of for other corporate purposes, including funding future expansion of our business, acquisitions, and ongoing capital expenditures, which could impede our growth. In addition, our ability to comply with, renegotiate or extend the Company's debt obligations will depend on our operating and financial performance, which in turn is subject to prevailing economic conditions and financial, business and other factors beyond our control. Any disruptions in our operations, the financial markets, or the overall economy, may adversely affect the availability and cost of credit to us and/or our ability to comply with our existing obligations.

GLOBAL PUBLIC HEALTH CONCERNS

Public health crises, such as the COVID-19 pandemic, have had, and could in the future have, a negative effect on our business.

Our global operations and interactions with healthcare systems, providers and patients around the world expose us to risks associated with public health crises, including epidemics and pandemics. Such pandemics or disease outbreaks, such as the COVID-19 pandemic, have created and may continue to create significant volatility, uncertainty and economic disruption in the markets in which we sell our products and in which we operate. In response to the COVID-19 pandemic, governments around the world imposed measures designed to reduce the transmission of COVID-19 and individuals responded to the fear of contracting COVID-19.

Additionally, the impact of the COVID-19 pandemic and its aftermath on general macroeconomic conditions has led to disruptions in the global supply chain, primarily through a lack of availability of raw materials and electronic components. We have experienced challenges associated with material and component availability for certain product lines, longer shipping and delivery times for raw materials and components, constrained logistics capacity related to the movement of our products, availability of skilled labor and increased costs of raw materials, components, labor, and freight and courier services.

The direct and indirect disruptions caused by the pandemic and the responses of both governments and individuals could negatively impact the number of surgical and medical intervention procedures performed and have a material adverse effect on our business, financial condition, results of operations, or cash flows. The extent to which fear of exposure to or actual effects of COVID-19, new variants, disease outbreak, epidemic or a similar widespread health concern impacts our business will depend on future developments, which are highly uncertain and cannot be predicted with confidence, such as the speed and extent of geographic spread of the disease, the duration of the outbreak, travel restrictions, the efficacy of vaccination and treatment; impact on the U.S. and international healthcare systems, the U.S. economy and worldwide economy; the timing, scope and effectiveness of U.S. and international governmental response; and the impact on the health, well-being and productivity of our employees.

RISKS RELATED TO OUR INTELLECTUAL PROPERTY

Our intellectual property rights may not provide meaningful commercial protection for our products, potentially enabling third parties to use our technology or very similar technology and could reduce our ability to compete in the market.

To compete effectively, we depend, in part, on our ability to maintain the proprietary nature of our technologies and manufacturing processes, which includes the ability to obtain, protect and enforce patents on our technology and to protect our trade secrets. We own or have licensed patents that cover aspects of some of our product lines. Our patents, however, may not

provide us with any significant competitive advantage. Others may challenge our patents and, as a result, our patents could be narrowed, invalidated or rendered unenforceable. Competitors may develop products similar to ours that our patents do not cover. In addition, the approval or rejection of patent applications may take several years and our current and future patent applications may not result in the issuance of patents in the U.S. or foreign countries.

Our competitive position depends, in part, upon unpatented trade secrets, which we may be unable to protect.

Our competitive position also depends upon unpatented trade secrets, which are difficult to protect. We cannot assure that others will not independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets, that our trade secrets will not be disclosed or that we can effectively protect our rights to unpatented trade secrets.

In an effort to protect our trade secrets, we require our employees, consultants and advisors to execute confidentiality and invention assignment agreements upon commencement of employment or consulting relationships with us. These agreements provide that, except in specified circumstances, all confidential information developed or made known to the individual during the course of their relationships with us must be kept confidential. We cannot assure, however, that these agreements will provide meaningful protection for our trade secrets or other proprietary information in the event of the unauthorized use or disclosure of confidential information.

Our success will depend partly on our ability to operate without infringing or misappropriating the proprietary rights of others.

We may be sued for infringing the intellectual property rights of others. In addition, we may find it necessary, if threatened, to initiate a lawsuit seeking a declaration from a court that we do not infringe the proprietary rights of others or that their rights are invalid or unenforceable. If we do not prevail in any litigation, in addition to any damages we might have to pay, we would be required to stop the infringing activity (which could include a cessation of selling the products in question) or obtain a license for the proprietary rights involved. Any required license may be unavailable to us on acceptable terms, if at all. In addition, some licenses may be nonexclusive and allow our competitors to access the same technology we license.

If we fail to obtain a required license or are unable to design our products so as not to infringe on the proprietary rights of others, we may be unable to sell some of our products, and this potential inability could have a material, adverse effect on our revenues and profitability and cash flows.

We may be involved in lawsuits relating to our intellectual property rights and promotional practices, which may be expensive.

The medical device industry is characterized by extensive intellectual property litigation and to protect or enforce our intellectual property rights, we may have to initiate or defend legal proceedings, such as infringement suits or opposition proceedings, against or by third parties. In addition, we may have to institute proceedings regarding our competitors' promotional practices or defend proceedings regarding our promotional practices. Legal proceedings are costly, and, even if we prevail, the cost of the legal proceedings could affect our profitability and cash flows. In addition, litigation is time-consuming and could divert management's attention and resources away from our business. Moreover, in response to our claims against other parties, those parties could assert counterclaims against us.

RISKS RELATED TO CYBERSECURITY AND DATA PRIVACY

Cyber-attacks or other disruptions to our information technology systems could adversely affect our business.

We are increasingly dependent on sophisticated information technology for our infrastructure and to support business decisions. Our information systems require an ongoing commitment of significant resources to maintain, protect, and enhance existing systems and develop new systems to keep pace with continuing changes in information processing technology, evolving systems and regulatory standards, the increasing need to protect patient and customer information, and changing customer patterns. An experienced third party maintains the enterprise business system used to support our transaction processing, accounting and financial reporting, and supply chain and manufacturing processes. Any significant breakdown, intrusion, interruption, corruption, or destruction of these systems, as well as any data breaches, could have a material, adverse effect on our business.

Third parties may attempt to breach our systems and may obtain data relating to patients, proprietary or sensitive information. We may 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. If we, or third parties on whom we rely, fail to maintain or protect our information systems and data integrity effectively, we could lose existing customers, have difficulty attracting new customers, suffer backlash from negative public relations, have regulatory sanctions or penalties imposed, have increases in operating expenses, incur expenses or lose revenues as a result of a data privacy breach, or suffer other adverse consequences.

We have programs, processes (including ongoing improvements) and technologies in place to prevent, detect, contain, respond to and mitigate security related threats and potential incidents. Because the techniques used to obtain unauthorized access or interrupt services change frequently and can be difficult to detect, anticipating, identifying or preventing these threats or mitigating them if and when they occur, may be challenging. We are also dependent on third party vendors to supply and/or support certain aspects of our information technology systems which may contain defects in design or manufacture or other problems that could result in system disruption or unexpectedly compromise the information security of our own systems. In addition, as we grow in part through new acquisitions we may face risks due to implementation, modification, or remediation of controls, procedures, and policies relating to data privacy and cybersecurity at the acquired business. We continue to consolidate and integrate the number of systems we operate, and to upgrade and expand our information system capabilities for stable and secure business operations. Despite our implementation of controls to protect our systems and sensitive, confidential or personal data or information, we may be vulnerable to material security breaches, theft, misplaced, lost or corrupted data, employee errors and/or malfeasance (including misappropriation by departing employees) that could potentially lead to the compromising of sensitive, confidential or personal data or information, improper use of our systems, software solutions or networks, unauthorized access, use, disclosure, modification or destruction of information, defective products, production downtimes and operational disruptions. In addition, a cyber-related attack could result in other negative consequences, including damage to our reputation or competitiveness, remediation or increased protection costs, litigation or regulatory action.

Failure to comply with laws relating to the confidentiality of sensitive personal information or standards related to the transmission of electronic health data, may require us to make significant changes to our products, or incur penalties or other liabilities.

State, federal and foreign laws, such as HIPAA or the California Consumer Privacy Act of 2018, regulate the confidentiality of sensitive personal information and the circumstances under which such information may be released. These measures may govern the disclosure and use of personal and patient medical record information and may require users of such information to implement specified security measures, and to notify individuals in the event of privacy and security breaches. Evolving laws and regulations in this area could restrict the ability of our customers to obtain, use or disseminate patient information, or could require us to incur significant additional costs to re-design our products in a timely manner, either of which could have an adverse impact on our results of operations. Other health information standards, such as regulations under HIPAA, establish standards regarding electronic health data transmissions and transaction code set rules for specified electronic transactions, for example transactions involving submission of claims to third-party payors. These standards also continue to evolve and are often unclear and difficult to apply. We have incurred and expect that we will continue to incur significant costs implementing additional security measures to protect against new or enhanced data security or privacy threats, or to comply with current and new federal, state and international laws governing the unauthorized disclosure or exfiltration of confidential and personal information which are continuously being enacted and proposed. Outside the U.S., we are impacted by privacy and data security requirements at the international, national and regional level, and on an industry specific basis. More privacy and security laws and regulations are being adopted, and more are being enforced, with potential for significant financial penalties. In the EU, increasingly stringent data protection and privacy rules have been enacted. The EU General Data Protection Regulation (GDPR) applies uniformly across the EU and includes, among other things, a requirement for prompt notice of data breaches to data subjects and supervisory authorities in certain circumstances. The GDPR also requires companies processing personal data of individuals residing in the EU to comply with EU privacy and data protection rules. Failure to maintain the confidentiality of sensitive personal information in accordance with the applicable regulatory requirements, or to abide by electronic health data transmission standards, could expose us to breach of contract claims, fines and penalties, costs for remediation and harm to our reputation.

ITEM 1B. *UNRESOLVED STAFF COMMENTS*

As of the filing of this Annual Report on Form 10-K, we had no unresolved comments from the staff of the SEC that were received not less than 180 days before the end of our 2023 fiscal year.

ITEM 1C. *CYBERSECURITY*

Information Technology and Cybersecurity

Our business relies on the secure electronic transmission, storage and hosting of sensitive information, including personal information, financial information, intellectual property, and other sensitive information related to our customers and workforce. Given the importance of cybersecurity to our business, we maintain a comprehensive information technology and cybersecurity program to increase both the effectiveness of our systems and our preparedness for cybersecurity risks, including security monitoring for internal and external threats to bolster the confidentiality, integrity and availability of our information assets. We regularly perform evaluations of our cybersecurity program, including periodic internal and external audits, penetration tests and incident response simulations, and our information technology infrastructure and cybersecurity management system are subject to external program assessments on a regular basis. In 2017, we adopted the National Institute

of Standards and Technology Cybersecurity Framework (NIST CSF) to bolster our cybersecurity management system and reduce cybersecurity risks.

We engage multiple independent third-party cybersecurity services and consulting firms to review our cybersecurity program and we have entered into partnerships with entities such as the Health Information Sharing and Analysis Center, the Cybersecurity & Infrastructure Security Agency, InfraGard, the Department of Homeland Security, the Cyber Fraud Task Forces and the Center for Internet Security to complement our program and bolster our data protection and privacy efforts. To monitor and minimize the risks from cybersecurity threats associated with our use of third-party service providers, we require the completion of standardized information gathering questionnaires from service providers prior to entering any engagement for services. Further, we utilize security ratings from industry-recognized sources to provide an external analysis of such third-party service providers. We work closely with these industry-recognized sources to interpret the security ratings results in the context of the specific characteristics of our information technology and cybersecurity systems, which helps inform our assessment of the efficacy and reliability of the third-party vendors we use. We also conduct periodic internal reviews of the performance and reliability of the third-parties we have engaged for cybersecurity services.

Management and Board Oversight

The Board has overall responsibility for the oversight of risk management at the Company, which includes overseeing our process for identifying, assessing and mitigating significant financial, operational, strategic, cybersecurity and other risks that may affect the Company. Our Chief Information Officer, or CIO, leads our cybersecurity program and our Director, Cybersecurity leads our cybersecurity team. Our CIO provides periodic reports relating to cybersecurity matters to the Board, as well as our Chief Executive Officer and other members of our senior management, as appropriate. Our executive leadership team and Board provide principal oversight and guidance of our cybersecurity risk management programs and processes. We have established a cybersecurity executive steering committee to review and discuss cybersecurity issues and review our security metrics. The committee is comprised of a cross-functional group of senior executives, including our Chief Executive Officer, Chief Financial Officer, Chief Legal Officer, Chief Information Officer and Director, Cybersecurity, and is responsible for the implementation and oversight of the processes and systems we use to assess and manage risk from cybersecurity threats as well as cybersecurity incidents. Our CIO and committee members have significant work experience related to cybersecurity issues or oversight and members of our cybersecurity team hold vendor-neutral and vendor-specific certifications from organizations such as the Information Systems Audit and Control Association (ISACA), the Computing Technology Industry Association (CTIA) and the International Information System Security Certification Consortium (ISC2). In addition, we require all new employees to complete cybersecurity training so they are better able to understand how to identify, protect, and preserve sensitive data and minimize risks related to cybersecurity matters. We supplement this new hire training with annual training and certification programs, which includes social engineering simulations. We continue to expand and improve our global training programs to raise employee awareness of security obligations and members of senior management regularly provide employees with communications regarding the cybersecurity environment to increase employee awareness of cybersecurity trends and emerging risks.

Processes for Assessing, Identifying and Managing Material Risks from Cybersecurity Threats

Our monitoring capabilities, including our internal auditing procedures, internal control over financial reporting and corporate compliance programs, are designed in part to inform management about our material risks, including those related to cybersecurity risks. In the event of an incident which jeopardizes the confidentiality, integrity, or availability of our information assets, and our risk management systems, we maintain a regularly tested incident response program. Pursuant to the program and its escalation protocols, designated personnel are responsible for assessing the severity of the incident and associated threat, containing the threat, remediating the threat, including recovery or data and access to systems, analyzing the reporting and disclosure obligations associated with the incident, and performing post-incident analysis and program improvements. Although the particular personnel assigned to an incident response team will depend on the particular facts and circumstances, the team is generally led by the CIO or another member of the cybersecurity executive steering committee and will include other information technology and legal personnel. In the event of a potentially material incident, the incident response team regularly reports to both the Company's Board and members of senior management, including the Chief Executive Officer, Chief Financial Officer and Chief Legal Officer to assist in making determinations regarding applicable SEC reporting requirements.

In addition, our Board receives regular reports from management on matters relating to strategic and operational initiatives, financial performance, cybersecurity and legal developments. The Company's Enterprise Risk Management program, which has been adopted by the Company to further enhance oversight of risks inherent to our business and allow members of the Board and management to gain a greater understanding of the efforts being undertaken to manage the risks confronting the Company, covers cybersecurity risks.

Our management believes that our current systems and practice of implementing regular updates positions us well to support current needs and future growth. We use a strategic information systems multi-year planning process that involves senior management and is integrated into our overall business planning. Information systems projects are prioritized based upon strategic, financial, regulatory, risk and other business advantage criteria.

Cybersecurity Risks

As of December 31, 2023, we have not had any material cybersecurity incidents. However, we face risks associated with cybersecurity incidents, whether through cyber-attacks or cyber intrusions over the Internet, ransomware and other forms of malware, computer viruses, attachment to emails, phishing attempts or other scams. Although we make efforts to maintain the security and integrity of our networks and systems, and the proprietary, confidential and personal information that resides on or is transmitted through them, and we have implemented various cybersecurity policies and procedures to manage the risk of a security incident or disruption, there can be no assurance that our security efforts and measures will be effective or that attempted security incidents or disruptions would not be successful or damaging. We also carry insurance that provides protection against the potential losses arising from a cybersecurity incident. See "Risk Factors–Risks Related to Cybersecurity and Data Privacy—Cyber-attacks or other disruptions to our information technology systems could adversely affect our business" and "—Failure to comply with laws relating to the confidentiality of sensitive personal information or standards related to the transmission of electronic health data, may require us to make significant changes to our products, or incur penalties or other liabilities."

ITEM 2. *PROPERTIES*

As of December 31, 2023, we lease approximately 166,991 square feet of space in Princeton, NJ, where we house our principal headquarters, sales operations, and support functions. This lease expires in 2035.

Our segments utilize key manufacturing and research facilities located in California, Indiana, Maryland, Massachusetts, New Jersey, Ohio, Illinois, Puerto Rico, Tennessee, Utah, France, Germany, Ireland, and Switzerland. Our instrument procurement operations are located in Germany. Our primary distribution centers are located in Kentucky, Nevada, Australia, Belgium, Canada, Italy, Japan, and China. In addition, we lease several smaller facilities to support additional administrative, assembly, and distribution operations. We own facilities in Saint Aubin Le Monial, France, Rietheim-Weilheim, Germany and Ohio and we lease all of our other facilities. We also have repair centers in United States, Canada, Australia, France, Japan, China and Germany, and field service presence covering regions within Europe, Asia Pacific and Latin America with direct teams based in the United States, Canada, France, Germany, Austria, Switzerland, Korea, Taiwan, India, Italy, Belgium, Luxembourg, Netherlands, Singapore, Thailand, Australia, New Zealand, and United Kingdom.

Our manufacturing facilities are registered with the FDA. Our facilities are subject to FDA inspection to ensure compliance with Quality System regulations. For further information regarding the status of FDA inspections, see the "Item 1. Business – Government Regulation and Compliance" and "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations – FDA Matters" in this Annual Report on Form 10-K.

ITEM 3. *LEGAL PROCEEDINGS*

Information pertaining to legal proceedings can be found in Note 15, *Commitments and Contingencies*, to the Notes to Consolidated Financial Statements (Part IV, Item 15 of this Annual Report on Form 10-K).

ITEM 4. *MINE SAFETY DISCLOSURES*

Not applicable.

PART II

ITEM 5. *MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES*

Market Information, Holders and Dividends

Our common stock trades on The Nasdaq Global Select Market under the symbol "IART." The number of stockholders of record as of February 27, 2024 was approximately 749, which includes stockholders whose shares were held in nominee name.

Dividend Policy

We have not paid any cash dividends on our common stock since our formation. Our Senior Credit Facility (as defined below) limits the amount of dividends that we may pay. Any future determinations to pay cash dividends on our common stock will be at the discretion of the Board and will depend upon our financial condition, results of operations, cash flows and other factors deemed relevant by the Board.

Sales of Unregistered Securities

There were no sales of unregistered securities during the years ended December 31, 2023, 2022 or 2021.

Sale of Registered Securities

There were no sales of registered securities during the years ended December 31, 2023, 2022 or 2021.

Issuer Purchases of Equity Securities

The following table provides information about purchases by the Company during the quarter ended December 31, 2023 of equity securities that are registered by us pursuant to Section 12 of the Exchange Act. Subject to applicable law, share repurchases may be made from time to time in open market transactions, privately negotiated transactions including accelerated share repurchase agreements, or pursuant to instruments and plans complying with Rule 10b5-1 under the Exchange Act, among other types of transactions and arrangements.

	Issuer purchases of equity securities			
Period	Total number of shares purchased by month	Average price paid per share	Total number of shares purchased by month as part of publicly announced repurchase programs [1]	Approximate dollar value of shares that may yet be purchased under the plans or program
10/01/23 - 10/31/23	928,485	$ 37.17	928,485	$ 100,000,000
11/01/23 - 11/30/23	—	$ —	—	100,000,000
12/01/23 - 12/31/23	—	$ —	—	100,000,000
	928,485	$ 37.17	928,485	

[1] On July 18, 2023, the Board of Directors authorized a stock repurchase program, which expires on December 31, 2023, to repurchase up to $225 million of the Company's outstanding common stock, effective as of the close of trading on September 23, 2022. As of December 31, 2023, $100.0 million remained unused under this program. The program does not obligate the Company to acquire a minimum amount of shares. Under the program, shares may be repurchased in privately negotiated and/or open market transactions, including under plans complying with Rule 10b5-1 under the Exchange Act.

On August 15, 2023, the Company entered into a $125 million accelerated share repurchase ("August 2023 ASR") and received 2.3 million shares of the common stock at inception of the August 2023 ASR, which represented approximately 80% of the expected total shares under the August 2023 ASR. On October 18, 2023 the early exercise provision was exercised by the August 2023 ASR counterparty. The Company received an additional 0.9 million shares determined using the volume-weighted average price of the Company's common stock during the term of the August 2023 ASR.

On January 26, 2023, the Company entered into a $150 million accelerated share repurchase ("January 2023 ASR") and received 2.1 million shares of common stock at inception of the January 2023 ASR, which represented approximately 80% of the expected total shares under the January 2023 ASR. The settlement of the January ASR agreement was completed in two separate transactions on April 26, 2023 and May 4, 2023, where the Company received an additional 0.30 million and 0.31 million shares respectively, determined using the volume-weighted average price of the Company's common stock during the term of the January 2023 ASR.

On August 16, 2022, the Inflation Reduction Act of 2022 (the "Act") was signed into law. The Act implemented a new excise tax of 1% on the net share repurchases made by the Company effective for share repurchases performed January 1, 2023, or after. The Company accrued $2.5 million of excise tax related to the two ASR agreements during 2023.

On July 18, 2023, the Board of Directors authorized a new $225 million share repurchase program, replacing the existing $225 million program authorized in April 2022, of which $100 million remained authorized as of the year ended December 31, 2023. The program authorized in July 2023, which expires on December 31, 2025, allows the Company to repurchase its shares opportunistically from time to time. The Company may utilize various methods to effect any repurchases, including open market transactions, privately negotiated transactions, transactions structured through investment banking institutions, including accelerated share repurchases, or a combination of the foregoing, some of which may be effected through Rule 10b5-1 plans. The price and timing of any future purchases under the share repurchase program will depend on factors such as levels of cash generation from operations, the volume of stock option exercises by employees, cash requirements for acquisitions, dividends, economic and market conditions and stock price, and such repurchases may be discontinued at any time.

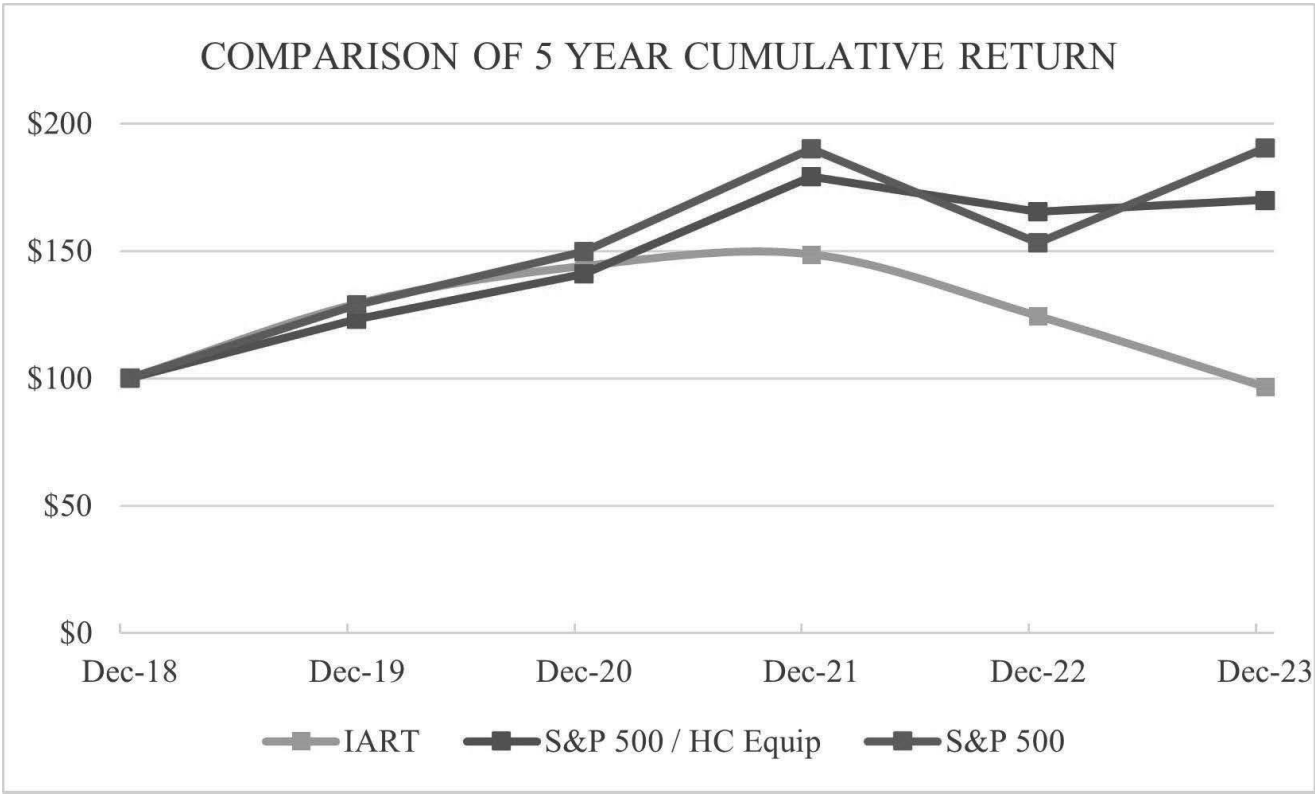
See Note 8, *Treasury Stock to* the Notes to Consolidated Financial Statements (Part IV, Item 15 of this Annual Report on Form 10-K) for further details.

Securities Authorized for Issuance under Equity Compensation Plan

The information required by this item regarding our equity compensation plans is incorporated herein by reference to Item 12 of Part III of this Annual Report on Form 10-K.

Stock Performance Graph

The graph below compares the five-year total return to stockholders on our common stock with the return of the Standard & Poor's (S&P) 500 Stock Index and the S&P Healthcare Equipment Index for the five years ended December 31, 2023. The Company's cumulative shareholder return is based on an investment of $100 on December 31, 2018 and is compared to the cumulative total return of the S&P indices mentioned above over the period with a like amount invested. Measurement points are the last trading day of each respective fiscal year.



Note: The stock price performance shown on the graph above is not indicative of future price performance. This graph shall not be deemed filed for purposes of Section 18 of the Exchange Act or otherwise subject to the liabilities of that section nor shall it be deemed incorporated by reference in any filing under the Securities Act or the Exchange Act, regardless of any general incorporation language in such filing.

ITEM 6. ***[Reserved]***

ITEM 7. ***MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS***

The following discussion and analysis provides information management believes to be relevant to understanding our financial condition and results of operations. For a full understanding of financial condition and results of operations, it should be read together with the selected unaudited consolidated financial data and our financial statements with the related notes appearing elsewhere in this report. The discussion focuses on our financial results for the year ended December 31, 2023 and 2022. The comparison of fiscal 2022 to 2021 has been omitted from this Form 10-K, but can be referenced in our Form 10-K for the fiscal year ended December 31, 2022—"Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" filed with the SEC on February 22, 2023.

We have made statements in this report which constitute forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. These forward-looking statements are subject to a number of risks, uncertainties and assumptions about the Company and other matters. The Company's actual results could differ materially from those anticipated in these forward-looking statements as a result of many factors, including but not limited to those set forth under Item 1A. Risk Factors. Please refer to "Special Note Regarding Forward-Looking Statements" and Item 1A. Risk Factors for a discussion of the factors that could cause actual results to differ materially from those projected in these statements. The following information concerning our business, results of operations and financial condition should also be read in conjunction with the information included under Item 1. Business, Item 1A. Risk Factors and Item 15. Exhibits and Financial Statement Schedules.

GENERAL

We are a leading global medical technology company innovating treatment pathways in surgical, neurologic and regenerative care to advance patient outcomes and set new standards of surgical, neurologic and regenerative care. Founded in 1989 with the acquisition of an engineered collagen technology platform used to repair and regenerate tissue, our common stock trades on the Nasdaq Global Select Market ("Nasdaq") under the symbol "IART." We have developed numerous product lines from this technology for applications ranging from burn and deep tissue wounds to the repair of dura mater in the brain, as well as nerves and tendons. We have expanded our base regenerative technology business to include surgical instruments, neurosurgical products and advanced wound care through global acquisitions and product development to meet the evolving needs of our customers and enhance patient care.

Our products are sold in more than 130 countries through a direct sales force as well as distributors and wholesalers. We manufacture and sell medical technologies and products in two reportable business segments: Codman Specialty Surgical ("CSS") and Tissue Technologies ("TT"). The CSS segment, which represents approximately two-thirds of our total revenue, consists of market-leading technologies and instrumentation used for a wide range of specialties, such as neurosurgery, neurocritical care and otolaryngology. We are the world leader in neurosurgery and one of the top three providers in instruments used in precision, specialty, and general surgical procedures. Our TT segment generates about one-third of our overall revenue and focuses on three main areas: complex wound surgery, surgical reconstruction, and peripheral nerve repair.

We have key manufacturing and research facilities located in California, Indiana, Maryland, Massachusetts, New Jersey, Ohio, Puerto Rico, Tennessee, Utah, France, Germany, Ireland and Switzerland. We source most of our handheld surgical instruments and dural sealant products through specialized third-party vendors.

Following the completion of our strategic refresh in 2023, we refocused our strategies around five pillars. Of these five pillars, we have identified three core growth drivers: (1) innovating for outcomes, (2) growing internationally, and (3) broadening our impact on care pathways. Our execution of the core growth drivers is enabled by two key levers: (4) driving operational and customer excellence and (5) cultivating a high-performance culture. As outlined in greater detail below, we believe these five pillars will enable us to realize and advance our integrated growth strategy.

To this end, the executive leadership team has established the following key priorities aligned to the following five pillars:

Innovating for Outcomes. An important part of Integra's growth strategy is introducing new products to strengthen and expand our portfolio, including via acquisitions. For example, we entered into a stock purchase agreement to acquire Acclarent, Inc. ("Acclarent") from Ethicon, Inc., a subsidiary of Johnson & Johnson in December 2023. Acclarent is an innovator and market leader in ear, nose and throat ("ENT") procedures and we believe that the acquisition of Acclarent will provide Integra with the opportunity to become a leading provider of ENT products and technologies. Furthermore, we believe that, owing to the ENT segment being an anatomical adjacency to neurosurgery, the acquisition will allow Integra to deliver future innovation both within the ENT segment and across our other CSS technology platforms. Additionally, we seek clinical evidence to support regulatory approval and strong reimbursement of our product portfolio around the world, including new indications for existing technologies. For example, in 2021, we filed a pre-market approval ("PMA") application for a specific indication for Surgimend® in the use of post-mastectomy breast reconstruction. In 2022, we acquired SIA, which is also pursuing a pre-market approval for DuraSorb for use in implant-based breast reconstruction ("IBBR"), and in June 2023 we completed enrollment in the DuraSorb U.S. IDE clinical study for two-stage breast reconstruction; the primary follow-up period is one year after device implantation. We hope to obtain FDA approvals for both products in 2025. We also continued to advance the development of pioneering neurosurgical technologies with the expansion of our product offerings. In 2023 we launched the CUSA® Clarity Tips for use in surgical procedures requiring the controlled fragmentation, emulsification and aspiration of bone as well as in laparoscopic liver surgery.

Growing Internationally: Over the years, we have been significantly expanding our global footprint through investments in our commercial organization, the expansion and development of international markets and new product introductions. As part of our In-China-For-China strategy, we continue the build out of our assembly capabilities in our new facility in Suzhou, China. Several new products were introduced in select international markets in 2023, including MicroMatrix® and Certas Plus® Programmable Valve which were launched in Europe, and CUSA Clarity Laparoscopic tip which was launched in Australia, New Zealand, Japan, Canada, South Africa and Israel. In addition, DuraGen Secure, received approval in Japan, while DuraGen Plus, an absorbable and sutureless collagen onlay indicated as a dura substitute for the repair of dura mater, was approved in China.

Broadening Impact on Care Pathways. We seek ways to develop products and technologies that impact the lives of patients, starting with the journey that a patient takes from diagnosis and treatment planning to surgery and postoperative care. We are well-established in acute care in the hospital setting and continue to leverage that strong position to grow in this segment and shape treatment pathways into preoperative care and additional sites of care.

Driving Operations and Customer Excellence. We have been making investments to build more responsive and scalable processes, enhance the reliability of our supply chain, and drive productivity initiatives to further supply and lower costs. Additionally, we continue to invest in technologies, systems and processes to enhance the customer experience. In 2023, we continued to invest in our capacity expansion. This includes ongoing projects of transferring our Boston manufacturing to a new location in Braintree, Massachusetts., validating manufacturing processes in our manufacturing facility in Plainsboro, New Jersey and increasing cleanroom capacity in our Memphis, Tennessee location.

Cultivating a High-Performance Culture. In seeking to sustain a culture of excellence and accountability, we have focused on employee empowerment and agility and building a diverse and inclusive workplace. These efforts resulted in our being named in several best workplace lists globally in 2023. Additionally, we have been making further strides in advancing our environmental, social and governance ("ESG") agenda to drive sustainability across the organization and recently published our second annual ESG report in the third quarter of 2023. For more information on our ESG strategy, goals, performance, and achievements, please visit “Our Company—ESG Report” at https://www.integralife.com/esg-report. Information on our website is not incorporated by reference herein and is not part of this Annual Report on Form 10-K.

New Product Introductions and Research and Development Updates

We continue to invest in collecting clinical evidence to support our existing products and new product launches, and to ensure that we obtain market access for broader and more cost-effective solutions.

Electromechanical Technologies and Instrumentation. The CSS business consists of a broad portfolio of market-leading brands, such as Codman®, DuraGen®, DuraSeal®, CUSA®, Mayfield®,Bactiseal®, and Certas® Plus,which are used for the management of multiple disease states, including brain tumors, traumatic brain injury, hydrocephalus and other neurological conditions. The growth in this business in recent years has been fueled by geographic expansion and new product registrations in markets, such as China, Japan, and Europe, which we expect to continue in the near-to-long term. Because our electromechanical products and instruments address significant needs in surgical procedures and limit uncertainty for surgeons, we continue to invest in registrations, clearances, and approvals for new indications and next generation improvements to our market-leading products. We have several active programs focused on life cycle management and innovation for capital and disposable products in our portfolio. Our product development efforts are focused on core clinical applications in cerebrospinal fluid ("CSF") management, neuro-critical care monitoring, minimally invasive instruments and electrosurgery and ultrasonic medical technologies, as well as our ambition to transform the standard of care in neurosurgery with product advancements in minimally invasive surgery ("MIS") and the surgical management of intracerebral hemorrhage ("ICH"). Our lighting franchise is among the most dynamic in the industry.

We are focused on the development of core clinical applications in our electromechanical technologies portfolio. We continue to update our CUSA Clarity platform by incorporating new ultrasonic handpiece and integrated electrosurgical capabilities. In 2022, we made progress to several enhancements to our CUSA Clarity Tissue Ablation System. The extended laparoscopic tip was launched in the U.S. to enhance laparoscopic liver procedures. In addition, a single-sided bone tip received 510(k) clearance from the FDA. Commercial launch was completed successfully in early 2023. In August 2023, we launched a modified 23 kHz CUSA Electrosurgery Module (CEM) for Clarity handpieces that can be used with additional electrosurgery generators. We continue to work with several instrument partners to bring new surgical instrument platforms to the market.

Throughout 2023 we also continued to advance the early-stage technology platforms we acquired in 2019. Through the acquisition of Arkis Biosciences, Inc. ("Arkis") we added a platform technology, CerebroFlo® external ventricular drainage ("EVD"), catheter with Endexo® technology, a permanent additive designed to reduce the potential for catheter obstruction due to thrombus formation. The CerebroFlo EVD catheter has demonstrated an average of 99% less thrombus accumulation onto its surface, in vitro, compared to a market leading EVD catheter. Our work to combine our Bactiseal® antimicrobial technology with the Endexo anti-occlusive technology continues to progress for both a silicone-based hydrocephalus and EVD project.

Throughout 2023, we continued to advance our innovation from the Rebound Therapeutics Corporation ("Rebound Therapeutics"), which was acquired in 2019. Rebound Therapeutics specializes in a single-use medical device, known as the Aurora Surgiscope, which is the only tubular retractor system designed for cranial surgery with an integrated access channel, camera and lighting. The 9mm Surgiscope received 510(k) clearance from the FDA in the fourth quarter of 2023.

In the third quarter of 2021, we launched our CereLink ICP Monitor System in the U.S. and Europe and continued the global rollout in the first half of 2022. On August 18, 2022, the Company, after consultation with the FDA and other regulatory authorities outside of the United States, initiated an immediate voluntary global product removal of all CereLink® intracranial pressure monitors. We believe that the out-of-range readings are principally caused by a combined interaction of electrical noise (originating from sources such as electrical components in the device, other devices set up near the CereLink Monitor, and the hospital power grid) and an electrical potential difference between the patient and monitor. We submitted a traditional 510(k) submission to the FDA on September 15, 2023 as a result of customer reports about monitors whose pressure readings were out of range. We have received 510(k) clearance from the FDA on February 4th, 2024. We plan to resume shipments of CereLink monitors in the U.S. in the first quarter of 2024. Shipments resumed in international markets with a limited release in the third quarter of 2023.

Regenerative Technologies. We were the first company to receive an FDA claim for regeneration of dermal tissue and are a world leader in regenerative technology. Our regenerative technology development program applies our expertise in bioengineering to a range of biomaterials including natural materials such as purified collagen, intact human or animal tissues, honey as well as resorbable synthetic polymers with our DuraSorb and DuraSeal product lines. These unique product designs are used for neurosurgical and reconstructive surgical applications, as well as dermal regeneration, including the healing of chronic and acute wounds, tendon and nerve repair. Our regenerative technology platform includes our legacy Integra® Dermal Regeneration Template ("IDRT") products and complementary technologies that we have acquired. Our collagen manufacturing capability, combined with our history of innovation, including our launch of NeuraGen 3D, provides us with strong platform technologies for multiple indications.

In the second quarter of 2023, after consultation with the FDA, The Company initiated a voluntary global recall of all products manufactured at the Boston facility, including Primatrix®, Surgimend®, Revize™, and TissueMend™, distributed between March 1, 2018 and May 22, 2023.

In the third quarter of 2021, we filed a PMA application for a specific indication for Surgimend® in the use of post-mastectomy breast reconstruction. In 2022, we acquired SIA, which is also PMA for DuraSorb with IBBR, and in June 2023 we completed enrollment in the DuraSorb U.S. IDE clinical study for two-stage breast reconstruction; the primary follow-up period is one year after device implantation. By offering two distinct product solutions, we believe we have the opportunity to build a leading position in the IBBR market. We hope to obtain FDA approvals in 2025.

Additionally, in 2022 we launched NeuraGen 3D Nerve Guide Matrix, a resorbable implant for repair of peripheral nerve discontinuities and engineered to create an optimized environment for nerve regeneration. Following the completion of design control activities in 2022, we launched both Cytal and MicroMatrix in Europe in 2023. In 2023, the Company received 510(k) clearance from the FDA for MicroMatrix® Flex.

As part of our ongoing efforts to remain compliant, the Company continues to work towards European Union Medical Device Regulation ("EU MDR") certifications. In 2023 the Company has received EU MDR certification in the CSS segment for Hakim Programmable Valves, Certas Plus without Bactiseal catheters, and DuraSeal Dural. Additionally, the Company has received EU MDR certification in the TT segment for IDRT and BioPatch.

FDA Matters

On August 18, 2022, we, after consultation with the FDA and other regulatory authorities outside of the United States, initiated an immediate voluntary global product removal of all CereLink intracranial pressure monitors as a result of customer reports about monitors whose pressure readings were out of range. We believe that the out-of-range readings are principally caused by a combined interaction of electrical noise (originating from sources such as electrical components in the device, other devices set up near the CereLink Monitor, and the hospital power grid) and an electrical potential difference between the patient and monitor. These out-of-range readings have occurred at a low incidence rate and at a limited number of sites; however, out of an abundance of caution, we removed all CereLink monitors from the field.

We submitted a traditional 510(k) premarket notification to the FDA on September 15, 2023 and received 510(k) clearance on February 4th, 2024 from the FDA. The submission included design changes to remedy the previously-observed issues identified above. We plan to resume shipments of CereLink monitors in the U.S. in the first quarter of 2024. We resumed shipments in international markets with a limited release in the third quarter of 2023.

On March 7, 2019, TEI Biosciences, Inc. ("TEI"), one of our wholly-owned subsidiaries, received a Warning Letter (the "2019 Warning Letter"), dated March 6, 2019, from the FDA. The 2019 Warning Letter related to quality systems issues at TEI's manufacturing facility located in Boston, Massachusetts. The Boston facility manufactures extracellular bovine matrix products in our Tissue Technologies segment that are sold both in wound reconstruction and care and in private label channels. The letter resulted from an inspection held at that facility in October and November 2018 and did not identify any new observations that were not already provided in the Form 483 that followed the inspection. We submitted our initial response to the 2019 Warning Letter on March 28, 2019 and provide regular progress reports to the FDA as to its corrective actions. On October 28, 2021, the FDA initiated an inspection of the facility and at the conclusion of the inspection, issued an FDA Form 483 on November 12, 2021 (the "2021 Form 483"). We provided an initial response to the inspection observations. On March 1, 2023, the FDA commenced an inspection of the Boston facility, and issued an FDA Form 483 at the conclusion of this inspection (the "2023 Form 483"). In May 2023, after consultation with the FDA, the Company initiated a voluntary recall of products manufactured in the Boston facility distributed between March 1, 2018 and May 22, 2023, and extended the temporary halt of manufacturing at the facility to implement additional detection and quality controls. On July 19, 2023, TEI received a Warning Letter, dated July 17, 2023, from the FDA related to quality system issues at the Boston facility (the "2023 Warning Letter"). The 2023 Warning Letter did not identify any new observations that had not already been provided in the 2023 Form 483. The Company has submitted an initial response to the FDA for both the 2023 Form 483 and the 2023 Warning Letter. We are committed to resolving the matters identified in the Warning Letters and Form 483s and are continuing our significant efforts to remediate the observations.

Following implementation of upgraded Good Laboratory Practices and expertise and a standardization of corrective and preventative action processes and governance, the Company resumed manufacturing at its Boston facility in the fourth quarter of 2023. We anticipate submitting a final external audit to the FDA by the end of the first quarter of 2024 with commercialization targeted for the second half of 2024.

Although the Warning Letters do not restrict the Company's ability to seek FDA 510(k) clearance of products, PMAs for Class III devices to which the quality system regulation violations are reasonably related will not be approved until the violations have been addressed. We cannot give any assurances that the FDA will be satisfied with our response to the issues identified by the FDA or as to the expected date of the resolution of such issues. Until the issues cited by the FDA are resolved to the FDA's satisfaction, the FDA may initiate additional regulatory action without further notice. Any adverse regulatory action, depending on its magnitude, may restrict us from effectively manufacturing, marketing and selling our products and could have a material adverse effect on our business, financial condition and results of operations.

We continue to work with our customers in wound reconstruction and care and in private label as we move toward commercialization in the second half of 2024. Revenues of products manufactured in the Boston facility for the year ended December 31, 2022 were approximately 5.3% of consolidated revenues. For the year ended December 31, 2023, due to the Boston recall, the Company recorded a $18.7 million provision for product returns, as a reduction of net revenue. Of this amount, $9.9 million was credited to customers in the year ended December 31, 2023. The Company also recorded a $24.6 million write off of inventory that was no longer able to be sold.

ACQUISITIONS & DIVESTITURES

Acquisitions

Our growth strategy includes the acquisition of businesses, assets or products lines to increase the breadth of our offerings and the reach of our product portfolios and drive relevant scale to our customers. As a result of acquisitions in 2022, our financial results for the year ended December 31, 2023 may not be directly comparable to those of the corresponding prior-year periods. See Note 4, *Acquisitions and Divestitures,* of the Notes to Consolidated Financial Statements (Part IV, Item 15 of this Annual Report on Form 10-K) for a further discussion.

Surgical Innovation Associates, Inc.

On December 6, 2022, we completed its acquisition of SIA for an acquisition purchase price of $51.5 million. In addition to the purchase price, the acquisition includes two separate contingent considerations payments, which are dependent on 1) achieving certain revenue-based performance milestones in 2023, 2024, and 2025 (up to $50M in additional payments), as well as 2) the approval by the FDA of the PMA application for DuraSorb for certain uses by certain timing targets (up to $40M in additional payments). On June 28, 2023, we announced the completion of patient enrollment in the DuraSorb U.S. IDE clinical study for two-stage breast reconstruction. Prior to our acquisition, SIA was a privately-held company whose core technology, DuraSorb, is a fully resorbable scaffold of a globally accepted polymer, cleared for use in hernia repair, abdominal wall, and other soft tissue reinforcement. DuraSorb sales are reported within Integra's TT segment as part of its Wound Reconstruction and Care franchise. See Note 4, *Acquisitions and Divestitures*, to the Notes to Consolidated Financial Statements (Part IV, Item 15 of this Annual Report on Form 10-K) for details.

Acclarent Inc.

In December 2023, we entered into a definitive agreement to acquire Acclarent, Inc. from Ethicon, Inc., a Johnson & Johnson MedTech company for $275 million in cash at closing, subject to customary purchase price adjustments, and an additional $5 million upon the achievement of certain regulatory milestones. Acclarent is an innovator and market leader in ENT procedures and we believe that the acquisition of Acclarent will provide Integra with the opportunity to become a leading provider of ENT products and technologies. Furthermore, we believe that, owing to the ENT segment being an anatomical adjacency to neurosurgery, the acquisition will allow Integra to deliver future innovation both within the ENT segment and across our other CSS technology platforms.

Divestitures

On August 31, 2022, the Company completed the sale of its TWC business to Gentell, Inc. ("Gentell") for $28.8 million, which consists of $27.8 million in cash plus $1.0 million in contingent consideration which may be received upon achieving certain revenue-based performance milestones two years after the closing date. The proceeds from the sale of the TWC business of $27.8 million is presented in the consolidated statement of cash flows net of cash transferred of $3.5 million and other transaction fees. The transaction included the sale of the Company's TWC products, such as sponges, gauze and conforming bandages, and certain advanced wound care dressings, such as supportive, calcium alginate, hydrogel, and foam dressings. In connection with the sale, the Company recognized $0.6 million as a gain from the sale of business in the consolidated statement of operations for the fiscal year ended December 31, 2022. The transaction is subject to final working capital adjustments. See Note 4, *Acquisitions and Divestitures*, to the Notes to Consolidated Financial Statements (Part IV, Item 15 of this Form 10-K) for details.

OPTIMIZATION AND INTEGRATION ACTIVITIES

As a result of our ongoing acquisition strategy and significant growth in recent years, in 2023 we have undertaken cost-saving initiatives to consolidate manufacturing operations, distribution facilities and transfer activities, eliminate duplicative positions, realign various sales and marketing activities, and expand and upgrade production capacity for our regenerative technology products. These efforts are expected to continue and while we expect a positive impact from ongoing restructuring, integration, and manufacturing transfer and expansion activities, such results remain uncertain. In support of our continued focus on product margins we closed a manufacturing facility located in France in 2022, and transferred production to our existing Switzerland facility. In addition to closing the manufacturing facility, we outsourced certain transactional back-office finance and customer service activities to enhance customer quality, build scale for future growth, and capture cost efficiencies.

RESULTS OF OPERATIONS

Executive Summary

Net income for the year ended December 31, 2023 was $67.7 million, or $0.84 per diluted share, compared to $180.6 million, or $2.16 per diluted share for the year ended December 31, 2022. The decrease in net income for the year ended December 31, 2023, was primarily driven by impacts from the Boston recall. This includes inventory write-offs of $24.6 million, and a provision for product returns of $18.7 million for the year ended December 31, 2023.

Income before taxes includes the following special charges:

	Years Ended December 31,	
Dollars in thousands	2023	2022
Acquisition, divestiture and integration-related charges [1]	$ 25,173	$ (18,849)
Structural optimization charges	23,020	23,072
Boston recall expenses[2]	40,034	
EU medical device regulation	46,559	45,147
Total	134,786	49,370

[1] See Note 4, *Acquisitions and Divestitures* of the Notes to Consolidated Financial Statements (Part IV, Item 15 of this Annual Report on Form 10-K) for details.

[2] This includes inventory write-offs and idle capacity charges.

The items reported above are reflected in the consolidated statements of operations as follows:

Dollars in thousands	Years Ended December 31, 2023	2022
Cost of goods sold	$ 63,182	$ 11,722
Research and development	18,490	21,882
Selling, general and administrative	53,979	20,584
Gain from the sale of business	—	(644)
Other (income) expense	(865)	(4,174)
Total	134,786	49,370

We typically define special charges as items for which the amounts and/or timing of such expenses may vary significantly from period to period, depending upon our acquisition, divestiture, integration and restructuring activities, and for which the amounts are non-cash in nature, or for which the amounts are not expected to recur at the same magnitude. We believe that given our ongoing strategy of seeking acquisitions, our continuing focus on rationalizing our existing manufacturing and distribution infrastructure and our continuing review of various product lines in relation to our current business strategy, some of the special charges discussed above could recur with similar materiality in the future.

We believe that the separate identification of these special charges provides important supplemental information to investors regarding financial and business trends relating to our financial condition and results of operations. Investors may find this information useful in assessing comparability of our operating performance from period to period, against the business model objectives that management has established, and against other companies in our industry. We provide this information to investors so that they can analyze our operating results in the same way that management does and to use this information in their assessment of our core business and valuation of Integra.

Revenues and Gross Margin

Our revenues and gross margin on product revenues were as follows:

Dollars in thousands	Years Ended December 31, 2023	2022
Segment Net Sales		
Codman Specialty Surgical	$ 1,058,993	$ 1,019,564
Tissue Technologies	482,580	538,102
Total revenues	1,541,573	1,557,666
Cost of goods sold	656,838	587,355
Gross margin on total revenues	$ 884,735	$ 970,311
Gross margin as a percentage of total revenues	57.4 %	62.3 %

Revenues

For the year ended December 31, 2023, total revenues decreased by $16.1 million, or 1.0%, to $1,541.6 million from $1,557.7 million during the prior year. This decrease was primarily driven by the impact of the Boston recall, which was comprised of $18.7 million return reserve recorded, as well as a decline in revenue of $61.9 million. This decrease is inclusive of an unfavorable foreign currency impact of $6.8 million, as well as a $16.3 million decrease that impacts both domestic and international revenues, related to the divestiture of the TWC business. This also includes an increase of $9.8 million related to the SIA acquisition. Excluding the impacts of the Boston recall, foreign currency impact, and TWC divestiture, domestic revenues increased by $38.4 million or 3.7%. International revenues increased by $39.4 million or 9.6%. The increase in domestic revenues was primarily driven by increases in our Instruments and Neurosurgery portfolio. The increase in international revenues was primarily driven by our Asia Pacific region including China, Japan, and Australia.

In the CSS segment, revenues were $1,059.0 million which was an increase of $39.4 million, or 3.9% as compared to the prior-year period. This increase is inclusive of a $6.4 million unfavorable foreign currency impact on revenue. Excluding the impact of foreign currency, the CSS segment revenues increased $45.8 million as compared to the prior year period. This increase was driven primarily by mid single digit growth in both our Neurosurgery and Instruments portfolios as compared to the same period in the prior year. The increase was driven primarily by growth in dural access & repair, CSF management, as well as instruments.

In the TT segment, revenues were $482.6 million, which was a decrease of $55.5 million, or 10.3% as compared to the prior-year period, inclusive of a $0.4 million unfavorable foreign currency impact on revenue, a $16.3 million decrease that impacts both domestic and international revenues related to the divestiture of the TWC business, and a $9.8 million increase related to the SIA acquisition. This also includes the impact of the Boston recall of $18.7 million return reserve and $61.9 million decline in revenue. Excluding the impact of these items, the TT segment increased by $32.0 million as compared to the same period in the prior year, attributable to strong sales in IDRT and MicroMatrix® and Cytal®

Gross Margin

Gross margin was $884.7 million for the year ended December 31, 2023, a decrease of $85.6 million from $970.3 million for the same period last year. Gross margin as a percentage of revenues was 57.4% in 2023 and 62.3% in 2022. The decrease in gross margin percentage was primarily associated with the Boston recall, which includes inventory write-offs of $24.6 million, a provision for product returns of $18.7 million, and idle capacity at the Boston facility of $15.0 million for the year ended December 31, 2023.

Operating Expenses

The following is a summary of operating expenses as a percent of total revenues:

	Years Ended December 31,	
	2023	2022
Research and development	6.8 %	6.5 %
Selling, general and administrative	42.6 %	39.6 %
Intangible asset amortization	0.8 %	0.9 %
Total operating expenses	50.2 %	47.0 %

Total operating expenses, which consist of research and development, selling, general and administrative, and intangible asset amortization expenses, increased by $41.8 million or 5.7% to $773.2 million in 2023, compared to $731.4 million in the prior year.

Research and Development

Research and development expenses for the year ended December 31, 2023 increased by $3.0 million as compared to the prior year. This increase in spending resulted from expenses related to the SIA acquisition, new product development and clinical studies.

Selling, General and Administrative

Selling, general and administrative expenses for the year ended December 31, 2023 increased by $40.3 million as compared to the prior year driven primarily due to increased costs associated with the SIA acquisition, and higher spend in commercial selling activities. Current year expenses included an increase in the fair value of contingent considerations of $12.9 million, primarily related to SIA. Prior year expenses included a reduction in the fair value of contingent consideration for ACell, Inc. of $18.1 million.

Intangible Asset Amortization

Amortization expense (excluding amounts reported in cost of product revenues for technology-based intangible assets) in 2023 was $12.4 million compared to $13.9 million in 2022, a decrease resulting from intangible assets sold with the TWC divestiture.

We may discontinue certain products in the future as we continue to assess the profitability of our product lines. As our profitability assessment evolves, we may make further decisions about our trade names and incur impairment charges or accelerated amortization. We expect total annual amortization expense to be approximately $82.7 million in 2024, $82.7 million in 2025, $82.5 million in 2026, $80.6 million in 2027, $79.0 million in 2028 and $481.2 million thereafter.

Non-Operating Income and Expenses

The following is a summary of non-operating income and expenses:

Dollars in thousands	Years Ended December 31, 2023	2022
Interest income	$ 17,202	$ 11,917
Interest expense	(51,377)	(49,594)
Gain from sale of business	—	644
Other income, net	3,718	12,007
Total non-operating income and expense	$ (30,457)	$ (25,026)

Interest Income

Interest income for the year ended December 31, 2023 increased by $5.3 million as compared to the same period last year primarily due to higher interest rates.

Interest Expense

Interest expense for the year ended December 31, 2023 increased by $1.8 million as compared to the same period last year primarily due to incremental borrowing on the revolver in the second half of 2023.

Gain from the Sale of Businesses

On August 31, 2022, the Company completed the sale of its TWC business to Gentell and recognized a gain of $0.6 million million.

Other Income, Net

Other income, net for the year ended December 31, 2023 decreased by $8.3 million, primarily due to lower Transition Service Agreement ("TSA") income from our recent divestitures.

Income Taxes

Our effective income tax rate was 16.4% and 15.6% of income before income taxes in 2023 and 2022, respectively. See Note 12, *Income Taxes*, in our consolidated financial statements for a reconciliation of the United States federal statutory rate to our effective tax rate. Our effective tax rate could vary from year to year depending on, among other factors, tax law changes, the geographic and business mix and taxable earnings and losses. We consider these factors and others, including our history of generating taxable earnings, in assessing our ability to realize deferred tax assets. We estimate our worldwide effective income tax rate for 2024 to be approximately 19.8%, estimated based on existing tax laws.

At December 31, 2023, the Company had $12.5 million of valuation allowance against the remaining $239.6 million of gross deferred tax assets recorded at December 31, 2023. Our deferred tax asset valuation allowance increased by $2.8 million in 2023, primarily driven by a $3.3 million increase related to the new Swiss tax credit. The valuation allowance for 2022 had remained substantially unchanged as compared to 2021. This valuation allowance relates to deferred tax assets for which the Company does not believe it has satisfied the more likely than not threshold for realization.

At December 31, 2023, we had net operating loss carryforwards of $64.7 million for federal income tax purposes, $98.4 million for foreign income tax purposes and $19.2 million for state income tax purposes to offset future taxable income. The federal net operating loss carryforwards decreased during 2023 due to usage during the year. Of the total federal net operating loss carryforwards, $55.8 million expire through 2037 and $8.9 million have an indefinite carryforward period. Regarding the foreign net operating loss carryforwards, $81.0 million expire through 2028 and $17.4 million have an indefinite carryforward period. The state net operating loss carryforwards expire in 2036.

As of December 31, 2023, the Company has not provided deferred income taxes on unrepatriated earnings from foreign subsidiaries as they are deemed to be indefinitely reinvested unless there is a manner under which to remit the earnings with no material tax cost. Such taxes would primarily be attributable to foreign withholding taxes and local income taxes when such earnings are distributed.

GEOGRAPHIC PRODUCT REVENUES AND OPERATIONS

The Company attributes revenues to geographic areas based on the location of the customer. Total revenue by major geographic area consisted of the following:

	Years Ended December 31,	
Dollars in thousands	2023	2022
United States	$ 1,100,730	$ 1,126,810
Europe	165,221	170,903
Asia Pacific	193,096	176,477
Rest of World	82,526	83,476
Total Revenues	$ 1,541,573	$ 1,557,666

We generate significant revenues outside the U.S., a portion of which are U.S. dollar-denominated transactions conducted with customers that generate revenue in currencies other than the U.S. dollar. As a result, currency fluctuations between the U.S. dollar and the currencies in which those customers do business could have an impact on the demand for our products in foreign countries. Local economic conditions, regulatory compliance or political considerations, the effectiveness of our sales representatives and distributors, local competition and changes in local medical practice all may combine to affect our sales into markets outside the U.S.

Domestic revenues decreased by $26.1 million for the year ended December 31, 2023 compared to the same period last year. European sales decreased by $5.7 million for the year ended December 31, 2023 compared to the same period last year. Sales to customers in Asia Pacific increased by $16.6 million for the year ended December 31, 2023 compared to the same period last year. The Rest of the World for the year ended December 31, 2023 decreased by $1.0 million compared to the same period last year. The international revenues were impacted by a $6.8 million unfavorable foreign exchange impact, with the larger impact in Europe. The decrease in global revenues is primarily the result of the Boston recall which affected both domestic and international markets. We continue to see growth in our Asia Pacific Market by leveraging our existing portfolios, specifically CUSA® and DuraGen®, in China and Japan.

LIQUIDITY AND CAPITAL RESOURCES

Working Capital

At December 31, 2023 and December 31, 2022, working capital was $751.1 million and $840.6 million, respectively. Working capital consists of total current assets less total current liabilities as presented in the consolidated balance sheets.

Cash and Marketable Securities

The Company had cash and cash equivalents totaling approximately $276.4 million and $456.7 million at December 31, 2023 and 2022, respectively, which are valued based on Level 1 measurements in the fair value hierarchy. At December 31, 2023, our non-U.S. subsidiaries held approximately $246.9 million of cash and cash equivalents that are available for use outside the U.S. The Company asserts that it has the ability and intends to indefinitely reinvest the undistributed earnings from its foreign operations unless there is no material tax cost to remit the earnings into the U.S.

Short Term Investments

The Company had short term investments totaling approximately $32.7 million at December 31, 2023 and $0.0 million at December 31, 2022.

Cash Flows

Dollars in thousands	Years Ended December 31, 2023	2022
Net cash provided by operating activities	$ 139,955	$ 264,469
Net cash used in investing activities	(94,178)	(58,580)
Net cash used (provided) by financing activities	(229,925)	(251,953)
Effect of exchange rate fluctuations on cash	3,889	(10,723)
Net increase (decrease) in cash and cash equivalents	$ (180,259)	$ (56,787)

Cash Flows Provided by Operating Activities

Operating cash flows for the year ended December 31, 2023 decreased by $124.5 million compared to the same period in 2022. Net income after removing the impact of non-cash adjustments decreased for the year ended December 31, 2023, by approximately $82.4 million as compared to 2022 primarily due to lower revenues and inventory write-off attributable to the Boston recall along with higher selling expenses. The changes in assets and liabilities, net of business acquisitions, decreased cash flows by $81.6 million in 2023 as compared to the decrease in cash flows of $39.4 million for the same period in 2022. The change in 2023 is mainly attributable to increases in inventory.

Operating cash flows for the year ended December 31, 2022 decreased by $48.0 million compared to the same period in 2021. Net income after removing the impact of the gain on sale of businesses and non-cash adjustments increased for the year ended December 31, 2022, by approximately $9.6 million as compared to 2021 primarily due to earnings from higher revenues. The changes in assets and liabilities, net of business acquisitions, decreased cash flows by $39.4 million in 2022 as compared to the increase in cash flows of $18.2 million for the same period in 2021. The change in 2022 is mainly attributable to increases in inventory and accounts receivable. The increase in inventory is due to a build up of safety stock due to supply chain challenges. The increase in accounts receivable is due to increased sales as well as a increase in days sales outstanding.

Cash Flows Used in Investing Activities

During the year ended December 31, 2023, we paid $66.9 million for capital expenditures to support operations improvement initiatives at a number of our manufacturing facilities, including our Braintree facility in Boston, and other information technology investments. In addition, we paid $32.7 million related to short-term investments. This was partially offset by $5.4 million of proceeds on cross-currency swaps designated as net investment hedge.

During the year ended December 31, 2022, we paid $42.3 million for capital expenditures to support operations improvement initiatives at a number of our manufacturing facilities and other information technology investments, $51.5 million to acquire SIA, as well as the $4.7 million payment related to the final developmental milestone for Rebound Therapeutics Corporation. This was partially offset by the net proceeds from the sale of the TWC business of $24.0 million. The proceeds from the sale of the TWC business of $27.8 million is presented net of cash transferred of $3.5 million and other transaction fees. Additionally, the Company also received $4.9 million proceeds on cross-currency swaps designated as net investment hedge.

Cash Flows (Used in) Provided by Financing Activities

Uses of cash from financing activities for the year ended December 31, 2023 primarily related to the purchase of treasury stock of $275.0 million under the accelerated share repurchase agreements that were completed during the year. In addition, the Company had $5.9 million in cash taxes paid in net equity settlements related to the vesting of annual grants. The Company also had repayments of $110.6 million under our Senior Credit Facility (as defined below) and Securitization Facility offset by $165.1 million borrowings under our Senior Credit Facility and Securitization Facility. The Company also had $4.3 million proceeds from the exercise of stock options.

Uses of cash from financing activities for the year ended December 31, 2022 primarily related to the purchase of treasury stock of $125.0 million under the 2022 accelerated share repurchase agreement that was completed in the first quarter of 2022. In addition, the Company had $24.6 million in cash taxes paid in net equity settlements, $16.8 million of which resulted from the departure of the former chief executive officer of the Company. The Company also had repayments of $148.6 million under our Senior Credit Facility and Securitization Facility offset by $40.8 million borrowings under our Senior Credit Facility and Securitization Facility. The Company also had $5.5 million proceeds from the exercise of stock options.

Amended and Restated Senior Credit Agreement, Convertible Senior Notes, Securitization and Related Hedging Activities

See Note 5, *Debt*, to the Notes to Consolidated Financial Statements (Part IV, Item 15 of this Annual Report on Form 10-K) for further details of our Amended and Restated Senior Credit Agreement, the 2025 Notes and Securitization Facility and Note 6, *Derivative Instruments* to the Notes to Consolidated Financial Statements (Part IV, Item 15 of this Annual Report on Form 10-K) for further details of our hedging activities.

Share Repurchase Plan

See Note 8, *Treasury Stock*, to the Notes to Consolidated Financial Statements (Part IV, Item 15 of this Annual Report on Form 10-K) for further details of our share repurchase programs.

Dividend Policy

We have not paid any cash dividends on our common stock since our formation. Our Senior Credit Facility limits the amount of dividends that we may pay. Any future determinations to pay cash dividends on our common stock will be at the discretion of the Board and will depend upon our financial condition, results of operations, cash flows and other factors deemed relevant by the Board.

Capital Resources

We believe that our cash and available borrowings under the Senior Credit Facility are sufficient to finance our operations and capital expenditures over the next twelve months. Our future capital requirements will depend on many factors, including the growth of our business, the timing and introduction of new products and investments, strategic plans and acquisitions, among others. Additional sources of liquidity available to us include short term borrowings and the issuance of long term debt and equity securities.

Off-Balance Sheet Arrangements

We do not have any off–balance sheet financing arrangements during the year-ended December 31, 2023 that have or are reasonably likely to have, a current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that are material to our interests.

Contractual Obligations and Commitments

We will continue to have cash requirements to support seasonal working capital needs and capital expenditures, to pay interest, to service debt, and to fund acquisitions. As part of our ongoing operations, we enter into contractual arrangements that obligate us to make future cash payments.

Our primary obligations include principal and interest payments on the revolving portion and Term Loan component of the Senior Credit Facility, Securitization Facility and Convertible Securities. See Note 5, *Debt*, to the Notes to Consolidated Financial Statements (Part IV, Item 15 of this Annual Report on Form 10-K) for details. The Company also leases some of our manufacturing facilities and office buildings which have required future minimum lease payments. See Note 11, *Leases and Related Party Leases*, to the Notes to Consolidated Financial Statements (Part IV, Item 15 of this Annual Report on Form 10-K) for a schedule of our future minimum lease payments. Amounts related to the Company's other obligations, including employment agreements and purchase obligations were not material.

The Company has contingent consideration obligations related to prior and current year acquisitions and future pension contribution obligations. See Note 10, *Retirement Benefit Plans*, and Note 15, *Commitments and Contingencies* to the Notes to Consolidated Financial Statements (Part IV, Item 15 of this Annual Report on Form 10-K) for details. The associated obligations are not fixed. The Company also has a liability for uncertain tax benefits including interest and penalties. See Note 12, *Income Taxes* to the Notes to Consolidated Financial Statements (Part IV, Item 15 of this Annual Report on Form 10-K) for details. The Company cannot make a reliable estimate of the period in which the uncertain tax benefits may be realized.

Employee Termination Benefits

The Company incurred employee termination costs on sales force restructuring activities in the consolidated statement of operations for the year ended December 31, 2023. In 2022, the Company incurred employee termination costs on restructuring activities associated with the closure of the manufacturing facility in France. Restructuring costs were included in accrued expenses and other current liabilities in the consolidated balance sheet for the year ended December 31, 2023 and 2022. See Note 2, *Summary of Significant Accounting Policies*, of the Notes to Consolidated Financial Statements (Part IV, Item 15 of this Annual Report on Form 10-K) for further details.

CRITICAL ACCOUNTING POLICIES AND THE USE OF ESTIMATES

Our discussion and analysis of financial conditions and results of operations is based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP"). The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent liabilities, and the reported amounts of revenues and expenses. Significant estimates affecting amounts reported or disclosed in the consolidated financial statements include allowances for doubtful accounts receivable and sales returns and allowances, net realizable value of inventories, valuation of intangible assets including amortization periods for acquired intangible assets, discount rates and estimated projected cash flows used to value and test impairments of long-lived assets and goodwill, estimates of projected cash flows and depreciation and amortization periods for long-lived assets, computation of taxes, valuation allowances recorded against deferred tax assets, the valuation of stock-based compensation, valuation of derivative instruments, valuation of contingent liabilities, the fair value of debt instruments and loss contingencies. These estimates are based on historical experience and on various other assumptions that are believed to be reasonable under the current circumstances.

We believe that the following accounting policies, which form the basis for developing these estimates, are those that are most critical to the presentation of our consolidated financial statements and require the more difficult subjective and complex judgments, often because of the need to make estimates about the effect of matters that are inherently uncertain. Because of this uncertainty, actual results could differ from these estimates.

Inventories

Inventories, consisting of purchased materials, direct labor and manufacturing overhead, are stated at the lower of cost (determined by the first-in, first-out method) or net realizable value. At each balance sheet date, we evaluate ending inventories for excess quantities, obsolescence or shelf-life expiration. Our evaluation includes an analysis of historical sales levels by product, projections of future demand by product, the risk of technological or competitive obsolescence for our products, general market conditions, a review of the shelf-life expiration dates for our products, and the feasibility of reworking or using excess or obsolete products or components in the production or assembly of other products that are not obsolete or for which we do not have excess quantities in inventory. To the extent that we determine there are excess or obsolete quantities or quantities with a shelf life that is too near its expiration for us to reasonably expect that we can sell those products prior to their expiration, we adjust their carrying value to estimated net realizable value. If future demand or market conditions are lower than our projections, or if we are unable to rework excess or obsolete quantities into other products, we may record further adjustments to the carrying value of inventory through a charge to cost of product revenues in the period the revision is made. As of December 31, 2023, our reserve for inventory excess and obsolescence is 9% of total inventory on our consolidated balance sheet.

The Company capitalizes inventory costs associated with certain products prior to regulatory approval, based on management's judgment of probable economic benefit. The Company could be required to expense previously capitalized costs related to pre-approval inventory upon a change in such judgment, due to, among other potential factors, a denial or delay of approval by necessary regulatory bodies or a decision by management to discontinue the related development program.

Acquisitions

Results of operations of acquired companies are included in the Company’s results of operations as of the respective acquisition dates. The Company accounts for the acquisition of a business in accordance with ASC Topic 805, *Business Combinations* ("ASC Topic 805"). Amounts paid to acquire a business are allocated to the assets acquired and liabilities assumed based on the fair values at the date of acquisition. Any excess of the purchase price over the fair value of the net assets acquired in recorded as goodwill. Transaction costs and costs to restructure the acquired company are expensed as incurred.

Contingent consideration is recorded at fair value as measured on the date of acquisition. The value recorded is based on estimates of future financial projections under various potential scenarios using either a Monte Carlo simulation or the probability-weighted income approach derived from revenue estimates and probability assessment with respect to the likelihood of achieving contingent obligations. Contingent payments related to acquisitions consist of development, regulatory, and commercial milestone payments, in addition to sales-based payments, and are valued using discounted cash flow techniques. Each quarter until such contingent amounts are earned, the fair value of the liability is remeasured at each reporting period and adjusted as a component of operating expenses based on changes to the underlying assumptions. The change in the fair value of sales-based payments is based upon future revenue estimates and increases or decreases as revenue estimates or expectation of timing of payment charges. The estimates used to determine the fair value of the contingent consideration liability are subject to significant judgment and actual results are likely to differ from the amounts originally recorded.

The Company determines the fair value of acquired intangible assets based on detailed valuations that use certain information and assumptions provided by management. The Company allocates any excess purchase price over the fair value of the net tangible and intangible assets acquired to goodwill. Determining the fair value of these intangible assets, acquired as part of a business combination requires the Company to make significant estimates. These estimates include the amount and timing of projected future cash flows, the discount rate used to discount those cash flows to present value, the assessment of the asset's life cycle, and the consideration of legal, technical, regulatory, economic, and competitive risks. The fair value assigned to other intangible assets is determined by estimating the future cash flows of each project or technology and discounting the net cash flows back to their present values. The discount rate used is determined at the time of measurement in accordance with accepted valuation methodologies.

In our most recent acquisition of SIA, the key areas of judgement relating to the valuation of the acquired definite-lived developed technology intangible assets were the net revenue growth rates, cost of sales, selling and marketing costs, discounts rates, and asset useful life. The key areas of judgement relating to the valuation of the contingent consideration are the inputs to the Monte-Carlo model including revenue-adjusted discount rate, counterpart discount rate, revenue volatility and forecasted revenue, earnings before income taxes and fixed costs. These assumptions were developed with the assistance of a third-party valuation expert.

Acquired IPR&D is recognized at fair value and initially characterized as an indefinite-lived intangible asset, irrespective of whether the acquired IPR&D has an alternative future use. The Company uses the income approach to determine the fair value of developed technology and IPR&D acquired in a business combination. This approach determines fair value by estimating the after-tax cash flows attributable to the respective asset over its useful life and then discounting these after-tax cash flows back to a present value. Some of the more significant assumptions inherent in the development of those asset valuations include the estimated net cash flows for each year for each product including net revenues, cost of sales, R&D costs, selling and marketing costs, the appropriate discount rate to select in order to measure the risk inherent in each future cash flow stream, the assessment of each asset's life cycle, and competitive trends impacting the asset and each cash flow stream. The Company also uses the income approach, as described above, to determine the estimated fair value of certain other identifiable intangible assets including customer relationships, trade names and business licenses. Customer relationships represent established relationships with customers, which provide a ready channel for the sale of additional products and services. Trade names represent acquired company and product names.

IPR&D acquired in a business combination is capitalized as an indefinite-lived intangible asset. Development costs incurred after the acquisition are expensed as incurred. Upon receipt of regulatory approval, the indefinite-lived intangible asset is then accounted for as a finite-lived intangible asset and amortized on a straight-line basis or accelerated basis, as appropriate, over its estimated useful life. If the research and development project is subsequently abandoned, the indefinite-lived intangible asset is charged to expense. IPR&D acquired outside of a business combination is expensed immediately.

Due to the uncertainty associated with research and development projects, there is risk that actual results will differ materially from the original cash flow projections and that the research and development project will result in a successful commercial product. The risks associated with achieving commercialization include, but are not limited to, delay or failure to obtain regulatory approvals to conduct clinical trials, delay or failure to obtain required market clearances, delays or issues with patent issuance, or validity and litigation.

If the acquired net assets do not constitute a business under the acquisition method of accounting, the transaction is accounted for as an asset acquisition and no goodwill is recognized. In an asset acquisition, the amount allocated to acquired IPR&D with no alternative future use is charged to expense at the acquisition date. Payments that would be recognized as contingent consideration in a business combination are recognized when probable in an asset acquisition. Refer to Note 4, *Acquisitions and Divestitures* to the Notes to Consolidated Financial Statements (Part IV, Item 15 of this Annual Report on Form 10-K) for details.

Valuation of Goodwill

The excess of the cost over the fair value of net assets of acquired businesses is recorded as goodwill. Goodwill is not subject to amortization but is reviewed for impairment at the reporting unit level annually, or more frequently if impairment indicators arise. The Company's assessment of the recoverability of goodwill is based upon a comparison of the carrying value of goodwill with its estimated fair value. Key assumptions used to estimate the fair value of goodwill include the Company's discounts rate and forecasted operating results. The Company had goodwill on the balance sheet of $1.1 billion as of December 31, 2023. The Company reviews goodwill for impairment in the third quarter every year in accordance with ASC Topic 350, *Intangibles - Goodwill and Other* ("ASC Topic 350"), and whenever events or changes in circumstances indicate the carrying value of goodwill may not be recoverable.

In the second quarter of 2023, due to the Boston recall, as well as the associated drop in the Company's stock price in that quarter, the Company elected to perform a quantitative analysis, using a combination of a discounted cash flow method and guideline public company method for its TT reporting unit. The quantitative test utilized key assumptions of revenue growth rate, a terminal growth rate of 2%, a discount rate of 10%, and the range and application of the company guideline multiples. The Company determined, after performing the quantitative analysis, that the fair value of the goodwill of the reporting unit was not less than the carrying amount, with more than 20% headroom.

During the third quarter of 2023, the Company elected to perform a qualitative analysis for its three reporting units. The Company determined, after performing the qualitative analysis, that there was no evidence that it is more likely than not that the fair value was less that the carrying amounts, therefore, it was not necessary to perform a quantitative impairment test. Refer to Note 7, *Goodwill and Other Intangibles*, to the Notes to Consolidated Financial Statements (Part IV, Item 15 of this Annual Report on Form 10-K) for more information.

Valuation of Identifiable Intangible Assets

The Company tests intangible assets with indefinite lives for impairment annually in the third quarter in accordance with ASC Topic 350. Additionally, the Company may perform interim tests if an event occurs or circumstances change that could potentially reduce the fair value of a indefinite lived intangible asset below its carrying amount. The Company tests for impairment by either performing a qualitative evaluation or a quantitative test. The qualitative evaluation is an assessment of factors, including specific operating results as well as industry, market and general economic conditions, to determine whether it is more likely than not that the fair values of the intangible asset is less than its carrying amount. The Company may elect to bypass this qualitative evaluation and perform a quantitative test. There were no changes to identifiable intangible assets as a result of the Company's assessments.

Product rights and other definite-lived intangible assets are tested periodically for impairment in accordance with ASC Topic 360, *Property, Plant and Equipment*, ("ASC Topic 360") when events or changes in circumstances indicate that an asset's carrying value may not be recoverable. The impairment test involves comparing the carrying amount of the asset or asset group to the forecasted undiscounted future cash flows. In the event the carrying value of the asset exceeds the undiscounted future cash flows, the carrying value is considered not recoverable and impairment exists. An impairment loss is measured as the excess of the asset's carrying value over its fair value, calculated using discounted future cash flows. The computed impairment loss is recognized in the period that the impairment occurs.

As of December 31, 2023, the Company has $1.1 billion of identifiable intangible assets, net on the balance sheets.

Income Taxes

Since we conduct operations on a global basis, our effective tax rate has and will depend upon the geographic distribution of our pre-tax earnings among locations with varying tax rates. Changes in the tax rates of the various jurisdictions in which we operate affect our profits. In addition, we maintain a reserve for uncertain tax benefits, changes to which could impact our effective tax rate in the period such changes are made. The effective tax rate can also be impacted by changes in valuation allowances of deferred tax assets, and tax law changes.

Our provision for income taxes may change period-to-period based on specific events, such as the settlement of income tax audits and changes in tax laws, as well as general factors, including the geographic mix of income before taxes, state and local taxes and the effects of the Company's global income tax strategies. We maintain strategic management and operational activities in overseas subsidiaries. See Note 12, *Income Taxes*, to the Notes to Consolidated Financial Statements (Part IV, Item 15 of this Annual Report on Form 10-K), in our consolidated financial statements for disclosures related to foreign and domestic pretax income, foreign and domestic income tax expense (benefit) and the effect foreign taxes have on our overall effective tax rate.

We recognize a tax benefit from an uncertain tax position only if it is more likely than not to be sustained upon examination based on the technical merits of the position. The amount of the accrual for which an exposure exists is measured by determining the amount that has a greater than 50 percent likelihood of being realized upon ultimate settlement of the position. Components of the reserve are classified as a long-term liability in the consolidated balance sheets. We record interest and penalties accrued in relation to uncertain tax benefits as a component of income tax expense.

We believe that we have identified all reasonably identifiable exposures and that the reserve we have established for identifiable exposures is appropriate under the circumstances; however, it is possible that additional exposures exist and that exposures will be settled at amounts different from the amounts reserved. It is also possible that changes in facts and circumstances could cause us to either materially increase or reduce the carrying amount of our tax reserves.

Our deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and their basis for income tax purposes, and the temporary differences created by the tax effects of capital loss, net operating loss and tax credit carryforwards. We record valuation allowances when it is more likely than not that some portion or all of the deferred tax assets will not be realized. We could recognize no benefit from our deferred tax assets or we could recognize some or all of the future benefit depending on the amount and timing of taxable income we generate in the future.

We intend to indefinitely reinvest substantially all of our foreign earnings in our foreign subsidiaries unless there is a tax–free manner under which to remit the earnings. The current analysis indicates that we have sufficient U.S. liquidity, including borrowing capacity, to fund foreseeable U.S. cash needs without requiring the repatriation of foreign cash. One time or unusual items that may impact our ability or intent to keep the foreign earnings and cash indefinitely reinvested include significant U.S. acquisitions, loans from a foreign subsidiary, and changes in tax laws.

As of December 31, 2023, the Company has not provided deferred income taxes on unrepatriated earnings from foreign subsidiaries as they are deemed to be indefinitely reinvested unless there is a manner under which to remit the earnings with no material tax cost. Such taxes would primarily be attributable to foreign withholding taxes and local income taxes when such earnings are distributed.

Recently Issued and Adopted Accounting Standards

Refer to Note 2, *Summary of Significant Accounting Policies*, to the Notes to Consolidated Financial Statements (Part IV, Item 15 of this Annual Report on Form 10-K), to the consolidated financial statements for recently adopted accounting pronouncements.

ITEM 7A. *QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK*

We are exposed to various market risks, including changes in foreign currency exchange rates and interest rates that could adversely affect our results of operations and financial condition. To manage the volatility relating to these typical business exposures, we may enter into various derivative transactions when appropriate. We do not hold or issue derivative instruments for trading or other speculative purposes.

Foreign Currency Exchange and Other Rate Risks

We operate on a global basis and are exposed to the risk that changes in foreign currency exchange rates could adversely affect our financial condition, results of operations and cash flows. We are primarily exposed to foreign currency exchange rate risk with respect to transactions and net assets denominated in Euros, British pounds, Swiss francs, Canadian dollars, Japanese yen, Mexican pesos, Brazilian reais, Australian dollars and Chinese yuan. We manage the foreign currency exposure centrally, on a combined basis, which allows us to net exposures and to take advantage of any natural offsets. To mitigate the impact of currency fluctuations on transactions denominated in nonfunctional currencies, we periodically enter into derivative financial instruments in the form of foreign currency exchange forward contracts with major financial institutions. We temporarily record realized and unrealized gains and losses on these contracts that qualify as cash flow hedges in other comprehensive income, and then recognize them in other income or expense when the hedged item affects net earnings.

From time to time, we enter into foreign currency forward exchange contracts to manage currency exposures for transactions denominated in a currency other than an entity's functional currency. As a result, the impact of foreign currency gains/losses recognized in earnings are partially offset by gains/losses on the related foreign currency forward exchange contracts in the same reporting period. Refer to Note 6, *Derivative Instruments*, to the Notes to Consolidated Financial Statements (Part IV, Item 15 of this Annual Report on Form 10-K) for additional information.

We maintain written policies and procedures governing our risk management activities. With respect to derivatives, changes in hedged items are generally expected to be completely offset by changes in the fair value of hedge instruments. Consequently, foreign currency exchange contracts would not subject us to material risk due to exchange rate movements, because gains and losses on these contracts offset gains and losses on the assets, liabilities or transactions being hedged.

The results of operations discussed herein have not been materially affected by inflation.

Interest Rate Risk

Cash and Cash Equivalents - We are exposed to the risk of interest rate fluctuations on the interest income earned on our cash and cash equivalents. A hypothetical 100 basis points movement in interest rates applicable to our cash and cash equivalents outstanding at December 31, 2023 would increase interest income by approximately $2.8 million on an annual basis. No significant decrease in interest income would be expected as our cash balances are earning interest at rates of approximately one basis points. We are subject to foreign currency exchange risk with respect to cash balances maintained in foreign currencies.

Short-Term Investments- We are exposed to the risk of interest rate fluctuations on the interest income earned on our short-term investments. A hypothetical 100 basis points movement in interest rates applicable to our short-term investments outstanding at December 31, 2023 would increase or decrease interest income by approximately $0.3 million on an annual basis.

Debt - The Company's interest rate risk relates to U.S. dollar denominated variable interest rate borrowings. The Company uses interest rate swap derivative instruments to manage earnings and cash flow exposure resulting from changes in interest rates. These interest rate swaps apply a fixed interest rate on a portion of the Company's expected SOFR-indexed borrowings. In connection with the March 2023 Amendment to the Senior Credit Facility, the Company amended its interest rate from LIBOR to SOFR-indexed interest. In March 2023, the Company entered into a basis swap where the Company receives Term SOFR and pays daily compounded SOFR to convert the portfolio of swaps from daily compounded SOFR to term SOFR. See Note 6, *Derivative Instruments* to the Notes to Consolidated Financial Statements (Part IV, Item 15 of this Annual Report on Form 10-K) for a detail of current interest rate swap derivative instruments.

These interest rate swaps were designated as cash flow hedges as of December 31, 2023. The total notional amounts related to the Company's interest rate swaps were $1.5 billion with $0.8 billion effective as of December 31, 2023. Based on our outstanding borrowings at December 31, 2023, a 100 basis points change in interest rates would have impacted interest expense on the unhedged portion of the debt by $1.6 million on an annualized basis.

ITEM 8. *FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA*

Financial statements and the financial statement schedule specified by this Item, together with the report thereon of PricewaterhouseCoopers LLP, are presented following Item 15. Exhibits and Financial Statement Schedule of this Annual Report on Form 10-K.

ITEM 9. *CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURES*

Not applicable.

ITEM 9A. *CONTROLS AND PROCEDURES*

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to provide reasonable assurance that information required to be disclosed in our Exchange Act reports is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission'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. Disclosure controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and management is required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Management has designed our disclosure controls and procedures to provide reasonable assurance of achieving the desired control objectives.

As required by Exchange Act Rule 13a-15(b), we have 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 December 31, 2023. Based upon this evaluation, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures were effective as of December 31, 2023 to provide such reasonable assurance.

Management's Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) under the Securities Exchange Act of 1934, as amended. Internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles in the United States of America ("GAAP"). We recognize that because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions or that the degree of compliance with the policies and procedures may deteriorate.

To evaluate the effectiveness of our internal control over financial reporting, management used the criteria described in *Internal Control — Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based upon this evaluation, management concluded that our internal control over financial reporting was effective as of December 31, 2023.

The effectiveness of the Company's internal control over financial reporting as of December 31, 2023 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) that occurred during the quarter ended December 31, 2023 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. *OTHER INFORMATION*

Not applicable.

ITEM 9C. *DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS*

Not applicable.

PART III

INCORPORATION BY REFERENCE

The information called for by Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities relating to equity compensation plans, Item 10. Directors, Executive Officers and Corporate Governance, Item 11. Executive Compensation, Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters, Item 13. Certain Relationships and Related Transactions, and Director Independence and Item 14. Principal Accountant Fees and Services is incorporated herein by reference to the Company's definitive proxy statement for its Annual Meeting of Stockholders scheduled to be held on May 9, 2024, which definitive proxy statement is expected to be filed with the Commission not later than 120 days after the end of the fiscal year to which this report relates.

PART IV

ITEM 15. ***EXHIBITS AND FINANCIAL STATEMENT SCHEDULE***

(a) Documents filed as a part of this report:

1. ***Financial Statements.***

The following financial statements are filed as a part of this report:

All other schedules not listed above have been omitted, because they are not applicable or are not required, or because the required information is included in the consolidated financial statements or notes thereto.

3. ***Exhibits required to be filed by Item 601 of Regulation S-K.***

2.1(a)	Put Option Agreement, dated September 29, 2020, between the Company and certain of its subsidiaries and Smith & Nephew USD Limited, a subsidiary of Smith+Nephew (including the Purchase and Sale Agreement attached as Appendix 1 thereto) (Incorporated by reference to Exhibit 2.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2020)
2.1(b)	Agreement and Plan of Merger by among Integra LifeSciences Holdings Corporation and ACell Inc. dated as of December 15, 2020 (Incorporated by reference to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2020)
2.1(c)+	Stock Purchase Agreement, dated December 12, 2023, among Ethicon, Inc., Integra LifeSciences Holdings Corporation and Integra LifeSciences Israel Ltd.
3.1(a)	Amended and Restated Certificate of Incorporation of the Company dated February 16, 1993 (Incorporated by reference to Exhibit 3.1(a) to the Company's Annual Report on Form 10-K for the year ended December 31, 2005)
3.1(b)	Certificate of Amendment to Amended and Restated Certificate of Incorporation of the Company dated May 22, 1998 (Incorporated by reference to Exhibit 3.1(b) to the Company's Annual Report on Form 10-K for the year ended December 31, 1998)
3.1(c)	Certificate of Amendment to Amended and Restated Certificate of Incorporation of the Company dated May 17, 1999 (Incorporated by reference to Exhibit 3.1(c) to the Company's Annual Report on Form 10-K for the year ended December 31, 2004)
3.1(d)	Certificate of Amendment to Amended and Restated Certificate of Incorporation of the Company dated December 21, 2016 (Incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on December 22, 2016)
3.2	Third Amended and Restated Bylaws of Integra LifeSciences Holdings Corporation, effective as of February 21, 2023
4.1	Indenture, dated as of February 7, 2020, by and between Integra LifeSciences Holdings Corporation and Citibank, N.A., as trustee (including Form of 0.50% Convertible Senior Notes due 2025) (Incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on February 7, 2020)

4.2	First Supplemental Indenture, by and between Integra LifeSciences Holdings Corporation and Citibank, N.A., as trustee (Incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on December 9, 2020)
4.3	Integra LifeSciences Deferred Compensation Plan, effective as of May 16, 2019 (Incorporated by reference to Exhibit 4.13 to the Company's Current Form S-8 Registration Statement filed on May 23, 2019)
4.4+	Description of Securities
10.1(a)	Lease Modification #3 entered into as of March 2, 2011, by and between Plainsboro Associates and Integra LifeSciences Corporation (Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on March 3, 2011)
10.1(b)	Lease Modification #4 entered into as of April 20, 2017, by and between Plainsboro Associates and Integra LifeSciences Corporation (Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on April 25, 2017)
10.2(a)*	Employee Stock Purchase Plan (as amended on May 17, 2004) (Incorporated by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-8 (Registration No. 333-127488) filed on August 12, 2005)
10.2(b)*	First Amendment to Employee Stock Purchase Plan, dated October 26, 2005 (Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on November 1, 2005)
10.3(a)*	Second Amended and Restated 2003 Equity Incentive Plan effective May 19, 2010 (Incorporated by reference to Exhibit 10 to the Company's Current Report on Form 8-K filed May 21, 2010)
10.3(b)*	Amendment to the Second Amended and Restated 2003 Equity Incentive Plan effective May 17, 2012 (Incorporated by reference to Exhibit 10.9 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2012)
10.3(c)*	Amendment to the Second Amended and Restated 2003 Equity Incentive Plan effective January 1, 2013 (Incorporated by reference to Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2013)
10.3(d)*	Third Amended and Restated 2003 Equity Incentive Plan effective May 22, 2015 (Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on May 29, 2015)
10.3(e)*	Fourth Amended and Restated 2003 Equity Incentive Plan, effective May 23, 2017 (Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on May 25, 2017)
10.3(f)*	Amendment to the Integra LifeSciences Holdings Corporation Fourth Amended and Restated 2003 Equity Incentive Plan (Incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2020)
10.3(g)*	Integra LifeSciences Holdings Corporation Fifth Amended and Restated 2003 Equity Incentive Plan (Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on May 18, 2021)
10.3(h)*	Form of Integra LifeSciences Holdings Corporation Fifth Amended and Restated 2003 Equity Incentive Plan Restricted Stock Award Agreement – Directors (Incorporated by reference to Exhibit 10.3(h) to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2022)
10.3(i)*	Form of Integra LifeSciences Holdings Corporation Fifth Amended and Restated 2003 Equity Incentive Plan Restricted Stock Agreement – Executive Officers (Incorporated by reference to Exhibit 10.3(i) to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2022)
10.3(j)*	Form of Integra LifeSciences Holdings Corporation Fifth Amended and Restated 2003 Equity Incentive Plan Performance Stock Unit Award Agreement (Incorporated by reference to Exhibit 10.3(j) to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2022)
10.3(k)*	Form of Integra LifeSciences Holdings Corporation Fifth Amended and Restated 2003 Equity Incentive Plan Non-Qualified Stock Option Award Agreement (Incorporated by reference to Exhibit 10.3(k) to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2022)
10.3(l)*	Form of Integra LifeSciences Holdings Corporation Fifth Amended and Restated 2003 Equity Incentive Plan Restricted Stock Award Agreement – OUS (Incorporated by reference to Exhibit 10.3(l) to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2022

10.4*	Form of Indemnification Agreement, by and between Integra LifeSciences Holdings Corporation and each of its directors and executive officers (Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on July 19, 2022)
10.5*	Annual Executive Physical Medical Exam Arrangement (Incorporated by reference to the Exhibit 10.2 to the Company's Current Report on Form 8-K filed on July 29, 2013)
10.6*	2018 Performance Incentive Compensation Plan, effective January 1, 2018 (Incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on May 25, 2017)
10.7*	Integra LifeSciences Holdings Corporation Change in Control Severance Program (Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on December 13, 2023)
10.8*	Amended and Restated Management Incentive Compensation Plan, as of January 1, 2008 (Incorporated by reference to Exhibit 10.43(c) to the Company's Annual Report on Form 10-K for the year ended December 31, 2007)
10.9*	Employment Agreement, dated October 28, 2021, by and between Integra LifeSciences Holdings Corporation, Integra LifeSciences Corporation and Jan De Witte (Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on October 28, 2021)
10.10*	Davis Promotion Summary, effective December 1, 2016 (Incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on December 5, 2016)
10.11(a)*	Coleman Promotion Summary, effective June 24, 2019 (Incorporated by reference to the Current Report on Form 8-K filed on June 24, 2019)
10.11(b)*	Separation Agreement and General Release, dated September 23, 2022, by and between Glenn Coleman, Integra LifeSciences Corporation and Integra LifeSciences Holdings Corporation (Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on September 23, 2022)
10.12(a)	Receivables Financing Agreement, dated as of December 21, 2018, by and among Integra Receivables LLC, Integra LifeSciences Sales LLC, as Servicer, PNC Bank, National Association, as Administrative Agent, PNC Capital Markets LLC, as Structuring Agent, and certain lenders and group agents that are parties thereto from time to time (Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on December 28, 2018)
10.12(b)	Amendment No. 1 to Receivables Financing Agreement and Reaffirmation of Performance Guaranty, dated as of March 29, 2019, by and among Integra Receivables LLC, Integra LifeSciences Sales LLC, as Servicer, PNC Bank, National Associations, as Administrative Agent, Committed Lender and Group Agent, Mizuho Bank, Ltd., as Committed Lender and Group Agent and PNC Capital Markets LLC, as Structuring Agent, and certain lenders and group agents that are parties thereto from time to time (Incorporated by reference to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2021)
10.12(c)	Amendment No. 2 to Receivables Financing Agreement and Reaffirmation of Performance Guaranty, dated as of July 17, 2020, by and among, Integra Receivables LLC, Integra LifeSciences Sales LLC, as Servicer, PNC Bank, National Associations, as Administrative Agent, Committed Lender and Group Agent, Mizuho Bank, Ltd., as Committed Lender and Group Agent and PNC Capital Markets LLC, as Structuring Agent, and certain lenders and group agents that are parties thereto from time to time (Incorporated by reference to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2021)
10.12(d)	Amendment No. 3 to Receivables Financing Agreement and Reaffirmation of Performance Guaranty, dated as of May 28, 2021, by and among, Integra Receivables LLC, Integra LifeSciences Sales LLC, as Servicer, PNC Bank, National Associations, as Administrative Agent, PNC Capital Markets LLC, as Structuring Agent, Committed Lender and Group Agent, and certain lenders and group agents that are parties thereto from time to time (Incorporated by reference to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2021)
10.12(e)	Amendment No. 4 to Receivables Financing Agreement and Reaffirmation of Performance Guaranty, dated as of April 17, 2023, by and among, Integra Receivables LLC, Integra LifeSciences Sales LLC, as Servicer, PNC Bank, National Associations, as Administrative Agent, PNC Capital Markets LLC, as Structuring Agent, Committed Lender and Group Agent, and certain lenders and group agents that are parties thereto from time to time (Incorporated by reference to Exhibit 10.4 to the Company Quarterly Report on Form 10-Q for the quarter ended March 31, 2023)

10.12(f)+	Amendment No. 5 to Receivables Financing Agreement and Reaffirmation of Performance Guaranty, dated as of December 15, 2023, by and among, Integra Receivables LLC, Integra LifeSciences Sales LLC, as Servicer, PNC Bank, National Associations, as Administrative Agent, PNC Capital Markets LLC, as Structuring Agent, Committed Lender and Group Agent, The Bank of Nova Scotia, as Committed Lender and Group Agent, and certain lenders and group agents that are parties thereto from time to time
10.13	Purchase and Sale Agreement, dated as of December 21, 2018, by and among Integra LifeSciences Sales LLC, Integra LifeSciences Corporation and Integra Receivables LLC (Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on December 28, 2018)
10.14	Seventh Amended and Restated Credit Agreement, dated as of March 24, 2023, among Integra LifeSciences Holdings Corporation, the lenders party thereto, Bank of America, N.A., as Administrative Agent, Swing Line Lender and L/C Issuer, Citibank N.A., JPMorgan Chase Bank, N.A., Morgan Stanley MUFG Loan Partners, LLC, PNC Bank, N.A., Truist Securities, Inc. and Wells Fargo Bank, N.A., as Co-Syndication Agents, and The Bank of Nova Scotia, BMO Harris Bank N.A., BNP Paribas, Capital One, National Association, Citizens Bank, N.A., DNB Bank ASA, New York Branch, Santander Bank, N.A. and TD Bank, N.A., as Co-Documentation (Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on March 24, 2023)
10.15	Base Call Option Transaction Confirmation, dated as of February 4, 2020, between Integra LifeSciences Holdings Corporation and Citibank, N.A. (Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on February 7, 2020)
10.16	Ratification Agreement, dated as of March 24, 2023, between Integra LifeSciences Holdings Corporation, the Subsidiary Guarantors of Integra LifeSciences Holdings Corporation and Bank of America, N.A., as Administrative Agent (Incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on March 24, 2023)
10.17	Base Call Option Transaction Confirmation, dated as of February 4, 2020, between Integra LifeSciences Holdings Corporation and Morgan Stanley & Co. International plc. (Incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed on February 7, 2020)
10.18	Base Call Option Transaction Confirmation, dated as of February 4, 2020, between Integra LifeSciences Holdings Corporation and Wells Fargo, National Association. (Incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K filed on February 7, 2020)
10.19	Base Warrant Confirmation, dated as of February 4, 2020, between Integra LifeSciences Holdings Corporation and Citibank, N.A. (Incorporated by reference to Exhibit 10.5 to the Company's Current Report on Form 8-K filed on February 7, 2020)
10.20	Base Warrant Confirmation, dated as of February 4, 2020, between Integra LifeSciences Holdings Corporation and Goldman Sachs & Co. LLC. (Incorporated by reference to Exhibit 10.6 to the Company's Current Report on Form 8-K filed on February 7, 2020)
10.21	Base Warrant Confirmation, dated as of February 4, 2020, between Integra LifeSciences Holdings Corporation and Morgan Stanley & Co. International plc. (Incorporated by reference to Exhibit 10.7 to the Company's Current Report on Form 8-K filed on February 7, 2020)
10.22	Base Warrant Confirmation, dated as of February 4, 2020, between Integra LifeSciences Holdings Corporation and Wells Fargo, National Association. (Incorporated by reference to Exhibit 10.8 to the Company's Current Report on Form 8-K filed on February 7, 2020)
10.23	Additional Call Option Transaction Confirmation, dated as of February 5, 2020, between Integra LifeSciences Holdings Corporation and Citibank, N.A. (Incorporated by reference to Exhibit 10.9 to the Company's Current Report on Form 8-K filed on February 7, 2020)
10.24	Additional Call Option Transaction Confirmation, dated as of February 5, 2020, between Integra LifeSciences Holdings Corporation and Goldman Sachs & Co. LLC. (Incorporated by reference to Exhibit 10.10 to the Company's Current Report on Form 8-K filed on February 7, 2020)
10.25	Additional Call Option Transaction Confirmation, dated as of February 5, 2020, between Integra LifeSciences Holdings Corporation and Morgan Stanley & Co. International plc. (Incorporated by reference to Exhibit 10.11 to the Company's Current Report on Form 8-K filed on February 7, 2020)
10.26	Additional Call Option Transaction Confirmation, dated as of February 5, 2020, between Integra LifeSciences Holdings Corporation and Wells Fargo, National Association. (Incorporated by reference to Exhibit 10.12 to the Company's Current Report on Form 8-K filed on February 7, 2020)

10.27	Additional Warrant Confirmation, dated as of February 5, 2020, between Integra LifeSciences Holdings Corporation and Citibank, N.A. (Incorporated by reference to Exhibit 10.13 to the Company's Current Report on Form 8-K filed on February 7, 2020)
10.28	Additional Warrant Confirmation, dated as of February 5, 2020, between Integra LifeSciences Holdings Corporation and Goldman Sachs & Co. LLC. (Incorporated by reference to Exhibit 10.14 to the Company's Current Report on Form 8-K filed on February 7, 2020)
10.29	Additional Warrant Confirmation, dated as of February 5, 2020, between Integra LifeSciences Holdings Corporation and Morgan Stanley & Co. plc. (Incorporated by reference to Exhibit 10.15 to the Company's Current Report on Form 8-K filed on February 7, 2020)
10.30	Additional Warrant Confirmation, dated as of February 5, 2020, between Integra LifeSciences Holdings Corporation and Wells Fargo, National Association. (Incorporated by reference to Exhibit 10.16 to the Company's Current Report on Form 8-K filed on February 7, 2020)
10.31	Issuer Forward Repurchase Transaction Confirmation, dated as of February 5, 2020, between Integra LifeSciences Holdings Corporation and JPMorgan Chase Bank, National Association, New York Branch. (Incorporated by reference to Exhibit 10.17 to the Company's Current Report on Form 8-K filed on February 7, 2020)
21.1+	Subsidiaries of the Company
23.1+	Consent of PricewaterhouseCoopers LLP
31.1+	Certification of Principal Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2+	Certification of Principal Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1+	Certification of Principal Executive Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2+	Certification of Principal Financial Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
97.1+	Integra LifeSciences Holdings Corporation Incentive Compensation Recovery Policy
101.INS+#	Inline XBRL Instance Document
101.SCH+#	Inline XBRL Taxonomy Extension Schema Document
101.CAL+#	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	Inline XBRL Definition Linkbase Document
101.LAB+#	Inline XBRL Taxonomy Extension Labels Linkbase Document
101.PRE+#	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

* Indicates a management contract or compensatory plan or arrangement.

\+ Indicates this document is filed as an exhibit herewith.

\# The financial information of Integra LifeSciences Holdings Corporation Annual Report on Form 10-K for the year ended December 31, 2023 filed on February 28, 2024 formatted in XBRL (Extensible Business Reporting Language): (i) the Consolidated Statements of Operations, (ii) the Consolidated Statement of Comprehensive Income (Loss), (iii) the Consolidated Balance Sheets, (iv) Parenthetical Data to the Consolidated Balance Sheets, (v) the Consolidated Statements of Cash Flows, (vi) the Consolidated Statements of Changes in Stockholders' Equity, and (vii) Notes to Consolidated Financial Statements, is furnished electronically herewith.

The Company's Commission File Number for Reports on Form 10-K, Form 10-Q and Form 8-K is 000-26224.

ITEM 16. ***FORM 10-K SUMMARY***

None.

SIGNATURES

Pursuant to the requirements of Section 13 of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

INTEGRA LIFESCIENCES HOLDINGS CORPORATION

By: /s/ Jan De Witte
Jan De Witte
President and Chief Executive Officer, and Director
(Principal Executive Officer)

By: /s/ Lea Knight
Lea Knight
Executive Vice President and Chief Financial Officer
(Principal Financial Officer)

By: /s/ Jeffrey A. Mosebrook
Jeffrey A. Mosebrook
Senior Vice President, Finance
(Principal Accounting Officer)

Date: February 28, 2024

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons, on behalf of the registrant in the capacities indicated.

Signature	Title	Date
/s/ Jan De Witte Jan De Witte	President and Chief Executive Officer, and Director (Principal Executive Officer)	February 28, 2024
/s/ Lea Knight Lea Knight	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 28, 2024
/s/ Jeffrey A. Mosebrook Jeffrey A. Mosebrook	Senior Vice President, Finance (Principal Accounting Officer)	February 28, 2024
/s/ Stuart M. Essig, Ph.D. Stuart M. Essig, Ph.D.	Chairman of the Board	February 28, 2024
/s/ Keith Bradley, Ph.D. Keith Bradley, Ph.D.	Director	February 28, 2024
/s/ Shaundra Clay Shaundra Clay	Director	February 28, 2024
/s/ Jeffrey A. Graves Jeffrey A. Graves	Director	February 28, 2024
/s/ Barbara B. Hill Barbara B. Hill	Director	February 28, 2024
/s/ Renee W. Lo Renee W. Lo	Director	February 28, 2024
/s/ Raymond G. Murphy Raymond G. Murphy	Director	February 28, 2024
/s/ Christian S. Schade Christian S. Schade	Director	February 28, 2024

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Integra LifeSciences Holdings Corporation

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Integra LifeSciences Holdings Corporation and its subsidiaries (the "Company") as of December 31, 2023 and 2022, and the related consolidated statements of operations, of comprehensive income, of changes in stockholders' equity, and of cash flows for each of the three years in the period ended December 31, 2023, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2023, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2023 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control Over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Interim Goodwill Impairment Assessment - Tissue Technologies Reporting unit

As described in Notes 2 and 7 to the consolidated financial statements, the Company has three reporting units and the total goodwill balance was $1,055 million as of December 31, 2023, of which $388.5 million relates to the Tissue Technologies reporting unit. Goodwill is tested by management for impairment at the reporting unit level annually during the third quarter every year, or more frequently if impairment indicators arise. Management's assessment of the recoverability of goodwill is based upon a comparison of the carrying value of goodwill with its estimated fair value. As disclosed by management, in the second quarter of 2023, due to the voluntary global recall of all products manufactured at the Boston facility, as well as the associated drop in the Company's stock price in that quarter, management elected to perform a quantitative analysis, using a combination of a discounted cash flow method and guideline public company method for its Tissue Technologies reporting unit. The quantitative test utilized assumptions of revenue growth rate, terminal growth rate, discount rate, and the range and application of company guideline multiples. Management determined, after performing the quantitative analysis, that the fair value of the goodwill of the reporting unit was not less than the carrying amount.

The principal considerations for our determination that performing procedures relating to the interim goodwill impairment assessment of the Tissue Technologies reporting unit is a critical audit matter are (i) the significant judgment by management when developing the fair value estimate of the reporting unit; (ii) a high degree of auditor judgment, subjectivity, and effort in performing procedures and evaluating management's significant assumptions related to the revenue growth rate, terminal growth rate, discount rate, and the range and application of company guideline multiples; and (iii) the audit effort involved in the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's goodwill impairment assessment, including controls over the valuation of the Tissue Technologies reporting unit. These procedures also included, among others (i) testing management's process for developing the fair value estimate of the Tissue Technologies reporting unit; (ii) evaluating the appropriateness of the discounted cash flow and guideline public company methods used by management; (iii) testing the completeness and accuracy of underlying data used by management in the discounted cash flow and guideline public company methods; and (iv) evaluating the reasonableness of the significant assumptions used by management in the discounted cash flow method related to the revenue growth rate, terminal growth rate, and discount rate, and the significant assumption used by management in the guideline public company method related to the range and application of company guideline multiples. Evaluating management's assumptions related to the revenue growth rates and terminal growth rate involved evaluating whether the assumptions used by management were reasonable considering (i) the current and past performance of the reporting unit; (ii) the consistency with external market and industry data; and (iii) whether the assumptions were consistent with evidence obtained in other areas of the audit. Professionals with specialized skill and knowledge were used to assist in evaluating (i) the appropriateness of the discounted cash flow and guideline public company methods and (ii) the reasonableness of the discount rate and the range and application of company guideline multiples assumptions.

/s/ PricewaterhouseCoopers LLP
Florham Park, New Jersey
February 28, 2024

We have served as the Company’s auditor since 1989.

INTEGRA LIFESCIENCES HOLDINGS CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS
(Dollars in thousands, except per share amounts)

	Years Ended December 31,		
	2023	**2022**	**2021**
Total revenue, net	$ 1,541,573	$ 1,557,666	$ 1,542,448
Costs and expenses:			
Cost of goods sold	656,838	587,355	597,808
Research and development	104,192	101,193	93,051
Selling, general and administrative	656,641	616,316	637,445
Intangible asset amortization	12,376	13,882	16,914
Total costs and expenses	1,430,047	1,318,746	1,345,218
Operating income	111,526	238,920	197,230
Interest income	17,202	11,917	6,737
Interest expense	(51,377)	(49,594)	(50,395)
Gain from sale of businesses	—	644	41,798
Other income, net	3,718	12,007	19,307
Income before income taxes	81,069	213,894	214,677
Provision for income taxes	13,328	33,344	45,602
Net income	$ 67,741	$ 180,550	$ 169,075
Net income per share			
Basic	$ 0.85	$ 2.18	$ 2.00
Diluted	$ 0.84	$ 2.16	$ 1.98
Weighted average common shares outstanding (See Note 13):			
Basic	80,089	82,997	84,698
Diluted	80,337	83,516	85,485

The accompanying notes are an integral part of these consolidated financial statements.

INTEGRA LIFESCIENCES HOLDINGS CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(Dollars in thousands)

	Years Ended December 31,		
	2023	2022	2021
Net income	$ 67,741	$ 180,550	$ 169,075
Other comprehensive (loss) income, before tax:			
Change in foreign currency translation adjustments	(20,821)	(17,807)	(17,362)
Unrealized gain (loss) on derivatives			
Unrealized derivative gain (loss) arising during period	(22,071)	104,351	68,192
Less: Reclassification adjustments for gain (loss) included in net income	(13,423)	18,859	17,024
Unrealized gain (loss) on derivatives	(8,648)	85,492	51,168
Defined benefit pension plan - net gain (loss) arising during period	(6,610)	7,429	6,998
Total other comprehensive gain (loss), before tax	(36,079)	75,114	40,804
Income tax (expense) benefit related to items in other comprehensive gain (loss)	10,708	(19,694)	(11,900)
Total other comprehensive gain (loss), net of tax	(25,371)	55,420	28,904
Comprehensive income, net of tax	$ 42,370	$ 235,970	$ 197,979

The accompanying notes are an integral part of these consolidated financial statements.

INTEGRA LIFESCIENCES HOLDINGS CORPORATION
CONSOLIDATED BALANCE SHEETS
(Dollars in thousands, except per share amounts)

	December 31, 2023	December 31, 2022
ASSETS		
Current Assets:		
Cash and cash equivalents	$ 276,402	$ 456,661
Short-term investments	32,694	—
Trade accounts receivable, net of allowances of $4,879 and $4,304	259,327	263,465
Inventories, net	389,608	324,583
Prepaid Expenses	67,362	85,757
Other Current Assets	32,643	31,032
Total current assets	1,058,036	1,161,498
Property, plant and equipment, net	340,199	311,302
Right of use asset - operating leases	156,184	148,284
Intangible assets, net	1,067,833	1,126,609
Goodwill	1,055,462	1,038,881
Deferred tax assets, net	46,080	45,994
Other assets	58,194	57,190
Total assets	$ 3,781,988	$ 3,889,758
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities:		
Current portion of borrowings under senior credit facility	$ 14,531	$ 38,125
Current portion of lease liability - operating leases	15,284	14,624
Accounts payable, trade	92,326	102,100
Contract liabilities	8,540	7,253
Accrued compensation	75,455	78,771
Accrued expenses and other current liabilities	100,844	80,033
Total current liabilities	306,980	320,906
Long-term borrowings under senior credit facility	825,563	733,149
Long-term borrowings under securitization facility	89,200	104,700
Long-term convertible securities	570,255	567,341
Lease liability - operating leases	166,849	157,420
Deferred tax liabilities	35,317	63,338
Other liabilities	199,940	138,501
Total liabilities	2,194,104	2,085,355
Stockholders' Equity:		
Preferred Stock; no par value; 15,000 authorized shares; none outstanding	—	—
Common stock; $0.01 par value; 240,000 authorized shares; 90,920 and 90,477 issued at December 31, 2023 and 2022, respectively	909	905
Additional paid-in capital	1,302,484	1,276,977
Treasury stock, at cost; 12,751 and 6,823 shares at December 31, 2023 and 2022, respectively	(647,262)	(362,862)
Accumulated other comprehensive income (loss)	(15,106)	10,265
Retained earnings	946,859	879,118
Total stockholders' equity	1,587,884	1,804,403
Total liabilities and stockholders' equity	$ 3,781,988	$ 3,889,758

The accompanying notes are an integral part of these consolidated financial statements.

INTEGRA LIFESCIENCES HOLDINGS CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Dollars in thousands)

	Years Ended December 31,		
	2023	**2022**	**2021**
OPERATING ACTIVITIES:			
Net income	$ 67,741	$ 180,550	$ 169,075
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	123,512	118,299	119,836
Non-cash impairment charges	—	—	2,754
Deferred income tax (benefit) provision	(11,885)	(4,585)	(2,755)
Share-based compensation	20,143	27,725	36,210
Amortization of debt issuance costs and expenses associated with debt refinancing	6,164	6,845	7,030
Non-cash lease expense	2,189	2,816	3,834
Loss (Gain) on disposal of property and equipment and construction in-progress	777	(6,813)	2,240
Gain from the sale of businesses	—	(644)	(41,798)
Change in fair value of contingent consideration and others	12,888	(20,304)	(2,162)
Changes in assets and liabilities:			
Accounts receivable	4,593	(33,905)	7,265
Inventories	(59,773)	(29,124)	5,374
Prepaid expenses and other current assets	2,652	8,612	(21,143)
Other non-current assets	(8,535)	(2,182)	7,875
Accounts payable, accrued expenses and other current liabilities	(20,229)	17,343	32,874
Contract liabilities	128	4,274	28
Other non-current liabilities	(410)	(4,438)	(14,110)
Net cash provided by operating activities	139,955	264,469	312,427
INVESTING ACTIVITIES:			
Purchases of property and equipment	(66,865)	(42,343)	(48,022)
Proceeds from sale of business	—	23,960	190,468
Acquired in-process research and development and intangibles	—	(4,742)	(58)
Purchases of Investments	(32,694)	—	—
Cash paid for business acquisitions, net of cash acquired	—	(51,509)	(303,910)
Proceeds from sales of property and equipment	—	11,145	3
Net proceeds on swaps designated as net investment hedges	5,381	4,909	76
Net cash used in investing activities	(94,178)	(58,580)	(161,443)
FINANCING ACTIVITIES:			
Proceeds from borrowings of long-term indebtedness	165,100	40,750	25,500
Payments on debt	(110,600)	(148,550)	(125,500)
Payment of debt issuance costs	(7,879)	—	(249)
Purchase of treasury stock	(275,000)	(125,000)	—
Proceeds from exercised stock options	4,317	5,465	6,824
Cash taxes paid in net equity settlement	(5,863)	(24,618)	(4,801)
Net cash used in financing activities	(229,925)	(251,953)	(98,226)
Effect of exchange rate changes on cash and cash equivalents	3,889	(10,723)	(9,476)
Net increase (decrease) in cash and cash equivalents	(180,259)	(56,787)	43,282
Cash and cash equivalents at beginning of period	456,661	513,448	470,166
Cash and cash equivalents at end of period	$ 276,402	$ 456,661	$ 513,448

The accompanying notes are an integral part of these consolidated financial statements.

INTEGRA LIFESCIENCES HOLDINGS CORPORATION
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
(Dollars in thousands)

	Common Stock		Treasury Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income	Retained Earnings	Total Equity
	Shares	Amount	Shares	Amount				
Balance, January 1, 2021	89,251	$ 893	(4,914)	$ (235,141)	$ 1,290,908	$ (74,059)	$ 532,266	$ 1,514,867
Net income	—	—	—	—	—	—	169,075	169,075
Other comprehensive income (loss), net of tax	—	—	—	—	—	28,904	—	28,904
Treasury shares retirement	—	—	—	—	—	—	—	—
Issuance of common stock through employee stock purchase plan	18	—	—	—	1,127	—	—	1,127
Issuance of common stock for vesting of share-based awards, net of shares withheld for taxes	331	1	15	693	201	—	—	895
Share-based compensation	—	2	—	—	35,981	—	—	35,983
Adoption of Update No. 2020-06	—	—	—	—	(63,274)	—	(2,773)	(66,047)
Balance, December 31, 2021	89,600	896	(4,899)	(234,448)	1,264,943	(45,155)	698,568	1,684,804
Net income	—	—	—	—	—	—	180,550	180,550
Other comprehensive income (loss), net of tax	—	—	—	—	—	55,420	—	55,420
Issuance of common stock through employee stock purchase plan	17		—	—	1,078	—	—	1,078
Issuance of common stock for vesting of share-based awards, net of shares withheld for taxes	859	7	14	738	(20,974)	—	—	(20,229)
Share-based compensation	—	2	—	—	27,778	—	—	27,780
Accelerated shares repurchased	—	—	(1,938)	(129,152)	4,152	—	—	(125,000)
Balance, December 31, 2022	90,476	$ 905	(6,823)	$ (362,862)	$ 1,276,977	$ 10,265	$ 879,118	$ 1,804,403
Net income	—	—	—	—	—	—	67,741	67,741
Other comprehensive income (loss), net of tax	—	—	—	—	—	(25,371)	—	(25,371)
Issuance of common stock through employee stock purchase plan	21	—	—	—	1,107	—	—	1,107
Issuance of common stock for vesting of share-based awards, net of shares withheld for taxes	423	1	18	911	(3,566)	—	—	(2,654)
Share-based compensation	—	3	—	—	20,105	—	—	20,108
Accelerated shares repurchased	—	—	(5,946)	(285,311)	7,861	—	—	(277,450)
Balance, December 31, 2023	90,920	909	(12,751)	(647,262)	1,302,484	(15,106)	946,859	1,587,884

The accompanying notes are an integral part of these consolidated financial statements.

1. BUSINESS

Integra LifeSciences Holdings Corporation (the "Company") was incorporated in Delaware in 1989. The Company is a worldwide leader in medical technology. The Company was founded with the acquisition of an engineered collagen technology platform used to repair and regenerate tissue. Since then, Integra has developed numerous product lines from this technology for applications ranging from burn and deep tissue wounds to the repair of dura mater in the brain, as well as nerves and tendons. The Company has expanded its base regenerative technology business to include surgical instruments, neurosurgical products and advanced wound care through global acquisitions and product development to meet the evolving needs of its customers and enhance patient care. The Company sells its products directly through various sales forces and through a variety of other distribution channels.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

BASIS OF PRESENTATION

These financial statements and the accompanying notes are prepared in accordance with accounting principles generally accepted in the United States of America and conform to Regulation S-X under the Securities Exchange Act of 1934, as amended.

PRINCIPLES OF CONSOLIDATION

The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. Intercompany accounts and transactions have been eliminated in consolidation. See Note 4, *Acquisitions and Divestitures*, for details of new subsidiaries included in the consolidation.

USE OF ESTIMATES

The preparation of consolidated financial statements is in conformity with generally accepted accounting principles in the United States ("GAAP") which requires management to make estimates and assumptions that affect the reported amount of assets and liabilities, the disclosure of contingent liabilities, and the reported amounts of revenues and expenses. Significant estimates affecting amounts reported or disclosed in the consolidated financial statements include allowances for doubtful accounts receivable and sales returns and allowances, net realizable value of inventories, valuation of intangible assets including amortization periods for acquired intangible assets, discount rates and estimated projected cash flows used to value and test impairments of long-lived assets and goodwill, estimates of projected cash flows and depreciation and amortization periods for long-lived assets, computation of taxes, valuation allowances recorded against deferred tax assets, the valuation of stock-based compensation, valuation of derivative instruments, valuation of contingent liabilities, the fair value of debt instruments and loss contingencies. These estimates are based on historical experience and on various other assumptions that are believed to be reasonable under the current circumstances. Actual results could differ from these estimates.

CASH AND CASH EQUIVALENTS

The Company considers all short-term, highly liquid investments purchased with original maturities of three months or less to be cash equivalents. These investments are carried at cost, which approximates fair value.

SHORT TERM INVESTMENTS

Short-term investments are securities with original maturities greater than 90 days that are available for use in our operations in the next twelve months. The short-term investments, primarily consisting of time deposits, are recorded at cost, which approximates fair value, which is estimated based on the net asset value of these investments. Interest and dividends are recorded in income when earned.

TRADE ACCOUNTS RECEIVABLE AND ALLOWANCES FOR DOUBTFUL ACCOUNTS RECEIVABLE

Trade accounts receivable are recorded at the invoiced amount and do not bear interest. The Company grants credit to customers in the normal course of business, but generally does not require collateral or any other security to support its receivables.

The Company evaluates the collectability of accounts receivable based on a combination of factors. The Company recognizes a provision for doubtful accounts that reflects the Company's estimate of expected credit losses for trade accounts receivable. In circumstances where a specific customer is unable to meet its financial obligations to the Company, a provision to the allowances for doubtful accounts is recorded against amounts due to reduce the net recognized receivable to the amount that is reasonably expected to be collected. For all other customers, the Company evaluates measurement of all expected credit losses for trade receivables held at the reporting date based on historical experience, current conditions, and reasonable and supportable forecasts.

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.

Provisions to the allowances for doubtful accounts are recorded to selling, general and administrative expenses. Account balances are charged off against the allowance when it is probable that the receivable will not be recovered. Provision for doubtful accounts, net of recoveries, associated with accounts receivable, included in selling, general and administrative expense, was charges of $3.0 million for the year ended December 31, 2023, charges of $0.2 million, and recoveries of $1.1 million for the years ended December 31, 2022 and 2021, respectively.

The below table shows the roll forward of the allowance for doubtful accounts for the years ended December 31, 2023, 2022 and 2021:

Dollars in thousands	Balance at Beginning of Period	Charged to Costs and Expenses	Other	Deductions	Balance at End of Period
Year Ended:					
December 31, 2023	$ 4,304	2,963	—	(2,388)	$ 4,879
December 31, 2022	$ 4,735	238	—	(669)	$ 4,304
December 31, 2021	$ 6,439	(1,059)	341	(986)	$ 4,735

(1) Deductions primarily relates to allowance for doubtful accounts written off during the year, net of recoveries and other adjustments.

INVENTORIES

Inventories, consisting of purchased materials, direct labor and manufacturing overhead, are stated at the lower of cost, the value determined by the first-in, first-out method, or net realizable value. Inventories consisted of the following:

	December 31,	
Dollars in thousands	2023	2022
Finished goods	196,402	$ 172,088
Work in process	74,035	70,598
Raw materials	119,171	81,897
Total inventories, net	$ 389,608	$ 324,583

At each balance sheet date, the Company evaluates inventories for excess quantities, obsolescence or shelf life expiration. This evaluation includes analysis of historical sales levels by product, projections of future demand, the risk of technological or competitive obsolescence for products, general market conditions, a review of the shelf life expiration dates for products, as well as the feasibility of reworking or using excess or obsolete products or components in the production or assembly of other products that are not obsolete or for which there are not excess quantities in inventory. To the extent that management determines there are excess or obsolete inventory or quantities with a shelf life that is too near its expiration for the Company to reasonably expect that it can sell those products prior to their expiration, the Company adjusts the carrying value to estimated net realizable value.

The Company capitalizes inventory costs associated with certain products prior to regulatory approval, based on management's judgment of probable economic benefit. The Company could be required to expense previously capitalized costs related to pre-approval inventory upon a change in such judgment, due to, among other potential factors, a denial or delay of approval by necessary regulatory bodies or a decision by management to discontinue the related development program. No such amounts were capitalized at December 31, 2023 or 2022.

In the twelve months ended December 31, 2023, due to the Boston recall, the Company recorded a $24.6 million write off of inventory to cost of goods sold that was no longer able to be sold.

PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment are stated at historical cost less accumulated depreciation and any impairment charges. The Company provides for depreciation using the straight-line method over the estimated useful lives of the assets. Leasehold improvements are amortized over the lesser of the lease term or the useful life. The cost of major additions and improvements is capitalized, while maintenance and repair costs that do not improve or extend the lives of the respective assets are charged to operations as incurred. The cost of computer software developed or obtained for internal use is accounted for in accordance with the Accounting Standards Codification 350-40, *Internal-Use Software.*

Property, plant and equipment balances and corresponding lives were as follows:

	December 31,		
Dollars in thousands	2023	2022	Useful Lives
Land	$ 978	$ 966	
Buildings and building improvements	14,859	14,710	5-40 years
Leasehold improvements	171,062	163,342	1-20 years
Machinery and production equipment	198,127	182,730	3-20 years
Demonstration equipment	3,896	3,792	4-5 years
Information systems and hardware	160,899	151,330	1-7 years
Furniture, fixtures, and office equipment	20,549	20,286	1-15 years
Construction-in-progress	137,276	103,875	
Total	707,646	641,031	
Less: Accumulated depreciation	(367,447)	(329,729)	
Property, plant and equipment, net	$ 340,199	$ 311,302	

Depreciation expense associated with property, plant and equipment was $40.9 million, $40.1 million, and $39.4 million for the years ended December 31, 2023, 2022 and 2021, respectively.

CAPITALIZED INTEREST

The interest cost on capital projects, including facilities build-out and internal use software, is capitalized and included in the cost of the project. Capitalization commences with the first expenditure for the project and continues until the project is substantially complete and ready for its intended use. When no debt is incurred specifically for a project, interest is capitalized on project expenditures using the weighted average cost of the Company's outstanding borrowings. For the years ended December 31, 2023 and 2022, respectively, the Company capitalized $2.4 million and $1.4 million of interest expense into property, plant and equipment.

ACQUISITIONS

Results of operations of acquired companies are included in the Company’s results of operations as of the respective acquisition dates. The Company accounts for the acquisition of a business in accordance with ASC 805, *Business Combinations* ("ASC Topic 805"). Amounts paid to acquire a business are allocated to the assets acquired and liabilities assumed based on their fair values at the date of acquisition. Any excess of the purchase price over the fair value of the net assets acquired is recorded as goodwill. Transaction costs and costs to restructure the acquired company are expensed as incurred.

Contingent consideration is recorded at fair value as measured on the date of acquisition. The value recorded is based on estimates of future financial projections under various potential scenarios using either a Monte Carlo simulation or the probability-weighted income approach derived from revenue estimates and probability assessment with respect to the likelihood of achieving contingent obligations. Contingent payments related to acquisitions consist of development, regulatory, and commercial milestone payments, in addition to sales-based payments, and are valued using discounted cash flow techniques. Each quarter until such contingent amounts are earned, the fair value of the liability is remeasured at each reporting period and adjusted as a component of operating expenses based on changes to the underlying assumptions. The change in the fair value of sales-based payments is based upon future revenue estimates and increases or decreases as revenue estimates or expectation of timing of payment charges. The estimates used to determine the fair value of the contingent consideration liability are subject to significant judgment and actual results are likely to differ from the amounts originally recorded.

The Company determines the fair value of acquired intangible assets based on detailed valuations that use certain information and assumptions provided by management. The Company allocates any excess purchase price over the fair value of the net tangible and intangible assets acquired to goodwill. Determining the fair value of these intangible assets acquired as part of a business combination requires the Company to make significant estimates. These estimates include the amount and timing of projected future cash flows, the discount rate used to discount those cash flows to present value, the assessment of the asset's life cycle, and the consideration of legal, technical, regulatory, economic, and competitive risks. The fair value assigned to other intangible assets is determined by estimating the future cash flows of each project or technology and discounting the net cash flows back to their present values. The discount rate used is determined at the time of measurement in accordance with accepted valuation methodologies.

Acquired IPR&D is recognized at fair value and initially characterized as an indefinite-lived intangible asset, irrespective of whether the acquired IPR&D has an alternative future use. The Company uses the income approach to determine the fair value of developed technology and IPR&D acquired in a business combination. This approach determines fair value by estimating the after-tax cash flows attributable to the respective asset over its useful life and then discounting these after-tax cash flows back to a present value. Some of the more significant assumptions inherent in the development of those asset valuations include the estimated net cash flows for each year for each product including net revenues, cost of sales, R&D costs, selling and marketing costs, the appropriate discount rate to select in order to measure the risk inherent in each future cash flow stream, the assessment of each asset's life cycle, and competitive trends impacting the asset and each cash flow stream. The Company also uses the income approach, as described above, to determine the estimated fair value of certain other identifiable intangible assets including customer relationships, trade names and business licenses. Customer relationships represent established relationships with customers, which provide a ready channel for the sale of additional products and services. Trade names represent acquired company and product names.

IPR&D acquired in a business combination is capitalized as an indefinite-lived intangible asset. Development costs incurred after the acquisition are expensed as incurred. Upon receipt of regulatory approval, the indefinite-lived intangible asset is then accounted for as a finite-lived intangible asset and amortized on a straight-line basis or accelerated basis, as appropriate, over its estimated useful life. If the research and development project is subsequently abandoned, the indefinite-lived intangible asset is charged to expense. IPR&D acquired outside of a business combination is expensed immediately.

Due to the uncertainty associated with research and development projects, there is risk that actual results will differ materially from the original cash flow projections and that the research and development project will result in a successful commercial product. The risks associated with achieving commercialization include, but are not limited to, delay or failure to obtain regulatory approvals to conduct clinical trials, delay or failure to obtain required market clearances, delays or issues with patent issuance, or validity and litigation.

If the acquired net assets do not constitute a business under the acquisition method of accounting, the transaction is accounted for as an asset acquisition and no goodwill is recognized. In an asset acquisition, the amount allocated to acquired IPR&D with no alternative future use is charged to expense at the acquisition date. Payments that would be recognized as contingent consideration in a business combination are recognized when probable in an asset acquisition. Refer to Note 4, *Acquisitions and Divestitures* for more information.

GOODWILL AND OTHER INTANGIBLE ASSETS

The excess of the cost over the fair value of net assets of acquired businesses is recorded as goodwill. Goodwill is not subject to amortization but is reviewed for impairment at the reporting unit level annually, or more frequently if impairment indicators arise. The Company's assessment of the recoverability of goodwill is based upon a comparison of the carrying value of goodwill with its estimated fair value. The Company reviews goodwill for impairment in the third quarter every year in accordance with ASC Topic 350, *Intangibles - Goodwill and Other* ("ASC Topic 350") and whenever events or changes in circumstances indicate the carrying value of goodwill may not be recoverable. Refer to Note 7, *Goodwill and Other Intangibles* for more information.

The Company has two reportable segments with three underlying reporting units. Refer to Note 16, *Segment and Geographic Information* for more information on reportable segments.

Other intangible assets include patents, trademarks, purchased technology, and supplier and customer relationships. Identifiable intangible assets are initially recorded at fair market value at the time of acquisition generally using an income or cost approach. The Company capitalizes costs incurred to renew or extend the term of recognized intangible assets and amortizes those costs over their expected useful lives.

The Company tests intangible assets with indefinite lives for impairment annually in the third quarter in accordance with ASC Topic 350. Additionally, the Company may perform interim tests if an event occurs or circumstances change that could potentially reduce the fair value of an indefinite lived intangible asset below its carrying amount. The Company tests for impairment by either performing a qualitative evaluation or a quantitative test. The qualitative evaluation is an assessment of factors, including specific operating results as well as industry, market and general economic conditions, to determine whether it is more likely than not that the fair values of the intangible asset is less than its carrying amount. The Company may elect to bypass this qualitative evaluation and perform a quantitative test.

Product rights and other definite-lived intangible assets are tested periodically for impairment in accordance with ASC Topic 360 when events or changes in circumstances indicate that an asset's carrying value may not be recoverable. The impairment testing involves comparing the carrying amount of the asset or asset group to the forecasted undiscounted future cash flows. In the event the carrying value of the asset exceeds the undiscounted future cash flows, the carrying value is considered not recoverable and impairment exists. An impairment loss is measured as the excess of the asset's carrying value over its fair value, calculated using discounted future cash flows. The computed impairment loss is recognized in the period that the impairment occurs.

LONG-LIVED ASSETS

Long-lived assets held and used by the Company, including property, plant and equipment, intangible assets, and leases are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. For purposes of evaluating the recoverability of long-lived assets to be held and used, a recoverability test is performed using projected undiscounted net cash flows applicable to the long-lived assets. If an impairment exists, the amount of such impairment is calculated based on the estimated fair value of the asset. Impairments to long-lived assets to be disposed of are recorded based upon the difference between the carrying value and the fair value of the applicable assets.

INTEGRA FOUNDATION

The Company may periodically make contributions to the Integra Foundation, Inc. The Integra Foundation was incorporated in 2002 exclusively for charitable, educational, and scientific purposes and qualifies under IRC 501(c)(3) as an exempt private foundation. Under its charter, the Integra Foundation engages in activities that promote health, the diagnosis and treatment of disease, and the development of medical science through grants, contributions and other appropriate means. The Integra Foundation is a separate legal entity and is not a subsidiary of the Company; therefore, its results are not included in these consolidated financial statements. The Company made no contributions to the Integra Foundation during the years ended December 31, 2023 and 2022 and $1.2 million during the year ended December 31, 2021. These contributions were recorded in selling, general, and administrative expense.

DERIVATIVES

The Company develops, manufactures, and sells medical devices globally and its earnings and cash flows are exposed to market risk from changes in interest rates and currency exchange rates. The Company addresses these risks through a risk management program that includes the use of derivative financial instruments and operates the program pursuant to documented corporate risk management policies. All derivative financial instruments are recognized in the financial statements at fair value in accordance with the authoritative guidance. Under the guidance, for those instruments that are designated and qualify as hedging instruments, the hedging instrument must be designated as a fair value hedge, cash flow hedge, or a hedge of a net investment in a foreign operation, based on the exposure being hedged. The accounting for changes in the fair value of a derivative instrument depends on whether it has been designated and qualifies as part of a hedging relationship and, further, on the type of hedging relationship. The Company's derivative instruments do not subject its earnings or cash flows to material risk, and gains and losses on these derivatives generally offset losses and gains on the item being hedged. The Company has not entered into derivative transactions for speculative purposes. From time to time, the Company may enter into derivatives that are not designated as hedging instruments in order to protect itself from currency volatility due to intercompany balances.

All derivative instruments are recognized at the fair values as either assets or liabilities on the balance sheet. The Company determines the fair value of its derivative instruments using the framework prescribed by the authoritative guidance, by considering the estimated amount the Company would receive to sell or transfer these instruments at the reporting date and by taking into account expected forward interest rates, currency exchange rates, the creditworthiness of the counterparty for assets, and its creditworthiness for liabilities. In certain instances, the Company utilizes a discounted cash flow model to measure fair value. Generally, the Company uses inputs that include quoted prices for similar assets or liabilities in active markets, other observable inputs for the asset or liability and inputs derived principally from, or corroborated by, observable market data by correlation or other means. The Company has classified all of its derivative assets and liabilities within Level 2 of the fair value hierarchy because observable inputs are available for substantially the full term of its derivative instruments. The Company classifies derivatives designated as hedges in the same category as the item being hedged for cash flow presentation purposes.

The Company entered into foreign currency forward and foreign currency swap contracts that are not designated as hedging instruments for accounting purposes. These contracts are recorded at fair value, with the changes in fair value recognized into other income, net, on the consolidated financial statements. Refer to Note 6, *Derivative Instruments* for more information.

FOREIGN CURRENCY

All assets and liabilities of foreign subsidiaries which have a functional currency other than the U.S. dollar are translated at the rate of exchange at year-end, while elements of the income statement are translated at the average exchange rates in effect during the year. The net effect of these translation adjustments is shown as a component of accumulated other comprehensive income (loss). These currency translation adjustments are not currently adjusted for income taxes as they relate to permanent investments in non-U.S. subsidiaries. Foreign currency transaction net losses of $4.4 million, net losses of $3.3 million, and net gains of less than $0.1 million are reported in other income, net in the statements of operations, for the year ended December 31, 2023, 2022 and 2021, respectively.

INCOME TAXES

Income taxes are accounted for by using the asset and liability method. Deferred tax assets and liabilities are recognized for the estimated future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax basis. A valuation allowance is provided when it is more likely than not that some portion or all of the deferred tax assets will not be realized. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period when the change is enacted.

The Company recognizes a tax benefit from an uncertain tax position only if it is more likely than not to be sustained upon examination based on the technical merits of the position. Reserves are established for positions that don't meet this recognition threshold. The reserve is measured as the largest amount of benefit determined on a cumulative probability basis that the Company believes is more likely than not to be realized upon ultimate settlement of the position. These reserves are classified as long-term liabilities in the consolidated balance sheets of the Company, unless the reserves are expected to be paid in cash during the next twelve months, in which case they are classified as current liabilities. The Company also records interest and penalties accrued in relation to uncertain tax benefits as a component of income tax expense.

While the Company believes it has identified all reasonable exposures and the reserve it has established is appropriate under the circumstances, it is possible that additional exposures exist and that exposures may be settled at amounts different than the amounts reserved. It is also possible that changes in facts and circumstances could cause the Company to either materially increase or reduce the carrying amount of its tax reserve.

The Company continues to indefinitely reinvest substantially all of its foreign earnings unless there is a manner under which to remit the earnings without a material tax cost. The current provisional analysis indicates that the Company has sufficient U.S. liquidity, including borrowing capacity, to fund foreseeable U.S. cash needs without requiring the repatriation of foreign cash. One time or unusual items that may impact the ability or intent to keep the foreign earnings and cash indefinitely reinvested include significant U.S. acquisitions, loans from a foreign subsidiary and changes in tax laws.

REVENUE RECOGNITION

Revenue is recognized upon the transfer of control of promised products or services to the customers in an amount that reflects the consideration the Company expects to receive in exchange for those products and services.

Total revenue, net, includes product sales, product royalties and other revenues, such as fees received from services.

For products shipped with FOB shipping point terms, the control of the product passes to the customer at the time of shipment. For shipments in which the control of the product is transferred when the customer receives the product, the Company recognizes revenue upon receipt by the customer. Certain products that the Company produces for private label customers have no alternative use and the Company has a right of payment for performance to date. Revenues from those products are recognized over the period that the Company manufactures these products, which is typically one month to three months. The Company uses the input method to measure the manufacturing activities completed to date, which depicts the progress of the Company's performance obligation of transferring control of goods being manufactured for private label customers.

A portion of the Company's product revenue is generated from consigned inventory maintained at hospitals and distributors, and also from inventory physically held by field sales representatives. For these types of products sales, the Company retains control until the product has been used or implanted, at which time revenue is recognized.

Revenues from sale of products and services are evidenced by either a contract with the customer or a valid purchase order and an invoice which includes all relevant terms of sale. For product sales, invoices are generally issued upon the transfer of control (or upon the completion of the manufacturing in the case of the private label transactions recognized over time) and are typically payable 30 days after the invoice date. The Company performs a review of each specific customer's creditworthiness and ability to pay prior to acceptance as a customer. Further, the Company performs periodic reviews of its customers' creditworthiness prospectively. Refer to Note 3, *Revenue From Contracts With Customers* for more information. The Company also maintains a provision for estimated returns and allowances in the same period that the related revenue is recorded. This reserve is based upon an analysis of actual credit memos issued for pricing issues or returned goods over an extended period, as well as assumptions about outstanding accounts receivable and judgment in interpreting the data.

RESEARCH AND DEVELOPMENT

Research and development costs, including salaries, depreciation, consultant and other external fees, and facility costs directly attributable to research and development activities, are expensed in the period in which they are incurred.

EMPLOYEE TERMINATION BENEFITS

The Company does not have a written severance plan, but has a history of providing benefits for employees in the case of involuntary termination. In situations outside the US, there are minimum statutory termination benefits requirements by country that must be paid to the affected employees. The Company records employee severance costs associated with these restructuring activities in accordance with the authoritative guidance for non-retirement post-employment benefits. Charges associated with these activities are recorded when the payment of benefits is probable and can be reasonably estimated. In situations where the Company pays out termination benefits in excess of statutory minimum amounts based on management's discretion, the Company records these termination costs once communication is made to the affected employees.

The timing of the recognition of charges for employee severance costs other than minimum statutory benefits depends on whether the affected employees are required to render service beyond their legal notification period in order to receive the benefits. If affected employees are required to render service beyond their legal notification period, charges are recognized over the future service period. Otherwise, charges are recognized when management has approved a specific plan and employee communication requirements have been met.

The Company incurred employee termination costs on sales force restructuring activities in the consolidated statement of operations for the year ended December 31, 2023. In addition, the Company incurred employee termination costs on restructuring activities associated with a closure of a manufacturing facility in France and other reorganization projects in the consolidated statement of operations for the year ended December 31, 2022. The following table summarizes the restructuring related accrual balances included within accrued expenses and other current liabilities in the consolidated balance sheet for the year ended December 31, 2023 and 2022.

	Years Ended December 31,	
(Dollars in thousands)	2023	2022
Balance, beginning of the year	$ 5,107	$ 10,226
Charges:		
Cost of Goods Sold	—	1,494
Research and development	—	72
Selling, general and administrative	1,048	5,582
Payments and other adjustments	(4,042)	(12,267)
Balance, end of the year	$ 2,113	$ 5,107

STOCK-BASED COMPENSATION

Relevant authoritative guidance requires companies to recognize the expense related to the fair value of their stock-based compensation awards. Stock-based compensation expense for stock option awards are based on the grant date fair value using the binomial distribution model. The Company recognizes compensation expense for stock option awards, restricted stock awards, performance stock awards and contract stock awards over the requisite service period of the award. All excess tax benefits and taxes and tax deficiencies from stock-based compensation are included in provision for income taxes in the consolidated statement of operations. Refer to Note 9, *Stock-based Compensation* for more information.

PENSION BENEFITS

The Company maintains defined benefit pension plans that cover certain employees in France, Japan, Germany and Switzerland. Various factors are considered in determining the pension liability, including the number of employees expected to be paid their salary levels and years of service, the expected return on plan assets, the discount rate used to determine the benefit obligations, the timing of benefit payments and other actuarial assumptions.

Retirement benefit plan assumptions are reassessed on an annual basis or more frequently if changes in circumstances indicate a re-evaluation of assumptions are required. The key benefit plan assumptions are the discount rate and expected rate of return on plan assets. The discount rate is based on average rates on bonds that matched the expected cash outflows of the benefit plans. The expected rate of return is based on historical and expected returns on the various categories of plan assets.

The Company uses the corridor approach in measuring the amount of net periodic benefit pension cost to recognize each period. The corridor approach defers all actuarial gains and losses resulting from variances between actual results and actuarial assumptions. Those unrecognized gains and losses are amortized when the net gains and losses exceed 10% of the greater of the market-related value of plan assets or the projected benefit obligation at the beginning of the year. The amount in excess of the corridor is amortized over the average remaining service period to retirement date of active plan participants.

Deferred Compensation Plan

The Company maintains a deferred compensation plan in which certain employees of the Company may defer the payment and taxation of up to 75% of their base salary and up to 100% of bonus amounts and other eligible cash compensation.

This deferred compensation is invested in funds offered under the Plan and is valued based on Level 1 measurements in the fair value hierarchy. The purpose of the plan is to retain key employees by providing them with an opportunity to defer a portion of their compensation as elected by the participant in accordance with the plan. Any amounts set aside to defray the liabilities assumed by the Company will remain the general assets of the Company until such amounts are distributed to the participants. Assets of the Company's deferred compensation plan are included in Other current assets and recorded at fair value based on their quoted market prices.

CONCENTRATION OF CREDIT RISK

Financial instruments, which potentially subject the Company to concentrations of credit risk, consist principally of cash and cash equivalents, which are held at major financial institutions, investment-grade marketable debt securities and trade receivables.

The Company's products are sold on an uncollateralized basis and on credit terms based upon a credit risk assessment of each customer. A portion of the Company's trade receivables to customers outside the United States includes sales to foreign distributors, who then sell to government owned or supported healthcare systems.

None of the Company's customers accounted for 10% or more of the consolidated net sales during the years ended December 31, 2023, 2022 and 2021.

RECENT ACCOUNTING PRONOUNCEMENTS

In December 2023, the FASB issued ASU 2023-09, Income Taxes (Topic 740): Improvements to Income Tax Disclosures which enhances the transparency of income tax disclosures by expanding annual disclosure requirements related to the rate reconciliation and income taxes paid. The amendments are effective for fiscal years beginning after December 15, 2023, and for interim periods within fiscal years beginning after December 15, 2024. Early adoption is permitted. The amendments should be applied retrospectively to all prior periods presented in the financial statements. The Company is currently evaluating this ASU to determine its impact on the Company's disclosures.

In November 2023, the FASB issued ASU 2023-07, Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures, which updates reportable segment disclosure requirements primarily through enhanced disclosures about significant segment expenses. The amendments are effective for fiscal years beginning after December 15, 2023, and for interim periods within fiscal years beginning after December 15, 2024. Early adoption is permitted. The amendments should be applied retrospectively to all prior periods presented in the financial statements. The Company does not plan to early adopt, but is currently evaluating this ASU to determine its impact on the Company's disclosures.

In March 2020, the Financial Accounting Standards Board ("FASB") issued ASU 2020-04, Reference Rate Reform (Topic 848), and subsequent amendment to the initial guidance: ASU 2021-01, Reference Rate Reform (Topic 848): Scope (collectively, "Topic 848"). Topic 848 provides optional expedients and exceptions for applying GAAP to contracts, hedging relationships, and other transactions affected by reference rate reform if certain criteria are met. The amendments apply only to contracts, hedging relationships, and other transactions that reference London Inter-Bank Offered Rate ("LIBOR") or another reference rate expected to be discontinued because of reference rate reform. The guidance generally can be applied through December 31, 2024. The Alternative Reference Rates Committee, a group of private-market participants convened by the U.S. Federal Reserve Board and the New York Federal Reserve, has recommended the use of the Secured Overnight Financing Rate ("SOFR") as a more robust reference rate alternative to LIBOR. On March 24, 2023, the Company entered into the seventh amendment and restatement (the "March 2023 Amendment") of its Senior Credit Facility (the "Senior Credit Facility") with a syndicate of lending banks with Bank of America, N.A., as Administrative Agent. In connection with the March 2023 Amendment, the Company replaced all LIBOR-based contracts with SOFR, which is calculated based on overnight transactions under repurchase agreements backed by Treasury securities. In addition, on April 17, 2023 the Company entered into an amendment (the "April 2023 Amendment") of the Securitization Facility (as defined below) and amended the interest rate from LIBOR to SOFR indexed rate. (See Note 6). In March 2023, the Company entered into a basis swap where the Company receives Term SOFR and pays LIBOR to convert the portfolio of interest rate swaps from LIBOR to SOFR. Integra has elected to adopt the optional expedient under ASC 848, which will allow the interest rate swap hedging relationship to continue, without de-designation, due to the change in the indexed rate from LIBOR to SOFR.

SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION

Cash paid for interest during the years ended December 31, 2023, 2022 and 2021 was $44.3 million (net of $2.4 million that was capitalized into construction in progress), $42.2 million (net of $1.4 million that was capitalized into construction in progress) and $43.2 million (net of $1.2 million that was capitalized into construction in progress), respectively.

Cash paid for income taxes, net of refunds, for the years ended December 31, 2023, 2022 and 2021 was $23.6 million, $35.9 million and $49.5 million, respectively.

NON-CASH INVESTING AND FINANCING ACTIVITIES

Property and equipment purchases included in liabilities at December 31, 2023, 2022 and 2021 were $10.0 million, $10.5 million and $4.7 million, respectively.

During the fourth quarter of 2021, the Company achieved its final developmental milestone which triggered a $5.0 million obligation to be paid to former shareholders of Rebound Therapeutics Corporation ("Rebound"). The Company recorded $5.0 million as an intangible asset in the consolidated balance sheet upon achieving the milestone. The remaining obligation was included in accrued liabilities at December 31, 2021 in the consolidated balance sheets. The milestone was fully paid in 2022.

3. REVENUES FROM CONTRACTS WITH CUSTOMERS

Summary of Accounting Policies on Revenue Recognition

Revenue is recognized upon the transfer of control of promised products or services to the customers in an amount that reflects the consideration the Company expects to receive in exchange for those products and services.

Performance Obligations

The Company's performance obligations consist mainly of transferring control of goods and services identified in the contracts, purchase orders, or invoices. The Company has no significant multi-element contracts with customers.

Significant Estimates

Usage-based royalties and licenses are estimated based on the provisions of contracts with customers and recognized in the same period that the royalty-based products are sold by the Company's strategic partners. The Company estimates and recognizes royalty revenue based upon communication with licensees, historical information, and expected sales trends. Differences between actual reported licensee sales and those that were estimated are adjusted in the period in which they become known, which is typically the following quarter. Historically, such adjustments have not been significant.

The Company estimates returns, price concessions, and discount allowances using the expected value method based on historical trends and other known factors. Rebate allowances are estimated using the most likely method based on each customer contract.

The Company's return policy, as set forth in its product catalogs and sales invoices, requires review and authorization in advance prior to the return of product. Upon the authorization, a credit will be issued for the goods returned within a set amount of days from the shipment, which is generally 90 days.

Due to the voluntary recall in 2023 of all products manufactured at the Boston facility, including Primatrix®, Surgimend®, Revize™, and TissueMend™, the Boston recall, the Company recorded a total of $18.7 million provision for product returns, as a reduction of net revenue, and has credited $9.9 million to customers during the year ended December 31, 2023. As of December 31, 2023, the return reserve was $8.8 million.

The Company disregards the effects of a financing component if the Company expects, at contract inception, that the period between the transfer and customer payment for the goods or services will be one year or less. The Company has no significant revenues recognized on payments expected to be received more than one year after the transfer of control of products or services to customers.

Contract Asset and Liability

Revenues recognized from the Company's private label business that are not invoiced to the customers as a result of recognizing revenue over time are recorded as a contract asset included in the prepaid expenses and other current assets account in the consolidated balance sheet. Upon invoicing to the customer, the balance is recorded in trade receivable, net in the consolidated balance sheet.

Other operating revenues may include fees received under service agreements. Non-refundable fees received under multiple-period service agreements are recognized as revenue as the Company satisfies the performance obligations to the other party. A portion of the transaction price allocated to the performance obligations to be satisfied in the future periods is recognized as a contract liability.

The following table summarized the changes in the contract asset and liability balances for the year ended December 31, 2023:

Dollars in thousands		Total
Contract Asset		
Contract asset, January 1, 2023	$	10,122
Transferred to trade receivable from contract asset included in beginning of the year contract asset		(7,743)
Written off from beginning of the year contract asset due to Boston recall		(2,379)
Contract asset, net of transferred to trade receivables on contracts during the period		9,233
Contract asset, December 31, 2023	$	9,233
Contract Liability		
Contract liability, January 1, 2023	$	16,127
Recognition of revenue included in beginning of year contract liability		(6,834)
Contract liability, net of revenue recognized on contracts during the period		6,951
Foreign currency translation		8
Contract liability, December 31, 2023	$	16,252

At December 31, 2023, the short-term portion of the contract liability of $8.5 million and the long-term portion of $7.7 million is included in current liabilities and other liabilities, respectively, in the consolidated balance sheet.

As of December 31, 2023, the Company is expected to recognize revenue from unsatisfied or partially satisfied performance obligations of approximately $8.5 million in 2024, $4.2 million in 2025, $2.1 million in 2026, $1.1 million in 2027, $0.2 million in 2028, and $0.1 million thereafter.

Shipping and Handling Fees

The Company elected to account for shipping and handling activities as a fulfillment cost rather than a separate performance obligation. Amounts billed to customers for shipping and handling are included as part of the transaction price and recognized as revenue when control of underlying products is transferred to the customer. The related shipping and freight charges incurred by the Company are included in the cost of goods sold.

Product Warranties

Certain of the Company's medical devices, including monitoring systems and neurosurgical systems, are designed to operate over long periods of time. These products are sold with warranties which may extend for up to two years from the date of purchase. The warranties are not considered a separate performance obligation. The Company estimates its product warranties using the expected value method based on historical trends and other known factors. The Company includes them in accrued expenses and other current liabilities in the consolidated balance sheet.

Taxes Collected from Customers

The Company elected to exclude from the measurement of the transaction price all taxes assessed by a governmental authority that are both imposed on and concurrent with a specific revenue-producing transaction and collected by the entity from a customer.

Disaggregated Revenue

The following table presents revenues disaggregated by the major sources of revenues for years-ended December 31, 2023, 2022 and 2021 (dollar amounts in thousands):

	Year Ended December 31, 2023	Year Ended December 31, 2022	Year Ended December 31, 2021
Neurosurgery	$ 818,101	$ 794,017	$ 802,959
Instruments	240,892	225,547	222,273
Total Codman Specialty Surgical	1,058,993	1,019,564	1,025,232
Wound Reconstruction and Care[1][2]	373,986	406,689	392,463
Private Label	108,594	131,413	124,753
Total Tissue Technologies	482,580	538,102	517,216
Total revenue	$ 1,541,573	$ 1,557,666	$ 1,542,448

[1] See Note 4. Acquisitions and Divestitures, for details around the ACell and SIA acquisitions.

[2] On August 31, 2022, the Company completed the sale of its non-core traditional wound care ("TWC") business. See Note 4, *Acquisitions and Divestitures*

See Note 16, *Segment and Geographical Information*, for details of revenues based on the location of the customer.

4. ACQUISITIONS AND DIVESTITURES

Surgical Innovation Associates, Inc. Acquisition

On December 6, 2022, the Company completed its acquisition of Surgical Innovation Associates, Inc. ("SIA") for an acquisition purchase price of $51.5 million (the "SIA Acquisition") plus contingent consideration of up to $90.0 million. In addition to the purchase price, the acquisition includes two separate contingent considerations payments, which are dependent on 1) achieving certain revenue-based performance milestones in 2023, 2024, and 2025 (up to $50.0 million in additional payments), as well as 2) the approval by the FDA of the Premarket Approval (“PMA”) Application for DuraSorb for certain uses by certain timing targets (up to $40.0 million in additional payments). SIA's core technology, DuraSorb, is a fully resorbable scaffold of a globally accepted polymer, which is cleared for use in hernia repair, abdominal wall, and other soft tissue reinforcement. DuraSorb sales will be reported within Integra’s Tissue Technologies segment as part of its Wound Reconstruction and Care franchise.

Assets Acquired and Liabilities Assumed at Fair Value

The SIA Acquisition has been accounted for using the acquisition method of accounting. This method requires that assets acquired, and liabilities assumed in a business combination to be recognized at their fair values as of the acquisition date.

The following table summarizes the fair values of the assets acquired and liabilities assumed at the acquisition date:

Dollars in thousands		Final Valuation	Weighted Average Life
Current assets:			
Cash	$	4,438	
Trade accounts receivable, net		1,551	
Inventories, net		2,900	
Prepaid expenses and other current assets		1,654	
Total current assets	$	10,543	
Intangible assets		75,000	14 years
Goodwill		41,380	
Total assets acquired	**$**	**126,923**	
Current liabilities:			
Accounts payable and accrued expenses	$	2,044	
Total current liabilities	$	2,044	
Deferred Tax Liability		11,325	
Contingent consideration		57,607	
Total liabilities assumed		**70,976**	
Net assets acquired	**$**	**55,947**	

Developed Technology

The estimated fair value of the developed technology was determined using the multi-period excess earnings method of the income approach, which estimates value based on the present value of future economic benefits. Some of the more significant assumptions inherent in the development of those asset valuations include the estimated net cash flows for each year for each product including net revenues, cost of sales, R&D costs, selling and marketing costs, working capital, and contributory asset charges, the appropriate discount rate to select in order to measure the risk inherent in each future cash flow stream, the assessment of the asset's life cycle, and competitive trends impacting the asset and the cash flow stream.

The Company used a discount rate of 18% to arrive at the present value for the acquired intangible assets to reflect the rate of return a market participant would expect to earn and incremental commercial uncertainty in the cash flow projections. No assurances can be given that the underlying assumptions used to prepare the discounted cash flow analysis will not change. For these and other reasons, actual results may vary significantly from estimated results.

Goodwill

The Company allocated goodwill related to the SIA Acquisition to the Tissue Technologies segment. Goodwill is the excess of the consideration transferred over the net assets recognized and represents the expected revenue and cost synergies of the combined company and assembled workforce. A key factor that contributes to the recognition of goodwill, and a driver for the Company's acquisition of SIA, is the attractive growth opportunities presented by the surgical matrix business in the breast reconstruction market. Goodwill recognized as a result of this acquisition is non-deductible for income tax purposes.

Contingent Consideration

The Company determines the acquisition date fair value of contingent consideration obligations based on a probability-weighted income approach derived from revenue estimates and a probability assessment with respect to the likelihood of achieving contingent obligations. The fair value measurement is based on significant inputs not observable in the market and thus represents a Level 3 measurement as defined using the fair value concepts in ASC 820. The resulting most likely payouts are discounted using an appropriate effective annual interest rate. At each reporting date, the contingent consideration obligation will be revalued to estimated fair value and changes in fair value will be reflected as income or expense in the consolidated statement of operations. Changes in the fair value of the contingent considerations may result from changes in discount periods and rates and changes in the timing and amount of revenue estimates. Changes in assumptions utilized in the contingent consideration fair value estimates could result in an increase in the contingent consideration obligation and a corresponding charge to operating results.

As part of the acquisition, the Company is required to pay to the shareholder of SIA up to $90.0 million for two separate payments, which are dependent on 1) achieving certain revenue-based performance milestones in 2023, 2024, and 2025 (up to $50.0 million in additional payments), as well as 2) the approval by the FDA of the PMA for DuraSorb for certain uses by certain timing targets (up to $40.0 million in additional payments). The Company used iterations of the Monte Carlo simulation

to calculate the fair value of the contingent consideration for the revenue-based milestone that considered the possible outcomes of scenarios related to each specific milestone for the revenue based performance milestone. The Company used probabilities of achieving the conditions to calculate the fair value of the contingent consideration for the PMA approval milestone. For the twelve-month period ended December 31, 2023, the company estimates the fair value of contingent consideration for the revenue based milestone to be $41.8 million and PMA approval to be $26.9 million. This is compared to $32.6 million and $25.0 million, respectively at the acquisition date.

Deferred Tax Liabilities

Deferred tax liabilities result from identifiable intangible assets' fair value adjustments. These adjustments create excess book basis over tax basis which is tax-effected by the statutory tax rates of applicable jurisdictions.

Sale of non-core traditional wound care business

On August 31, 2022, the Company completed its sale of its non-core traditional wound care ("TWC") business to Gentell, LLC ("Gentell") for $28.8 million, which consists of $27.8 million in cash plus $1.0 million in contingent consideration which may be received upon achieving certain revenue-based performance milestones two years after the closing date. The proceeds from the sale of the TWC business of $27.8 million is presented in the consolidated statement of cash flows net of cash transferred of $3.5 million and other transaction fees. The transaction included the sale of the Company's TWC products, such as sponges, gauze and conforming bandages, and certain advanced wound care dressings, such as supportive, calcium alginate, hydrogel, and foam dressings.

The divestiture did not represent a strategic shift that had a major effect on the Company's operations and financial statements. Goodwill was allocated to the assets and liabilities divested using the relative fair value method of the TWC business to the Company's Tissue Technologies reportable business segment. In connection with the sale, the Company recognized $0.6 million as a gain from the sale of the business in the consolidated statement of operations for the year ended December 31, 2022. The transaction is subject to final working capital adjustments.

In addition to the purchase and sale agreement, the Company also entered into a contract manufacturing agreement with Gentell. Under the terms of the agreement, Gentell received inventory, equipment, and tooling to manufacture certain MediHoney® and TCC-EZ® products on behalf of the Company. On the close date of this transaction, the Company transferred all inventory associated with these products to Gentell and recognized an asset of $11.1 million, as a form of a deposit for the inventory transferred, which based on the expected timing of inventory purchases, was primarily included within prepaid expenses and other current assets in the consolidated balance sheet. This deposit will be utilized by the Company on future orders placed to Gentell for such products. As of December 31, 2023, the Company had a deposit remaining of $0.4 million which is included in prepaid assets. In addition, there are outstanding balances related to the Company's ongoing purchase of MediHoney® and TCC-EZ® products subsequent to the close of the TWC divestiture..

Definitive Agreement to Acquire Acclarent Inc.

In December 2023, the Company entered into a definitive agreement to acquire Acclarent, Inc. from Ethicon, Inc., a Johnson & Johnson MedTech company for $275 million in cash at closing, subject to customary purchase price adjustments, and an additional $5 million upon the achievement of certain regulatory milestones. Acclarent is an innovator and market leader in Ear, Nose, Throat ("ENT") procedures and upon closing, Integra will be one of the leading providers of ENT products and technologies. The transaction is expected to close by the second quarter of 2024.

Sale of Extremity Orthopedics Business

On January 4, 2021, the Company completed the sale of its Extremity Orthopedics business to Smith & Nephew USD Limited ("Smith & Nephew"). The transaction included the sale of the Company's upper and lower Extremity Orthopedics product portfolio, including ankle and shoulder arthroplasty and hand and wrist product lines. The Company received an aggregate purchase price of $240.0 million from Smith & Nephew and concurrently paid $41.5 million to the Consortium of Focused Orthopedists, LLC ("CFO") effectively terminating the licensing agreement between Integra and CFO relating to the development of shoulder arthroplasty products.

The divestiture did not represent a strategic shift that had a major effect on the Company's operations and financial statements. Goodwill was allocated to the assets and liabilities divested using the relative fair value method of the Extremity Orthopedics business to the Company's Tissue Technologies reporting unit. In connection with the sale, the Company recognized a gain of $41.8 million that is presented in Gain from the sale of business in the consolidated statement of operations for the year ended December 31, 2021. The Company finalized the net working capital to Smith & Nephew as of December 31, 2021.

ACell, Inc. Acquisition

On January 20, 2021, the Company acquired ACell, Inc. (the "ACell Acquisition") for an acquisition purchase price of $306.9 million plus contingent considerations of up to $100 million, that may be payable upon achieving certain revenue-based performance milestones in 2022, 2023 and 2025. The final working capital adjustments of $1.3 million was finalized and paid as of June 30, 2021. ACell was a privately-held company that offered a portfolio of regenerative products for complex wound management, including developing and commercializing products based on MatriStem Urinary Bladder Matrix, a technology platform derived from porcine urinary bladder extracellular matrix.

Assets Acquired and Liabilities Assumed at Fair Value

The ACell Acquisition has been accounted for using the acquisition method of accounting. This method requires that assets acquired and liabilities assumed in a business combination are recognized at their fair values as of the acquisition date.

The following table summarizes the final fair values of the assets acquired and liabilities assumed at the acquisition date:

Dollars in thousands		Final Valuation	Weighted Average Life
Current assets:			
Cash	$	2,726	
Trade accounts receivable, net		16,469	
Inventories, net		18,299	
Prepaid expenses and other current assets		1,498	
Total current assets	$	38,992	
Property, plant and equipment, net		13,769	
Intangible assets		245,000	13-14 years
Goodwill		94,147	
Right of use asset - operating leases		9,259	
Deferred tax assets		7,465	
Other assets		148	
Total assets acquired	**$**	**408,780**	
Current liabilities:			
Accounts payable	$	718	
Accrued expenses		5,966	
Current portion of lease liability - operating leases		1,673	
Total current liabilities	$	8,357	
Other long-term liability		276	
Lease liability - operating leases		7,585	
Deferred tax liability		61,724	
Contingent consideration		23,900	
Total liabilities assumed		**101,842**	
Net assets acquired	**$**	**306,938**	

Intangible Assets

The estimated fair value of the developed technology acquired was determined using the multi-period excess earnings method of the income approach, which estimates value based on the present value of future economic benefits. Some of the more significant assumptions inherent in the development of those asset valuations include the estimated net cash flows for each year for each product including net revenues, cost of sales, R&D costs, selling and marketing costs, the appropriate discount rate to select in order to measure the risk inherent in each future cash flow stream, the assessment of each asset's life cycle, and competitive trends impacting the asset and each cash flow stream.

The Company used a discount rate of 8.5% to arrive at the present value for the acquired intangible assets to reflect the rate of return a market participant would expect to earn and incremental commercial uncertainty in the cash flow projections. No assurances can be given that the underlying assumptions used to prepare the discounted cash flow analysis will not change. For these and other reasons, actual results may vary significantly from estimated results.

Goodwill

The Company allocated goodwill related to the ACell acquisition to the Tissue Technologies segment. Goodwill is the excess of the consideration transferred over the net assets recognized and represents the expected synergies of the combined company and assembled workforce. Goodwill recognized as a result of this acquisition is non-deductible for income tax purposes.

Contingent Consideration

As part of the acquisition of ACell (the "ACell Acquisition"), the Company is required to make payments to the former shareholders of ACell up to $50 million based on the achievement by the Company of certain revenue-based performance milestones in 2023 and $50 million in 2025. The 2023 milestone was not achieved, leaving only one contingent milestone remaining. The Company used iterations of the Monte Carlo simulation to calculate the fair value of the contingent consideration that considered the possible outcomes of scenarios related to each specific milestone. For the twelve-month period ended December 31, 2023, the company estimates the fair value of the contingent obligation to be $0.3 million. This is compared to $23.9 million at the acquisition date, and $3.7 million at December 31, 2022.

Deferred Tax Liabilities

Deferred tax liabilities result from identifiable intangible assets' fair value adjustments. These adjustments create excess book basis over tax basis which is tax-effected by the statutory tax rates of applicable jurisdictions.

5. DEBT

Amendment to the Seventh Amended and Restated Senior Credit Agreement

On March 24, 2023, the Company entered into the seventh amendment and restatement (the "March 2023 Amendment") of the Senior Credit Facility (the "Senior Credit Facility") with a syndicate of lending banks with Bank of America, N.A., as Administrative Agent. The March 2023 Amendment extended the maturity date to March 24, 2028, amended the contractual repayments of the term loan component, and amended the interest rate from LIBOR to SOFR-indexed interest. The Company continues to have the aggregate principal amount of up to approximately $2.1 billion available to it through the following facilities: (i) a $775.0 million term loan facility, and (ii) a $1.3 billion revolving credit facility, which includes a $60 million sublimit for the issuance of standby letters of credit and a $60 million sublimit for swingline loans.

The Company's maximum consolidated total leverage ratio in the financial covenants (as defined in the Senior Credit Facility) is the following:

Fiscal Quarter Ending	Maximum Consolidated Total Leverage Ratio
March 31, 2023 through December 31, 2024	4.50 to 1.00
March 31, 2025 through June 30, 2026	4.25 to 1.00
September 30, 2026 and the last day of each fiscal quarter thereafter	4.00 to 1.00

Borrowings under the Senior Credit Facility bear interest, at the Company's option, at a rate equal to the following:

i. Term SOFR in effect from time to time plus 0.10% plus the applicable rate (ranging from 1.00% to 1.75%), or

ii. the highest of:

   1. the weighted average overnight Federal funds rate, as published by the Federal Reserve Bank of New York, plus 0.50%
   2. the prime lending rate of Bank of America, N.A. or
   3. the one-month Term SOFR plus 1.00%

The applicable rates are based on the Company's consolidated total leverage ratio (defined as the ratio of (a) consolidated funded indebtedness as of such date less cash that is not subject to any restriction on the use or investment thereof to (b) consolidated EBITDA (as defined by the amended Seventh Amended and Restated Credit Agreement (the "Credit Agreement")), for the period of four consecutive fiscal quarters ending on such date).

The Company will pay an annual commitment fee (ranging from 0.15% to 0.30%), based on the Company's consolidated total leverage ratio, on the amount available for borrowing under the revolving credit facility.

The Senior Credit Facility is collateralized by substantially all of the assets of the Company's U.S. subsidiaries, excluding intangible assets. The Senior Credit Facility is subject to various financial and negative covenants and at December 31, 2023, the Company was in compliance with all such covenants. The Company capitalized $7.6 million deferred financing costs in connection with the modification of the Senior Credit Facility and wrote off $0.2 million of previously capitalized financing costs during the year ended 2023.

There was $70.0 million outstanding at December 31, 2023 under the revolving portion of the Senior Credit Facility at a weighted average interest rate of 6.8%. As of December 31, 2022, there was no balance outstanding under the revolving portion of the Senior Credit Facility. At December 31, 2023 and 2022, there was $775.0 million outstanding under the Term Loan component of the Senior Credit Facility at weighted average interest rate of 6.8% and 5.6%, respectively. At December 31, 2023 and 2022, there was $14.5 million and $38.1 million, respectively, of the Term Loan component of the Senior Credit Facility was classified as current on the consolidated balance sheets.

The fair value of outstanding borrowings of the Senior Credit Facility's Term Loan components at December 31, 2023 was $762.9 million. This fair values were determined by using a discounted cash flow model based on current market interest rates available to the Company. These inputs are corroborated by observable market data for similar liabilities and therefore classified within Level 2 of the fair value hierarchy. Level 2 inputs represent inputs that are observable for the asset or liability, either directly or indirectly, and are other than active market observable inputs that reflect unadjusted quoted prices for identical assets or liabilities

Letters of credit outstanding as of December 31, 2023 and 2022 totaled $1.7 million, and $1.6 million respectively. There were no amounts drawn as of December 31, 2023.

Contractual repayments of the Term Loan component of the Senior Credit Facility are due as follows:

Year Ended December 31, 2023	Principal Repayment
Dollars in thousands	
2024	$ 14,531
2025	$ 33,906
2026	$ 38,750
Thereafter	$ 687,813
	$ 775,000

Future interest payments on the term loan component of the Senior Credit Facility based on current interest rates are expected to approximate $52.4 million in 2024, $50.5 million in 2025, $47.9 million in 2026, and $54.7 million thereafter. Interest is calculated on the term loan portion of the Senior Credit Facility based on SOFR plus the certain amounts set forth in the Credit Agreement. As the revolving credit facility and Securitization Facility (defined below) can be repaid at any time, no interest has been included in the calculation.

Any outstanding borrowings on the revolving credit component of the Senior Credit Facility is due on March 24, 2028.

Convertible Senior Notes

On February 4, 2020, the Company issued $575.0 million aggregate principal amount of its 0.5% Convertible Senior Notes due 2025 (the "2025 Notes"). The 2025 Notes will mature on August 15, 2025 and bear interest at a rate of 0.5% per annum payable semi-annually in arrears, unless earlier converted, repurchased or redeemed in accordance with the terms of the 2025 Notes.

The 2025 Notes are senior, unsecured obligations of the Company, and are convertible into cash and shares of its common stock based on initial conversion rate, subject to adjustment of 13.5739 shares per $1,000 principal amounts of the 2025 Notes (which represents an initial conversion price of $73.67 per share). The 2025 Notes convert only in the following circumstances: (1) if the closing price of the Company's common stock has been at least 130% of the conversion price during the period; (2) if the average trading price per $1,000 principal amount of the 2025 Notes is less than or equal to 98% of the average conversion value of the 2025 Notes during a period as defined in the indenture; (3) if the Company calls the notes for optional redemption as defined in the indenture; or (4) if specified corporate transactions occur. As of December 31, 2023, none of these conditions existed with respect to the 2025 Notes and as a result the 2025 Notes are classified as long term.

On December 9, 2020, the Company entered into the First Supplemental Indenture to the original agreement dated as of February 4, 2020 between the Company and Citibank, N.A., as trustee, governing the Company's outstanding 2025 Notes. The Company irrevocably elected (1) to eliminate the Company's option to choose physical settlement on any conversion of the 2025 Notes that occurs on or after the date of the First Supplemental Indenture and (2) with respect to any Combination

Settlement for a conversion of the 2025 Notes, the Specified Dollar Amount that will be settled in cash per $1,000 principal amount of the 2025 Notes shall be no lower than $1,000.

Holders of the Notes will have the right to require the Company to repurchase for cash all or a portion of their Notes at 100% of their principal amount, plus any accrued and unpaid interest, upon the occurrence of a fundamental change (as defined in the indenture relating to the Notes). The Company will also be required to increase the conversion rate for holders who convert their Notes in connection with certain fundamental changes occurring prior to the maturity date or following delivery by the Company of a notice of redemption.

In connection with the issuance of the 2025 Notes, the Company entered into call transactions and warrant transactions, primarily with affiliates of the initial purchasers of the 2025 Notes (the “hedge participants”). The cost of the call transactions was $104.2 million for the 2025 Notes. The Company received $44.5 million of proceeds from the warrant transactions for the 2025 Notes. The call transactions involved purchasing call options from the hedge participants, and the warrant transactions involved selling call options to the hedge participants with a higher strike price than the purchased call options. The initial strike price of the call transactions was $73.67, subject to anti-dilution adjustments substantially similar to those in the 2025 Notes. The initial strike price of the warrant transactions was $113.34 for the 2025 Notes, subject to customary anti-dilution adjustments.

At December 31, 2023, the carrying amount of the liability was $575.0 million. The fair value of the 2025 Notes at December 31, 2023 was $541.2 million. Factors that the Company considered when estimating the fair value of the 2025 Notes included recent quoted market prices or dealer quote. The level of the 2025 Notes is considered as Level 1.

Securitization Facility

On December 15, 2023, the Company entered into an amendment (the "December 2023 Amendment") of the Securitization Facility which extended the maturity date from May 28, 2024 to December 15, 2026. The company incurred approximately $0.3 million of new issuance costs associated with the amendment which will be amortized over 3 years, the length of the agreement. Due to the increase in borrowing capacity, the remaining $0.1 million of unamortized costs from the previous agreement will be amortized over the length of the amended agreement, 3 years. In addition, on April 17, 2023 the company entered into an amendment (the "April 2023 Amendment") of the Securitization Facility and amended the interest rate from LIBOR to SOFR indexed rate. The December 2023 and April 2023 Amendments do not increase the Company’s total indebtedness.

During the fourth quarter of 2018, the Company entered into an accounts receivable securitization facility (the "Securitization Facility") under which accounts receivable of certain domestic subsidiaries are sold on a non-recourse basis to a special purpose entity (“SPE”), which is a bankruptcy-remote, consolidated subsidiary of the Company. Accordingly, the assets of the SPE are not available to satisfy the obligations of the Company or any of its subsidiaries. From time to time, the SPE may finance such accounts receivable with a revolving loan facility secured by a pledge of such accounts receivable. The amount of outstanding borrowings on the Securitization Facility at any one time is limited to $150.0 million. The Securitization Facility Agreement ("Securitization Agreement") governing the Securitization Facility contains certain covenants and termination events. An occurrence of an event of default or a termination event under this Securitization Agreement may give rise to the right of its counterparty to terminate this facility. As of December 31, 2023, the Company was in compliance with the covenants and none of the termination events had occurred.

At December 31, 2023 and 2022, the Company had $89.2 million and $104.7 million, of outstanding borrowings under its Securitization Facility at a weighted average interest rate of 5.9% and 5.0%, respectively. The fair value of the outstanding borrowing of the Securitization Facility at December 31, 2023 was $87.1 million. These fair values were determined by using a discounted cash flow model based on current market interest rates available to the Company. These inputs are corroborated by observable market data for similar liabilities and therefore classified within Level 2 of the fair value hierarchy. Level 2 inputs represent inputs that are observable for the asset or liability, either directly or indirectly, and are other than active market observable inputs that reflect unadjusted quoted prices for identical assets or liabilities.

6. DERIVATIVE INSTRUMENTS

Interest Rate Hedging

The Company's interest rate risk relates to U.S. dollar denominated variable interest rate borrowings. The Company uses interest rate swap derivative instruments to manage earnings and cash flow exposure resulting from changes in interest rates. These interest rate swaps apply a fixed interest rate on a portion of the Company's expected SOFR-indexed borrowings. In connection with the March 2023 Amendment to the Senior Credit Facility, the Company amended its interest rate from LIBOR to SOFR-indexed interest. In March 2023, the Company entered into a basis swap where the Company receives Term SOFR and pays daily compounded SOFR to convert the portfolio of swaps from daily compounded SOFR to term SOFR.

The Company held the following interest rate swaps as of December 31, 2023 and 2022 (dollar amounts in thousands):

	December 31, 2023					December 31, 2023
Hedged Item	Notional Amount	Designation Date	Effective Date	Termination Date	Fixed Interest Rate	Estimated Fair Value Asset (Liability)
1-month Term SOFR Loan	150,000	December 13, 2017	July 1, 2019	June 30, 2024	2.423 %	2,105
1-month Term SOFR Loan	200,000	December 13, 2017	January 1, 2018	December 31, 2024	2.313 %	4,978
1-month Term SOFR Loan	75,000	October 10, 2018	July 1, 2020	June 30, 2025	3.220 %	1,349
1-month Term SOFR Loan	75,000	October 10, 2018	July 1, 2020	June 30, 2025	3.199 %	1,312
1-month Term SOFR Loan	75,000	October 10, 2018	July 1, 2020	June 30, 2025	3.209 %	1,346
1-month Term SOFR Loan	100,000	December 18, 2018	December 30, 2022	December 31, 2027	2.885 %	3,015
1-month Term SOFR Loan	100,000	December 18, 2018	December 30, 2022	December 31, 2027	2.867 %	3,052
1-month Term SOFR Loan	575,000	December 15, 2020	July 31, 2025	December 31, 2027	1.415 %	22,965
1-month Term SOFR Loan	125,000	December 15, 2020	July 1, 2025	December 31, 2027	1.404 %	5,263
Basis Swap [1]	—	March 31, 2023	March 24, 2023	December 31, 2027	N/A	(1,829)
	$ 1,475,000					$ 43,556

[1] The notional of the basis swap amortizes to match the total notional of the interest rate swap portfolio over time

	December 31, 2022					December 31, 2022
Hedged Item	Notional Amount	Designation Date	Effective Date	Termination Date	Fixed Interest Rate	Estimated Fair Value Asset (Liability)
1-month USD LIBOR Loan	150,000	December 13, 2017	July 1, 2019	June 30, 2024	2.423 %	5,012
1-month USD LIBOR Loan	200,000	December 13, 2017	January 1, 2018	December 31, 2024	2.313 %	8,380
1-month USD LIBOR Loan	75,000	October 10, 2018	July 1, 2020	June 30, 2025	3.220 %	1,831
1-month USD LIBOR Loan	75,000	October 10, 2018	July 1, 2020	June 30, 2025	3.199 %	1,905
1-month USD LIBOR Loan	75,000	October 10, 2018	July 1, 2020	June 30, 2025	3.209 %	1,970
1-month USD LIBOR Loan	100,000	December 18, 2018	December 30, 2022	December 31, 2027	2.885 %	4,252
1-month USD LIBOR Loan	100,000	December 18, 2018	December 30, 2022	December 31, 2027	2.867 %	4,153
1-month USD LIBOR Loan	575,000	December 15, 2020	July 31, 2025	December 31, 2027	1.415 %	23,742
1-month USD LIBOR Loan	125,000	December 15, 2020	July 1, 2025	December 31, 2027	1.404 %	5,467
	$ 1,475,000					$ 56,712

The interest rate swaps were carried on the consolidated balance sheet at fair value and changes in the fair values were recorded as unrealized gains or losses in accumulated other comprehensive income ("AOCI"). For the years ended December 31, 2023 and 2022, the Company recorded gains of $4.9 million and $93.3 million, respectively, in AOCI related to the change in fair value of the interest rate swaps.

For the years ended December 31, 2023 and 2022, the Company recorded a gain of $18.1 million and a loss of $7.4 million, respectively, in interest income included in the consolidated statements of operations related to the interest rate differential of the interest rate swaps. The estimated gain that is expected to be reclassified to interest income from AOCI as of December 31, 2023 within the next twelve months is $14.1 million.

The Company has designated these derivative instruments as cash flow hedges. The Company assesses the effectiveness of these derivative instruments and has recorded the changes in the fair value of the derivative instrument designated as a cash flow hedge as unrealized gains or losses in AOCI, net of tax, until the hedged item affected earnings, at which point any gain or loss was reclassified to earnings. If the hedged cash flow does not occur, or if it becomes probable that it will not occur, the Company will reclassify the remaining amount of any gain or loss on the related cash flow hedge recorded in AOCI to interest expense at that time.

Foreign Currency Hedging

From time to time, the Company enters into foreign currency hedge contracts intended to protect the U.S. dollar value of certain forecasted foreign currency denominated transactions. The Company assesses the effectiveness of the contracts that are designated as hedging instruments. The changes in fair value of foreign currency cash flow hedges are recorded in AOCI, net of tax. Those amounts are subsequently reclassified to earnings from AOCI as impacted by the hedged item when the hedged item affects earnings. If the hedged forecasted transaction does not occur, or if it becomes probable that it will not occur, the Company will reclassify the amount of any gain or loss on the related cash flow hedge to earnings at that time. For contracts not designated as hedging instruments, the changes in fair value of the contracts are recognized in other income, net in the consolidated statements of operation, along with the offsetting foreign currency gain or loss on the underlying assets or liabilities.

The success of the Company's hedging program depends, in part, on forecasts of certain activity denominated in foreign currency. The Company may experience unanticipated currency exchange gains or losses to the extent that there are differences between forecasted and actual activities during periods of currency volatility. In addition, changes in currency exchange rates related to any unhedged transactions may affect earnings and cash flows.

Cross-Currency Rate Swaps

The objective of these cross-currency swaps is to reduce volatility of earnings and cash flows associated with changes in the foreign currency exchange rate. Under the terms of these contracts, which have been designated as cash flow hedges, the Company will make interest payments in Swiss Francs and receive interest in U.S. dollars. Upon the maturity of these contracts, the Company will pay the principal amount of the loans in Swiss Francs and receive U.S. dollars from the counterparties.

On September 22, 2023, the Company amended the Swiss Franc ("CHF")-denominated intercompany loan to partially settle CHF 20.0 million and extend the termination date to September 2024 and as a result, the Company terminated the cross-currency swap designated as cash flow hedge of an intercompany loan with aggregate notional amount of $48.5 million. Simultaneously, the Company entered into a cross-currency swap agreement to hedge a notional amount of CHF 28.5 million equivalent to $31.5 million of this amended intercompany loan into U.S. dollars. The loss recorded by the Company upon the settlement of the swap was not material for the period.

On December 21, 2020, the Company entered into cross-currency swap agreements to convert a notional amount of $471.6 million equivalent to 420.1 million of a CHF-denominated intercompany loan into U.S. dollars. The CHF-denominated intercompany loan was the result of an intra-entity transfer of certain intellectual property rights to a subsidiary in Switzerland completed during the fourth quarter of 2020. The intercompany loan requires quarterly payments of CHF 5.8 million plus accrued interest. As a result, the aggregate notional amount of the related cross-currency swaps will decrease by a corresponding amount.

The Company held the following cross-currency rate swaps as of December 31, 2023 and 2022 (dollar amounts in thousands):

	Effective Date	Termination Date	Fixed Rate		December 31, 2023 Aggregate Notional Amount	December 31, 2022 Aggregate Notional Amount	December 31, 2023 Fair Value Asset (Liability)	December 31, 2022 Fair Value Asset (Liability)
Pay CHF	December 21, 2020	December 22, 2025	3.00%	CHF	351,137	374,137	(38,324)	(4,241)
Receive U.S.$			3.98%	$	394,183	420,001		
Pay CHF	September 28, 2022	September 29, 2023	1.95%	CHF	—	48,532	—	(3,528)
Receive U.S.$			5.32%	$	—	49,142		
Pay CHF	September 22, 2023	September 29, 2024	2.40%	CHF	28,500	—	(2,348)	—
Receive U.S.$			6.27%	$	31,457	—		
Total							$ (40,672)	$ (7,769)

The cross-currency swaps are carried on the consolidated balance sheet at fair value, and changes in the fair values are recorded as unrealized gains or losses in AOCI. For the years ended December 31, 2023 and 2022 the Company recorded a loss of $37.4 million and a gain of $11.1 million, respectively, in other income, net related to change in fair value related to the foreign currency rate translation to offset the losses recognized on the intercompany loans. For the years ended December 31, 2023 and 2022, the Company recorded a loss of $27.4 million and a gain of $8.8 million in AOCI, respectively, related to change in fair value of the cross-currency swaps.

For the years ended December 31, 2023 and 2022, the Company recorded gains of $5.5 million and $8.4 million, respectively, in other income, net included in the consolidated statements of operations related to the interest rate differential of the cross-currency swaps.

The estimated loss that is expected to be reclassified to other income (expense), net from AOCI as of December 31, 2023 within the next twelve months is $4.3 million. As of December 31, 2023, the Company does not expect any gains or losses will be reclassified into earnings because the original forecasted transactions will not occur.

Net Investment Hedges

The Company manages certain foreign exchange risks through a variety of strategies, including hedging. The Company is exposed to foreign exchange risk from its international operations through foreign currency purchases, net investments in foreign subsidiaries, and foreign currency assets and liabilities created in the normal course of business.

The Company held the following cross-currency rate swaps designated as net investment hedges as of December 31, 2023 and 2022 (dollar amounts in thousands):

					December 31, 2023	December 31, 2022	December 31, 2023	December 31, 2022
	Effective Date	Termination Date	Fixed Rate	Aggregate Notional Amount			Fair Value Asset (Liability)	
Pay EUR	October 3, 2018	September 30, 2023	—%	EUR	—	51,760	—	4,713
Receive U.S.$			2.57%	$	—	60,000		
Pay EUR	October 3, 2018	September 30, 2025	—%	EUR	38,820	38,820	2,475	4,307
Receive U.S.$			2.19%	$	45,000	45,000		
Pay CHF	May 26, 2022	December 16, 2028	—%	CHF	288,210	288,210		
Receive U.S.$			1.94%	$	300,000	300,000	(48,047)	(14,663)
Pay CHF	November 21, 2023	December 17, 2029	—%	CHF	66,525	—		
Receive U.S.$			2.54%	$	75,000	—	(4,037)	—
Total							$ (49,609)	$ (5,643)

The cross-currency swaps were carried on the consolidated balance sheet at fair value and changes in the fair values were recorded as unrealized gains or losses in AOCI. For the years ended December 31, 2023 and 2022, the Company recorded a loss of $30.7 million and a gain of $2.2 million, respectively, in AOCI related to the change in fair value of the cross-currency swaps.

For the years ended December 31, 2023 and 2022, the Company recorded gains of $7.8 million and $6.8 million, respectively, in interest income included in the consolidated statements of operations related to the interest rate differential of the cross-currency swaps. The estimated gain that is expected to be reclassified to interest income from AOCI as of December 31, 2023 within the next twelve months is immaterial.

Foreign Currency Forward Contract

The Company has entered into a hedge for forecasted intercompany purchases denominated in foreign currencies through the use of forward contracts designated as cash flow hedges. To the extent these forward contracts meet hedge accounting criteria, changes in their fair value are included in AOCI. These changes in fair value will be recognized into earnings as a component of cost of sales when the forecasted-transaction occurs.

During 2023, the Company entered into foreign currency forward contracts to mitigate the risk of foreign currency on intercompany purchases in CHF. These contracts typically settle at various dates within twelve months of execution. As of December 31, 2023 there were no outstanding foreign currency forward contracts. During the year ended December 31, 2023 the Company recorded a gain of $0.4 million in AOCI related to the change in fair value of the foreign currency forward contracts. During the year ended December 31, 2023 the company recorded a gain of $0.4 million in cost of goods sold included in the consolidated statements of operations related to the foreign currency forward contracts.

Counterparty Credit Risk

The Company manages its concentration of counterparty credit risk on its derivative instruments by limiting acceptable counterparties to a group of major financial institutions with investment grade credit ratings, and by actively monitoring their credit ratings and outstanding positions on an ongoing basis. Therefore, the Company considers the credit risk of the counterparties to be low. Furthermore, none of the Company's derivative transactions are subject to collateral or other security arrangements, and none contain provisions that depend upon the Company's credit ratings from any credit rating agency.

Fair Value of Derivative Instruments

The Company has classified all of its derivative instruments within Level 2 of the fair value hierarchy because observable inputs are available for substantially the full term of the derivative instruments. The fair values of the interest rate swaps and cross-currency swaps were developed using a market approach based on publicly available market yield curves and the terms of the swap. The Company performs ongoing assessments of counterparty credit risk.

Effects of Derivative Instruments on Financial Position and Results of Operations

The following table summarizes the fair value for derivatives designated as hedging instruments in the consolidated balance sheets as of December 31, 2023 and 2022:

Dollars in thousands	Fair Value as of December 31, 2023	2022
Location on Balance Sheet [1]:		
Derivatives designated as hedges — Assets:		
Prepaid expenses and other current assets		
Cash Flow Hedges		
Interest rate swap[2]	14,675	16,682
Cross-currency swap	537	4,497
Net Investment Hedges		
Cross-currency swap	2,938	11,653
Other assets		
Cash Flow Hedges		
Interest rate swap[2]	30,710	40,030
Net Investment Hedges		
Cross-currency swap	1,470	3,311
Total derivatives designated as hedges — Assets	$ 50,330	$ 76,173
Derivatives designated as hedges — Liabilities		
Accrued expenses and other current liabilities		
Cash Flow Hedges		
Interest rate swap[2]	$ 579	$ —
Cross-currency swap	4,813	3,528
Net Investment Hedges		
Cross-currency swap	2,903	—
Other liabilities		
Cash Flow Hedges		
Interest rate swap[2]	1,250	—
Cross-currency swap	36,396	8,738
Net Investment Hedges		
Cross-currency swap	51,114	20,608
Total derivatives designated as hedges — Liabilities	97,055	32,874

+

[1] The Company classifies derivative assets and liabilities as current based on the cash flows expected to be incurred within the following 12 months.

[2] At December 31, 2023 and 2022, the total notional amounts related to the Company's interest rate swaps were $1.5 billion.

The following presents the effect of derivative instruments designated as cash flow hedges and net investment hedges on the accompanying consolidated statement of operations during the years ended December 31, 2023 and 2022:

Dollars in thousands	Balance in AOCI Beginning of Year	Amount of Gain (Loss) Recognized in AOCI	Amount of Gain (Loss) Reclassified from AOCI into Earnings	Balance in AOCI End of Year	Location in Statements of Operations
Year Ended December 31, 2023					
Cash Flow Hedges					
Interest rate swap	$ 56,712	$ 4,899	$ 18,055	$ 43,556	Interest expense
Cross-currency swap	(20,271)	(27,406)	(31,914)	(15,763)	Other income, net
Forward Currency Forward Contracts	—	436	436	—	Cost of sales
Net Investment Hedges					
Cross-currency swap	(6,914)	(30,738)	7,846	(45,498)	Interest income
	$ 29,527	$ (52,809)	$ (5,577)	$ (17,705)	
Year Ended December 31, 2022					
Cash Flow Hedges					
Interest rate swap	$ (43,956)	$ 93,308	$ (7,360)	$ 56,712	Interest expense
Cross-currency swap	(9,688)	8,847	19,430	(20,271)	Other income, net
Net Investment Hedges				—	
Cross-currency swap	(2,321)	2,196	6,789	(6,914)	Interest income
	$ (55,965)	$ 104,351	$ 18,859	$ 29,527	

Derivative Instruments not designated hedges:

During the second quarter of 2021, the Company entered into a foreign currency swap, with a notional amount of $7.3 million, to mitigate the risk from fluctuations in foreign currency exchange rates associated with an intercompany loan denominated in JPY. In a foreign currency swap transaction, the Company agrees with another party to exchange, at specified intervals, the difference between one currency and another currency at a fixed exchange rate, generally set at inception, calculated by reference to an agreed upon notional amount. The notional amount of each currency is exchanged at the inception and termination of the currency swap by each party. The Company subsequently paid down a portion of this swap in the second quarter of 2023, bringing the notional amount down to $5.5 million as of December 31, 2023.

The following table summarizes the gains (losses) of derivative instruments not designated as hedges on the consolidated statements of income, which was included in other income:

Dollars in thousands	December 31,	
	2023	2022
Foreign currency swaps	566	1,258
Total	$ 566	$ 1,258

7. GOODWILL AND OTHER INTANGIBLE ASSETS

Goodwill

The Company tests goodwill for impairment by either performing a qualitative evaluation or a quantitative test.

The qualitative evaluation is an assessment of factors including reporting unit specific operating results as well as industry, market and general economic conditions, to determine whether it is more likely than not that the fair values of a reporting unit is less than its carrying amount, including goodwill. The Company may elect to bypass the qualitative assessment for its three reporting units and perform a quantitative test. The assumptions used in evaluating goodwill for impairment are subject to change and are tracked against historical results by management.

The quantitative test estimates the fair value of the three reporting units using a discounted cash flow model, which incorporates significant estimates and assumptions made by management which, by their nature, are characterized by uncertainty. Inputs

used to fair value the Company's reporting units are considered inputs of the fair value hierarchy. For Level 3 measurements, significant increases or decreases in long-term growth rates or discount rates in isolation or in combination could result in a significantly lower or higher fair value measurement. The key assumptions impacting the valuation included the following:

- The reporting unit's financial projections, which are based on management's assessment of regional and macroeconomic variables, industry trends and market opportunities, and the Company's strategic objectives and future growth plans.
- The projected terminal value for the reporting unit, which represents the present value of projected cash flows beyond the last period in the discounted cash flow analysis. The terminal value reflects the Company's assumptions related to long-term growth rates and profitability, which are based on several factors, including local and macroeconomic variables, market opportunities, and future growth plans.
- The discount rate used to measure the present value of the projected future cash flows is set using a weighted-average cost of capital method that considers market and industry data as well as the Company's specific risk factors that are likely to be considered by a market participant. The weighted-average cost of capital is the Company's estimate of the overall after-tax rate of return required by equity and debt holders of a business enterprise.

In the second quarter of 2023, due to the Boston recall, as well as the associated drop in the Company's stock price in that quarter, the Company elected to perform a quantitative analysis, using a combination of a discounted cash flow method and guideline public company method for its TT reporting unit. The quantitative test utilized key assumptions of revenue growth rate, a terminal growth rate of 2%, a discount rate of 10%, and the range and application of the company guideline multiples. The Company determined, after performing the quantitative analysis, that the fair value of the goodwill of the reporting unit was not less than the carrying amount, with more than 20% headroom.

During the third quarter of 2023, the Company elected to perform a qualitative analysis for its three reporting units. The Company determined, after performing the qualitative analysis, that there was no evidence that it is more likely than not that the fair value was less that the carrying amounts, therefore, it was not necessary to perform a quantitative impairment test.

Changes in the carrying amount of goodwill in 2023 and 2022 were as follows:

Dollars in thousands	Codman Specialty Surgical	Tissue Technologies	Total
Goodwill at January 1, 2022	$ 663,428	$ 350,030	$ 1,013,458
Sale of non-core traditional wound care business	—	(5,019)	(5,019)
SIA Acquisition	—	41,855	41,855
Foreign currency translation	(7,209)	(4,204)	(11,413)
Balance at December 31, 2022	$ 656,219	$ 382,662	$ 1,038,881
Sale of non-core traditional wound care business	—	—	—
SIA Acquisition	—	(382)	(382)
Foreign currency translation	10,718	6,245	16,963
Balance at December 31, 2023	$ 666,937	$ 388,525	$ 1,055,462

Other Intangible Assets

The components of the Company's identifiable intangible assets were as follows:

	December 31, 2023			
Dollars in thousands	Weighted Average Life	Cost	Accumulated Amortization	Net
Completed technology	18 years	$ 1,226,128	$ (448,519)	$ 777,609
Customer relationships	12 years	193,895	(152,160)	41,735
Trademarks/brand names	28 years	98,892	(38,754)	60,138
Codman trade name	Indefinite	174,531	—	174,531
Supplier relationships	30 years	30,211	(18,148)	12,063
All other	11 years	6,180	(4,423)	1,757
		$ 1,729,837	$ (662,004)	$ 1,067,833

	December 31, 2022			
Dollars in thousands	Weighted Average Life	Cost	Accumulated Amortization	Net
Completed technology	18 years	$ 1,204,325	$ (370,968)	$ 833,357
Customer relationships	12 years	193,081	(144,040)	49,041
Trademarks/brand names	28 years	97,265	(34,674)	62,591
Codman trade name	Indefinite	166,693	—	166,693
Supplier relationships	30 years	30,211	(17,170)	13,041
All other	11 years	5,957	(4,071)	1,886
		$ 1,697,532	$ (570,923)	$ 1,126,609

Intangible Assets with Indefinite Lives

The Company tests intangible assets with indefinite lives for impairment annually in the third quarter in accordance with ASC Topic 350. Additionally, the Company may perform interim tests if an event occurs or circumstances change that could potentially reduce the fair value of a indefinite lived intangible asset below its carrying amount. The Company tests for impairment by either performing a qualitative evaluation or a quantitative test. The qualitative evaluation is an assessment of factors, including specific operating results as well as industry, market and general economic conditions, to determine whether it is more likely than not that the fair values of the intangible asset is less than its carrying amount. The Company may elect to bypass this qualitative evaluation and perform a quantitative test.

During the third quarter of 2023, the Company elected to perform a qualitative analysis for its intangible asset with indefinite lives. The Company determined, after performing the qualitative analysis, that there was no evidence that it is more likely than not that the fair value was less that the carrying amounts, therefore, it was not necessary to perform a quantitative impairment test.

Intangible Assets with Definite Lives

Product rights and other definite-lived intangible assets are tested periodically for impairment in accordance with ASC Topic 360 when events or changes in circumstances indicate that an asset's carrying value may not be recoverable. The impairment testing involves comparing the carrying amount of the asset or asset group to the forecasted undiscounted future cash flows. In the event the carrying value of the asset exceeds the undiscounted future cash flows, the carrying value is considered not recoverable and impairment exists. An impairment loss is measured as the excess of the asset's carrying value over its fair value, calculated using discounted future cash flows. The computed impairment loss is recognized in the period that the impairment occurs.

In the second quarter of 2023, due to the Boston recall, the Company elected to perform impairment testing on certain definite lived intangibles. The intangible components associated with the recalled products include completed technology and customer relationships with a net book value of $28.8 million and $7.6 million, respectively, as of December 31, 2023. The company used an undiscounted cash flow methodology and obtained revenue projections through the useful life of the intangibles. After performing the analysis, no impairment was noted. The Company will continue to monitor these intangibles as we return to the market and evaluate any changes that would impact our sales of these products.

Amortization expense (including amounts reported in cost of product revenues) for the years ended December 31, 2023, 2022 and 2021 was $82.8 million, $78.3 million and $83.3 million, respectively.

Annual amortization expense is expected to approximate $82.7 million in 2024, $82.7 million in 2025, $82.5 million in 2026, $80.6 million in 2027, $79.0 million in 2028 and $481.2 million thereafter. Amortization of product technology based intangible assets totaled $70.4 million, $64.4 million and $66.5 million for the years ended December 31, 2023, 2022 and 2021, respectively, and is presented by the Company within cost of goods sold.

8. TREASURY STOCK

As of December 31, 2023 and 2022, there were 12.8 million and 6.8 million shares of treasury stock outstanding with a cost of $647.3 million and $362.9 million, respectively, at a weighted average cost per share of $50.76 and $53.18, respectively.

On August 15, 2023, the Company entered into a $125 million accelerated share repurchase ("August 2023 ASR") and received 2.3 million shares of the common stock at inception of the August 2023 ASR, which represented approximately 80% of the expected total shares under the August 2023 ASR. On October 18, 2023 the early exercise provision was exercised by the August 2023 ASR counterparty. The Company received an additional 0.9 million shares determined using the volume-weighted average price of the Company's common stock during the term of the August 2023 ASR.

On January 26, 2023, the Company entered into a $150 million accelerated share repurchase ("January 2023 ASR") and received 2.1 million shares of common stock at inception of the January 2023 ASR, which represented approximately 80% of the expected total shares under the January 2023 ASR. The settlement of the January ASR agreement was completed in two separate transactions on April 26, 2023 and May 4, 2023, where the Company received an additional 0.30 million and 0.31 million shares respectively, determined using the volume-weighted average price of the Company's common stock during the term of the January 2023 ASR.

On August 16, 2022, the Inflation Reduction Act of 2022 (the “Act”) was signed into law. The Act implemented a new excise tax of 1% on the net share repurchases made by the Company effective for share repurchases performed January 1, 2023, or after. The Company accrued $2.5 million of excise tax related to the two ASR agreements during 2023.

On July 18, 2023, the Board of Directors authorized a new $225 million share repurchase program, replacing the existing $225 million program authorized in April 2022. As of December 31, 2023, $100 million remained authorized. The program authorized in July 2023, and which expires on December 31, 2025, allows the Company to repurchase its shares opportunistically from time to time. The Company may utilize various methods to effect any repurchases, including open market transactions, privately negotiated transactions, transactions structured through investment banking institutions, including accelerated share repurchases, or a combination of the foregoing, some of which may be effected through Rule 10b5-1 plans. The price and timing of any future purchases under the share repurchase program will depend on factors such as levels of cash generation from operations, the volume of stock option exercises by employees, cash requirements for acquisitions, dividends, economic and market conditions and stock price, and such repurchases may be discontinued at any time.

On January 12, 2022, the Company entered into a $125 million accelerated share repurchase ("2022 ASR") and received 1.48 million shares of Company common stock at inception of the 2022 ASR, which represented approximately 80% of the expected total shares under the 2022 ASR. In March 24, 2022, the early exercise provision was exercised by the 2022 ASR counterparty. Upon settlement on March 24, 2022, the Company received an additional 0.46 million shares determined using the volume-weighted average price of the Company's common stock during the term of the 2022 ASR.

9. STOCK-BASED COMPENSATION

Stock-based compensation expense - all related to employees and members of the Board of Directors - recognized under the authoritative guidance was as follows:

	Years Ended December 31,		
Dollars in thousands	2023	2022	2021
Cost of goods sold	588	549	470
Research and development	2,071	1,739	1,644
Selling, general and administrative	$ 17,483	$ 25,437	$ 34,096
Total stock-based compensation expense	20,142	27,725	36,210
Total estimated tax benefit related to stock-based compensation expense	5,223	10,574	13,804
Net effect on net income	$ 14,919	$ 17,151	$ 22,406

EQUITY AWARD PLANS

As of December 31, 2023, the Company had stock options, restricted stock awards, performance stock awards, contract stock awards and restricted stock unit awards outstanding under the Integra LifeSciences Holdings Corporation Fifth Amended and Restated 2003 Equity Incentive Plan (the "2003 Plan"). The 2000 and 2001 Equity Incentive Plans were terminated as of February 19, 2021, and no further awards may be issued under the plans.

In May 2010 and May 2017, the stockholders of the Company approved amendments to the 2003 Plan to increase by 3.5 million and 1.7 million, respectively, the number of shares of common stock that may be issued under the 2003 Plan. The Company has reserved 4.0 million shares under each of the 2000 Plan and the 2001 Plan, and 14.7 million shares under the 2003 Plan. The Plans permit the Company to grant incentive and non-qualified stock options, stock appreciation rights, restricted stock, contract stock, performance stock, or dividend equivalent rights to designated directors, officers, employees and associates of the Company.

Stock options issued under the 2003 Plan became exercisable over specified periods, generally within four years from the date of grant for officers and employees, and within one year from the date of the grant for members of the Board of Directors. The awards generally expire eight years from the grant date for employees and from six to ten years for directors and certain executive officers, except in certain instances that result in accelerated vesting due to death, disability, retirement age or change in control provisions within their grant agreements. Restricted stock issued under the 2003 Plan vests ratably over specified periods, generally three years after the date of grant. The vesting of performance stock issued under the 2003 Plan is subject to service and performance conditions.

Stock Options

The Company values stock option grants using the binomial distribution model. Management believes that the binomial distribution model is preferable to the Black-Scholes model because it is a more flexible model that gives consideration to the impact of non-transferability and vesting provisions in valuing employee stock options.

In determining the value of stock options granted, the Company considered that it has never paid cash dividends and does not currently intend to pay cash dividends, and thus has assumed a 0% dividend yield. Expected volatilities are based on the historical volatility of the Company's stock price. The expected life of stock options is estimated based on historical data on exercise of stock options, post-vesting forfeitures and other factors to estimate the expected term of the stock options granted. The risk-free interest rates are derived from the U.S. Treasury yield curve in effect on the date of grant for instruments with a remaining term similar to the expected life of the options. The Company accounts for forfeitures as they occur.

The following weighted-average assumptions were used in the calculation of fair value:

	Years Ended December 31,		
	2023	2022	2021
Dividend yield	0%	0%	0%
Expected volatility	30%	30%	29%
Risk free interest rate	3.86%	2.01%	1.30%
Expected life of option from grant date	7 years	7 years	7 years
Weighted average grant date fair value of options granted	$21.58	$23.15	$22.59

The following table summarizes the Company's stock option activity.

	Shares	Weighted Average Exercise Price	Weighted Average Contractual Term in Years	Aggregate Intrinsic Value
Stock Options	(In thousands)			(In thousands)
Outstanding at January 1, 2023	1,202	$ 49.63	4.14	$10,772
Granted	151	52.87	—	—
Exercised	(93)	34.59	—	—
Forfeited or Expired	(82)	58.02	—	—
Outstanding at December 31, 2023	1,178	$ 50.64	3.65	$ 1,766
Exercisable at December 31, 2023	888	$ 48.43	2.75	$ 1,762

The Company recognized $1.4 million, $3.5 million and $5.0 million in expense related to stock options during the years ended December 31, 2023, 2022 and 2021, respectively. The intrinsic value of options exercised for the years ended December 31, 2023, 2022 and 2021 were $1.8 million, $4.0 million and $11.1 million, respectively. Cash received from option exercises and employee stock purchase plan was $4.3 million, $5.5 million and $6.8 million, for the years ended December 31, 2023, 2022 and 2021, respectively. The realized tax benefit from options exercised were $0.1 million, $0.6 million and $2.2 million for the years ended December 31, 2023, 2022 and 2021, respectively.

As of December 31, 2023, there was approximately $3.8 million of total unrecognized compensation costs related to unvested stock options. These costs are expected to be recognized over a weighted-average period of approximately three years.

Awards of Restricted Stock, Performance Stock and Contract Stock

The following table summarizes the Company's awards of restricted stock, performance stock and contract stock for the year ended December 31, 2023.

	Restricted Stock Awards		Performance Stock and Contract Stock Awards	
	Shares	Weighted Average Grant Date Fair Value Per Share	Shares	Weighted Average Grant Date Fair Value Per Share
	(In thousands)		(In thousands)	
Unvested, January 1, 2023	483	$ 61.63	407	62.88
Granted	411	51.01	229	52.29
Adjustments for performance achievement related to award target	—	—	(78)	62.26
Cancellations	(99)	60.17	(77)	63.74
Released	(211)	58.85	(146)	60.14
Unvested, December 31, 2023	584	$ 55.37	335	57.53

The Company recognized $18.7 million, $24.3 million and $31.2 million in expense related to such awards during the years ended December 31, 2023, 2022 and 2021, respectively. The total fair market value of shares vested and released in 2023, 2022

and 2021 was $18.2 million, $65.0 million and $15.7 million, respectively. Vested awards include shares that have been fully earned but had not been delivered as of December 31, 2023.

Performance stock awards have performance features associated with them. Performance stock, restricted stock and contract stock awards generally have requisite service periods of three years. The fair value of these awards is being expensed on a straight-line basis over the vesting period. As of December 31, 2023, there were 51,241 performance stock units ("PSU's") granted in 2021 subject to vest and be released in 2024 based on PSU catch-up opportunity. No additional PSU's were subject to vest based on 2023 performance achievement.

As of December 31, 2023, there was approximately $30.5 million of total unrecognized compensation costs related to unvested restricted stock, performance stock and contract stock awards. These costs are expected to be recognized over a weighted-average period of approximately two years.

At December 31, 2023, there were approximately 2.7 million shares available for grant under the 2003 Plan.

The Company capitalized into inventory, share based compensation costs of $0.6 million, $0.6 million and $0.5 million for the years ended December 31, 2023, 2022 and 2021, respectively. Such share-based compensation was recognized as cost of goods sold when related inventory was sold.

EMPLOYEE STOCK PURCHASE PLAN

The purpose of the Employee Stock Purchase Plan (the "ESPP") is to provide eligible employees of the Company with the opportunity to acquire shares of common stock at periodic intervals by means of accumulated payroll deductions. The ESPP is a non-compensatory plan. Under the ESPP, a total of 3.0 million shares of common stock are reserved for issuance. These shares will be made available either from the Company's authorized but unissued shares of common stock or from shares of common stock reacquired by the Company as treasury stock. At December 31, 2023, 1.9 million shares remain available for purchase under the ESPP. During the years ended December 31, 2023, 2022 and 2021, the Company issued 23,337 shares, 20,780 shares and 16,948 shares under the ESPP for $1.0 million, $1.1 million and $1.1 million, respectively.

10. RETIREMENT BENEFIT PLANS

DEFINED BENEFIT PLANS

The Company has various defined benefit plans which covers certain employees in France, Japan, Germany and Switzerland.

Net periodic benefit costs for the Company's defined benefit pension plans for the years ended December 31, 2023 and 2022 included the following (amounts in thousands):

	Year ended December 31,	
	2023	2022
Service cost	$ 2,226	$ 2,419
Interest cost	1,157	194
Expected return on plan assets	(1,450)	(1,381)
Amortization of prior service cost (credit)	(389)	(326)
Recognized actuarial losses	(391)	9
Settlements	—	—
Net period benefit cost	**$ 1,153**	**$ 915**

The following weighted average assumptions were used to develop net periodic pension benefit costs and the actuarial present values of projected pension benefit obligations for the years ended December 31, 2023 and 2022, respectively:

	As of December 31,	
	2023	2022
Discount rate	1.51 %	2.44 %
Expected return on plan assets	3.67 %	3.61 %
Rate of compensation increase	2.00 %	1.97 %
Interest crediting rate for cash balance plans	1.00 %	1.00 %

The Company's discount rates are determined by considering current yield curves representing high quality, long-term fixed income instruments. The resulting discount rates are consistent with the duration of plan liabilities. In 2023 and 2022, the

discount rates were prescribed as the current yield on corporate bonds with an average rating of AA or AAA of equivalent currency and term to the liabilities. The expected returns on plan assets represent the average rate of return expected to be earned on plan assets over the period the benefits included in the benefit obligation are to be paid. In developing the expected rates of return, the Company considers returns of historical market data as well as actual returns on the plan assets. Using this reference information, the long-term return expectations for each asset category are developed according to the allocation among those investment categories.

The assessment is determined using projections from external financial sources, long-term historical averages, actual returns by asset class and the various asset class allocations by market.

The following sets forth the change in projected benefit obligations and the change in plan assets for the years ended December 31, 2023 and 2022 and a reconciliation of the funded status at December 31, 2023 and 2022, respectively (amounts in thousands):

	Year Ended December 31,	
	2023	2022
Change In Projected Benefit Obligations		
Projected benefit obligations, beginning of year	$ 50,364	$ 65,184
Interest cost	1,157	194
Service cost	2,226	2,419
Actuarial (gain) loss	8,229	(14,822)
Plan amendments	(1,772)	(390)
Plan settlements	(25)	(20)
Employee contribution	1,182	999
Premiums paid	(406)	(391)
Benefit payment	(812)	(999)
Effect of foreign currency exchange rates	4,958	(1,810)
Projected benefit obligations, end of year	**$ 65,101**	**$ 50,364**

	Year Ended December 31,	
	2023	2022
Change In Plan Assets		
Plan assets at fair value, beginning of year	$ 38,053	$ 39,914
Actual return on plan assets	1,350	(2,863)
Employer contributions	2,700	2,356
Employee contributions	1,182	999
Plan settlements	—	—
Benefits paid	(812)	(998)
Premiums paid	(406)	(391)
Effect of foreign currency exchange rates	3,657	(964)
Plan assets at fair value, end of year	**$ 45,724**	**$ 38,053**

	Year Ended December 31,	
	2023	2022
Reconciliation Of Funded Status		
Fair value of plan assets	$ 45,724	$ 38,053
Benefit obligations	65,101	50,364
Unfunded benefit obligations	**$ 19,377**	**$ 12,311**

The unfunded benefit obligations are included in other liabilities in the consolidated balance sheets at December 31, 2023 and 2022, respectively.

During the periods ended December 31, 2023 and 2022, the Company had a net loss of $6.6 million and a net gain of $7.4 million, respectively, recognized within accumulated other comprehensive loss that has not been recognized as a component of net periodic benefit cost. The combined accumulated benefit obligations for the defined benefit plans was $62.8 million and $46.4 million as of December 31, 2023 and 2022, respectively.

Unrecognized gains and losses are amortized over the average remaining future service for each plan. For plans with no active employees, they are amortized over the average life expectancy. The amortization of gains and losses is determined by using a 10% corridor of the greater of the market value of assets or the accumulated benefit obligation. Total unamortized gains and losses in excess of the corridor are amortized over the average remaining future service.

Prior service costs/benefits for the pension plans are amortized over the average remaining future service of plan participants at the time of the plan amendment.

The net plan assets of the pension plans are invested in common trusts. Common trusts are classified as Level 2 in fair value hierarchy. The fair value of common trusts is valued at net asset value based on the fair values of the underlying investments of the trusts as determined by the sponsor of the trusts. The investment strategy of the Company's defined benefit plans is both to meet the liabilities of the plans as they fall due and to maximize the return on invested assets within appropriate risk profile.

The benefit plans in France and Germany had no assets at December 31, 2023.

As of December 31, 2023, no plan assets are expected to be returned to the Company in the next twelve months.

The following table is the summary of expected future benefit payments (in thousands):

2024	$	2,457
2025	$	2,618
2026	$	2,251
2027	$	2,193
2028	$	2,388
Next five years	$	12,953

As of December 31, 2023, contributions expected to be paid to the plan in 2024 is $3.0 million.

DEFINED CONTRIBUTION PLANS

The Company also has various defined contribution savings plans that cover substantially all employees in the United States, Belgium, Canada, France, Japan, Netherlands, the U.K. and Puerto Rico. The Company matches a certain percentage of each employee’s contributions as per the provisions of the plans. Total contributions by the Company to the plans were $10.4 million, $9.8 million and $8.8 million for the years ended December 31, 2023, 2022 and 2021, respectively.

DEFERRED COMPENSATION PLAN

The Company maintains a Deferred Compensation Plan in which certain employees of the Company may defer the payment and taxation of up to 75% of their base salary and up to 100% of bonus amounts and other eligible cash compensation.

This deferred compensation is invested in funds offered under this plan and is valued based on Level 1 measurements in the fair value hierarchy. Assets of the Company's deferred compensation plan are included in Other current assets and recorded at fair value based on their quoted market prices. The fair value of these assets at December 31, 2023 and 2022 was $6.1 million and $4.7 million. Offsetting liabilities relating to the deferred compensation plan are included in Other liabilities.

11. LEASES AND RELATED PARTY LEASES

The Company leases administrative, manufacturing, research and distribution facilities and vehicles through operating lease agreements. The Company has no finance leases as of December 31, 2023. Many of the Company's leases include both lease (e.g., fixed payments including rent) and non-lease components (e.g., common-area or other maintenance costs). For vehicles, the Company has elected the practical expedient to group lease and non-lease components.

Most facility leases include one or more options to renew. The exercise of lease renewal options is typically at the Company's sole discretion, therefore, the majority of renewals to extend the lease terms are not included in the ROU assets and lease liabilities as they are not reasonably certain of exercise. The Company regularly evaluates renewal options and when they are reasonably certain of exercise, the renewal period is included in the lease term.

As most of the Company's leases do not provide an implicit rate, the Company uses a collateralized incremental borrowing rate based on the information available at the lease commencement date in determining the present value of the lease payments.

Total operating lease expense for the year ended December 31, 2023 and 2022, was $24.0 million and $22.6 million, respectively, which includes $0.3 million, in related party operating lease expense.

Supplemental balance sheet information related to operating leases at December 31, 2023 were as follows:

	December 31, 2023	December 31, 2022
	(In thousands, except lease term and discount rate)	
ROU assets	$ 156,184	$ 148,284
Current lease liabilities	15,284	14,624
Non-current lease liabilities	166,849	157,420
Total lease liabilities	$ 182,133	$ 172,044
Weighted average remaining lease term (in years):		
Leased facilities	16.3 years	16.9 years
Leased vehicles	1.9 years	2.0 years
Weighted average discount rate:		
Leased facilities	5.9 %	5.4 %
Leased vehicles	2.7 %	2.7 %

Supplemental cash flow information related to leases was as follows:

	December 31, 2023	December 31, 2022
	(In thousands)	
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	$ 20,655	$ 17,442
ROU assets obtained in exchange for lease liabilities:		
Operating leases	9,843	72,169

Future minimum lease payments under operating leases at December 31, 2023 were as follows:

	Related Parties	Third Parties	Total
		(In thousands)	
2024	296	22,625	22,921
2025	296	21,843	22,139
2026	296	19,166	19,462
2027	296	18,013	18,309
2028	296	15,769	16,065
Thereafter	246	173,562	173,808
Total minimum lease payments	$ 1,726	$ 270,978	$ 272,704
Less: Imputed interest			$ 90,571
Total lease liabilities			182,133
Less: Current lease liabilities			15,284
Long-term lease liabilities			166,849

There were no future minimum lease payments under finance leases at December 31, 2023.

Related Party Leases

The Company leases its manufacturing facility in Plainsboro, New Jersey, from a general partnership that is 50% owned by a principal stockholder of the Company. The term of the current lease agreement is through October 31, 2029 at an annual rate of approximately $0.3 million. The current lease agreement also provides (i) a 5-year renewal option for the Company to extend the lease from November 1, 2029 through October 31, 2034 at the fair market rental rate of the premises, and (ii) another 5-year renewal option to extend the lease from November 1, 2034 through October 31, 2039 at the fair market rental rate of the premises.

12. INCOME TAXES

Income before income taxes consisted of the following:

	Years Ended December 31,		
Dollars in thousands	2023	2022	2021
United States operations	$ (31,649)	$ 92,642	$ 91,150
Foreign operations	112,718	121,252	123,527
Total	$ 81,069	$ 213,894	$ 214,677

A reconciliation of the U.S. Federal statutory rate to the Company's effective tax rate is as follows:

	Years Ended December 31,		
	2023	2022	2021
Federal statutory rate	21.0 %	21.0 %	21.0 %
Increase (decrease) in income taxes resulting from:			
State income taxes, net of federal tax benefit	2.9 %	0.1 %	1.9 %
Benefit derived from foreign operations	(17.2)%	(1.6)%	(3.3)%
Nondeductible meals and entertainment	1.1 %	0.1 %	0.1 %
Intercompany profit in inventory	3.3 %	0.3 %	(0.2)%
Research and development credit	(5.7)%	(1.4)%	(1.2)%
Nondeductible executive compensation & stock compensation shortfall	2.3 %	(0.6)%	(0.3)%
Transaction and deal related costs	3.3 %	(1.8)%	0.1 %
Gain from sale of business - book to tax differences	— %	— %	3.9 %
Changes in valuation allowances	4.9 %	— %	0.1 %
Other	0.5 %	(0.5)%	(0.9)%
Effective tax rate	16.4 %	15.6 %	21.2 %

Our effective tax rate was 16.4% and 15.6% of income before income taxes for the years ended December 31, 2023 and December 31, 2022, respectively. In 2023, the Company's higher effective tax rate was driven by the the inclusion of Global Intangible Low-Taxed Income ("GILTI"), offset by a $5.8 million income tax benefit related to a four-year tax credit received by a Swiss subsidiary. The Company received an extension of the 2018 Swiss tax grant for three years, until the 2027 tax year. The net benefit of the tax credit, recorded as of December 31, 2023, was based on projections of use of the incremental tax grant. The Company's Swiss subsidiary may offset the tax credit against cantonal and communal income and capital taxes during tax years 2024 through 2027. Any unused balance at the end of the 2027 tax period will be forfeited.

In 2022, the Company's lower effective tax rate was driven by a $5.1 million income tax benefit related to stock compensation and a $2.4 million income tax benefit related to the filing of amended federal and state returns for prior years. In 2021, the Company's higher effective tax rate was driven in part by an $8.5 million income tax expense for nondeductible goodwill related to the sale of the Extremity Orthopedics business, offset by a $3.1 million income tax benefit related to excess tax benefits from stock compensation.

During 2023, the Company's foreign operations generated a $0.7 million decrease in income tax expense when compared to the same period in 2022, because of geographic and business mix of taxable earnings and losses, among other factors. The 2023 foreign effective tax rate is 16.4%, compared to 15.9% in 2022.

During 2022, the Company's foreign operations generated a $0.4 million increase in income tax expense when compared to the same period in 2021, because of geographic and business mix of taxable earnings and losses, among other factors. The 2022 foreign effective tax rate is 15.9%, compared to 15.2% in 2021. The Company's foreign tax rate is primarily based upon statutory rates.

Changes to income tax laws and regulations, in any of the tax jurisdictions in which the Company operates, could impact the effective tax rate. Various governments, both U.S. and non-U.S., are increasingly focused on tax reform and revenue-raising legislation. On August 16, 2022, the Inflation Reduction Act of 2022 (the "Act") was signed into law, for which the company did not experience a material impact on the company's effective tax rate. Further, legislation in foreign jurisdictions may be enacted, in continued response to the base erosion and profit-sharing (BEPS) project begun by the Organization for Economic Cooperation and Development (OECD).

The OECD released model rules related to a new 15% global minimum tax regime ("Pillar 2"). Several of the jurisdictions that we operate in have already adopted some form of the model rules, which could impact the amount of taxes that the Company pays after 2023. However, the rules are complex and provide for delays during the early transition years, if certain conditions are met. The Company will continue to analyze the law to determine potential impacts. At this time, the Company does not expect the Pillar 2 legislation to have a material impact on its consolidated financial statements. Such changes in U.S. and Non-U.S. jurisdictions could have an adverse effect on the Company's effective tax rate.

The provision for income taxes consisted of the following:

	Years Ended December 31,		
Dollars in thousands	2023	2022	2021
Current:			
Federal	$ 10,973	$ 24,201	$ 31,938
State	2,851	3,835	11,377
Foreign	11,389	9,893	5,042
Total current	$ 25,213	$ 37,929	$ 48,357
Deferred:			
Federal	(19,060)	(11,591)	(12,830)
State	93	(2,316)	(3,688)
Foreign	7,082	9,322	13,763
Total deferred	$ (11,885)	$ (4,585)	$ (2,755)
Provision for income taxes	$ 13,328	$ 33,344	$ 45,602

The income tax effects of significant temporary differences that give rise to deferred tax assets and liabilities, shown before jurisdictional netting, are presented below:

	December 31,	
Dollars in thousands	2023	2022
Assets:		
Doubtful accounts	$ 2,581	$ 2,261
Inventory related items	41,466	31,950
Tax credits	18,859	13,084
Accrued vacation	2,184	2,175
Accrued bonus	4,259	4,944
Stock compensation	9,117	10,175
Deferred revenue	1,849	2,130
Net operating loss carryforwards	28,799	30,707
Capitalization of research and development expenses	61,138	51,542
Unrealized foreign exchange gain	13,907	6,228
Charitable contributions carryforward	206	180
Leases and Other	55,271	55,228
Total deferred tax assets	239,636	210,604
Less valuation allowance	(12,486)	(9,651)
Deferred tax assets after valuation allowance	$ 227,150	$ 200,953
Liabilities:		
Intangible and fixed assets	(168,229)	(166,891)
Unrealized foreign exchange loss	(10,024)	(12,991)
Leases and Other	(38,134)	(38,415)
Total deferred tax liabilities	$ (216,387)	$ (218,297)
Total net deferred tax assets (liabilities)	$ 10,763	$ (17,344)

Prior period amounts were re-classed, as it relates to Leases and Other, between tax assets and liabilities within this table, to conform to the current period presentation.

The 2017 U.S. Tax Cuts and Jobs Act contained a provision which requires, for tax purposes, the capitalization and amortization of research and development expenses; effective for years beginning after December 31, 2021. The Company's deferred tax assets increased by $14.4 million and $20.3 million at December 31, 2023 and December 31, 2022 respectively within the table above, related to the 2017 Tax Act.

At December 31, 2023, the Company had net operating loss carryforwards of $64.7 million for federal income tax purposes, $98.4 million for foreign income tax purposes and $19.2 million for state income tax purposes to offset future taxable income. For the federal net operating loss carryforwards, $55.8 million will expire through 2037; while $8.9 million have an indefinite carry forward period. For foreign net operating loss carryforwards, $81.0 million will expire through 2028, while the remaining $17.4 million have an indefinite carry forward period. The state net operating loss carryforwards expire through 2036.

The valuation allowance relates to deferred tax assets for certain items that will be deductible for income tax purposes under very limited circumstances and for which the Company believes it will not satisfy the more likely than not threshold for realization of the associated tax benefit. In the event that the Company determines that it would be able to realize more or less than the recorded amount of net deferred tax assets, an adjustment to the deferred tax asset valuation allowance would be recorded in the period such a determination is made.

The valuation allowance at December 31, 2023 increased by $2.8 million, as compared to 2022, primarily driven by a $3.3 million increase related to the new Swiss tax credit. The valuation allowance for 2022 had remained substantially unchanged, as compared to 2021.

Description	Balance at Beginning of Period	Charged to Costs and Expenses	Other	Deductions	Balance at End of Period
Dollars in thousands					
Year ended December 31, 2023					
Deferred tax assets valuation allowance	14,672	3,069	26	56	17,823
Year ended December 31, 2022					
Deferred tax assets valuation allowance	15,258	(515)	—	(71)	14,672
Year ended December 31, 2021					
Deferred tax assets valuation allowance	13,825	1,444	89	(100)	15,258

As of December 31, 2023, the Company has not provided deferred income taxes on unrepatriated earnings from foreign subsidiaries as they are deemed to be indefinitely reinvested unless there is a manner under which to remit the earnings with no material tax cost. Material taxes would primarily be attributable to foreign withholding taxes and local income taxes when such earnings are distributed. The Company will repatriate foreign earnings when there is no need for reinvestment overseas and no material tax cost to bring the earnings back to the United States. Reinvestment considerations would include future acquisitions, transactions, and capital expenditure plans.

A reconciliation of the beginning and ending amount of uncertain tax benefits is as follows:

Dollars in thousands	Years Ended December 31,		
	2023	2022	2021
		(In thousands)	
Balance, beginning of year	$ 713	$ 676	$ 702
Gross increases:			
Current year tax positions	—	37	—
Prior years' tax positions	372	—	—
Lapse of statute	(273)	—	—
Other	—	—	(26)
Balance, end of year	$ 812	$ 713	$ 676

Approximately $0.8 million of the balance at December 31, 2023 relates to uncertain tax positions that, if recognized, would affect the annual effective tax rate. The Company has no uncertain tax positions at December 31, 2023 related to tax positions for which it is reasonably possible that the amounts could be reduced during the twelve months following December 31, 2023.

The Company recognizes interest and penalties relating to uncertain tax positions in income tax expense. The Company recognized a minimal expense for the years ended December 31, 2023, 2022 and 2021. The Company had minimal interest and penalties accrued for the years ended December 31, 2023 and 2022 and 2021.

The Company files Federal income tax returns, as well as multiple state, local and foreign jurisdiction tax returns. The Company is no longer subject to examinations of its U.S. consolidated Federal income tax returns by the IRS through fiscal year 2017. All significant state and local matters have been concluded through fiscal year 2018. All significant foreign matters have been settled through fiscal 2017.

13. NET INCOME PER SHARE

Basic and diluted net income per share was as follows:

Dollars in thousands, except per share amounts	Years Ended December 31, 2023	2022	2021
Basic net income per share:			
Net income	$ 67,741	$ 180,550	$ 169,075
Weighted average common shares outstanding	80,089	82,997	84,698
Basic net income per common share	$ 0.85	$ 2.18	$ 2.00
Diluted net income per share:			
Net income	$ 67,741	$ 180,550	$ 169,075
Weighted average common shares outstanding — Basic	80,089	82,997	84,698
Effect of dilutive securities:			
Stock options and restricted stock	248	519	787
Weighted average common shares for diluted earnings per share	80,337	83,516	85,485
Diluted net income per common share	$ 0.84	$ 2.16	$ 1.98

Common stock of approximately 0.6 million and 0.3 million shares at December 31, 2023, and 2022 that are issuable through exercise of dilutive securities, respectively, and were not included in the computation of diluted net income per share because their effect would have been anti-dilutive.

014. ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)

Comprehensive income for the years ended December 31, 2023 and 2022:

Dollars in thousands	2023	2022	2021
Net income	$ 67,741	$ 180,550	$ 169,075
Foreign currency translation adjustment, net of tax	(12,103)	(17,807)	(17,362)
Change in unrealized loss/(gain) on derivatives, net of tax	(6,658)	65,798	39,268
Pension liability adjustment, net of tax	(6,610)	7,429	6,998
Comprehensive income, net	42,370	235,970	197,979

Changes in accumulated other comprehensive loss by component between December 31, 2023 and 2022 are presented in the table below, net of tax:

Dollars in thousands	Gains and Losses on Derivatives	Defined Benefit Pension Items	Foreign Currency Items	Total
Balance at December 31, 2022	$ 28,147	$ 9,322	$ (27,204)	$ 10,265
Other comprehensive gain (loss)	(16,991)	(6,610)	(5,901)	(29,502)
Less: Amounts reclassified from accumulated other comprehensive income, net	(10,333)	—	6,202	(4,131)
Net current-period other comprehensive gain (loss)	(6,658)	(6,610)	(12,103)	(25,371)
Balance at December 31, 2023	$ 21,489	$ 2,712	$ (39,307)	$ (15,106)

For the year ended December 31, 2023, the Company reclassified a loss of $24.2 million and a gain of $20.1 million from accumulated other comprehensive loss to other income, net and interest income, respectively.

15. COMMITMENTS AND CONTINGENCIES

In consideration for certain technology, manufacturing, distribution, and selling rights and licenses granted to the Company, the Company has agreed to pay royalties on sales of certain products that it sells. The royalty payments that the Company made under these agreements were not significant for any of the periods presented.

The Company is subject to various claims, lawsuits and proceedings in the ordinary course of the Company's business, including claims by current or former employees, distributors and competitors and with respect to its products and product liability claims, lawsuits and proceedings, some of which have been settled by the Company. In the opinion of management, such claims are either adequately covered by insurance or otherwise indemnified, or are not expected, individually or in the aggregate, to result in a material, adverse effect on the Company's financial condition. However, it is possible that the Company's results of operations, financial position and cash flows in a particular period could be materially affected by these contingencies.

The Company accrues for loss contingencies when it is deemed probable that a loss has been incurred and that loss is estimable. The amounts accrued are based on the full amount of the estimated loss before considering insurance proceeds and do not include an estimate for legal fees expected to be incurred in connection with the loss contingency. The Company consistently accrues legal fees expected to be incurred in connection with loss contingencies as those fees are incurred by outside counsel as a period cost.

On December 21, 2023, Fortis Advisors, LLC (representative of the securityholders of ACell, Inc.) filed for arbitration against Integra Life Sciences claiming breach of contract related to the earnout consideration from the 2021 acquisition of Acell. Refer to Note 4, Acquisitions and Divestitures, for additional information on the ACell Contingent Considerations. The Company believes that it has strong defenses to the allegations in the arbitration and intends to defend the matter vigorously.

On September 12, 2023, a securities class action complaint, captioned *Pembroke Pines Firefighters & Police Officers Pension Fund v. Integra LifeSciences Holdings Corporation*, No. 23-cv-20321 (D.N.J.), was filed by a purported stockholder of the Company in the United States District Court for the District of New Jersey (the "Pembroke Litigation") against the Company and certain of the Company's current and former executive officers. The Pembroke Litigation, filed on behalf of a putative class of stockholders who purchased or acquired the Company's common stock between March 11, 2019 and May 22, 2023, inclusive, alleges violations of Sections 10(b) and 20(a) of the Securities Exchange Act of 1934, as amended, and Rule 10b-5 promulgated thereunder, on the basis of purportedly materially false and misleading statements and omissions relating to certain quality systems issues identified by the U.S. Food and Drug Administration at the Company's Boston, Massachusetts manufacturing facility, the Company's efforts to remediate those issues, and the Company's forecasts for certain products in its Tissue Technologies segment. The complaint seeks, among other things, compensatory damages, attorneys' fees, expert fees, and other costs. The Company believes that it has strong defenses to the allegations in the Pembroke Litigation, as we intend to defend the matter vigorously.

Contingent Consideration

The Company determined the fair value of contingent consideration during the twelve-month period ended December 31, 2023 and 2022 to reflect the change in fair value during the period.

A reconciliation of the opening balances to the closing balances of these Level 3 measurements for the years ended December 31, 2023 and 2022 is as follows (in thousands):

	Contingent Consideration Liability Related to Acquisition of:					
	Arkis	Location in Financial Statements	Derma Sciences	ACell	Surgical Innovations Associates, Inc. (FN 4)	Location in Financial Statements
Balance as of January 1, 2023	$ 12,895		$ 230	$ 3,700	57,607	
Change in fair value of contingent consideration liabilities	2,860	Research and development	2,327	(3,400)	11,093	Selling, general and administrative
Balance as of December 31, 2023	15,755		2,557	300	68,700	
Short-Term	$ 7,778		$ —	$ —	$ 13,400	Accrued expenses and other current liabilities
Long-Term	7,977		2,557	300	55,300	Other liabilities
Total	$ 15,755		$ 2,557	$ 300	$ 68,700	

Contingent Consideration Liability Related to Acquisition of:

	Arkis	Location in Financial Statements	Derma Sciences	ACell Inc. (FN 4)	Surgical Innovations Associates, Inc. (FN 4)	Location in Financial Statements
Balance as of January 1, 2022	$ 15,099		$ 230	$ 21,800	$ —	
Additions	—		—	—	57,607	
Change in fair value of contingent consideration liabilities	(2,204)	Research and development	—	(18,100)		Selling, general and administrative
Balance as of December 31, 2022	$ 12,895		$ 230	$ 3,700	$ 57,607	
Short-Term	$ 2,845		$ —	$ —	$ —	
Long-Term	10,050		230	3,700	57,607	Accrued expenses and other current liabilities
Total	$ 12,895		$ 230	$ 3,700	$ 57,607	Other liabilities

Arkis BioSciences Inc.

As part of the acquisition of Arkis BioSciences Inc. ("Arkis"), the Company is required to pay the former shareholders of Arkis up to $25.5 million based on the timing of certain development milestones of $10.0 million and commercial sales milestones of $15.5 million, respectively. The Company used a probability weighted income approach to calculate the fair value of the contingent consideration that considered the possible outcomes of scenarios related to each specified milestone. The Company estimated the fair value of the contingent consideration to be $13.1 million at the acquisition date.

Derma Sciences

The Company assumed contingent consideration incurred by Derma Sciences, Inc. ("Derma Sciences") related to its acquisitions of BioD and the intellectual property related to Medihoney products. The Company accounted for the contingent liabilities by recording their fair value on the date of the acquisition based on a probability weighted income approach. The Company has already paid $33.3 million related to the aforementioned contingent liabilities. One contingent milestone remains which relates to net sales of Medihoney™ products exceeding certain amounts defined in the agreement between the Company and Derma Sciences. The potential maximum undiscounted payment amounts to $3.0 million.

16. SEGMENT AND GEOGRAPHIC INFORMATION

The Company internally manages two global reportable segments and reports the results of its businesses to its chief operating decision maker. The two reportable segments and their activities are described below.

- The Codman Specialty Surgical segment includes (i) the Neurosurgery business, which sells a full line of products for neurosurgery and neuro critical care such as tissue ablation equipment, dural repair products, cerebral spinal fluid management devices, intracranial monitoring equipment, and cranial stabilization equipment and (ii) the Instruments business, which sells more than 40,000 instrument patterns and surgical and lighting products to hospitals, surgery centers, dental, podiatry, and veterinary offices.
- The Tissue Technologies segment includes such offerings as skin and wound repair, plastics & surgical reconstruction products, bone grafts, and nerve and tendon repair products.

The Corporate and other category includes (i) various executive, finance, human resource, information systems and legal functions, (ii) brand management, and (iii) share-based compensation costs.

The operating results of the various reportable segments as presented are not comparable to one another because (i) certain operating segments are more dependent than others on corporate functions for unallocated general and administrative and/or operational manufacturing functions, and (ii) the Company does not allocate certain manufacturing costs and general and administrative costs to the operating segment results. Net sales and profit by reportable segment for the years ended December 31, 2023, 2022 and 2021 are as follows:

	Years Ended December 31,		
Dollars in thousands	2023	2022	2021
Segment Net Sales			
Codman Specialty Surgical	$ 1,058,993	$ 1,019,564	$ 1,025,232
Tissue Technologies	482,580	538,102	517,216
Total revenues	$ 1,541,573	$ 1,557,666	$ 1,542,448
Segment Profit			
Codman Specialty Surgical	$ 450,530	$ 417,873	$ 439,471
Tissue Technologies	134,048	233,802	228,199
Segment profit	584,578	651,675	667,670
Amortization	(12,376)	(13,882)	(16,914)
Corporate and other	(460,676)	(398,873)	(453,526)
Operating income	$ 111,526	$ 238,920	$ 197,230

The Company does not allocate any assets to the reportable segments. No asset information is reported to the chief operating decision maker and disclosed in the financial information for each segment. The Company attributes revenue to geographic areas based on the location of the customer. Total revenue, net and long-lived assets (tangible) by major geographic area are summarized below:

Dollars in thousands	United States[1]	Europe	Asia Pacific	Rest of the World	Consolidated
Total revenue, net:					
2023	$ 1,100,730	$ 165,221	$ 193,096	$ 82,526	$ 1,541,573
2022	1,126,810	170,903	176,477	83,476	1,557,666
2021	1,089,526	191,327	182,034	79,561	1,542,448
Total long-lived assets:					
2023	$ 481,508	$ 51,730	$ 19,842	$ 1,497	$ 554,577
2022	440,223	60,857	12,975	2,721	516,776

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Disclosures Regarding Forward-Looking Statements

This summary annual report wrap contains forward-looking statements regarding Integra Life Sciences Holdings Corporation (the “Company”). All statements, other than statements of historical fact, are statements that could be deemed forward-looking statements. Some of these forward-looking statements may contain words like “will,” “believe,” “may,” “could,” “would,” “might,” “possible,” “should,” “expect,” “intend,” "forecast," "guidance," “plan,” “anticipate,” "target," or “continue,” the negative of these words, other terms of similar meaning or they may use future dates. Forward-looking statements contained in this annual report wrap include, but are not limited to, statements concerning expectations, estimates and projections concerning the Company’s business and operations, financial performance, strategic initiatives, product development and regulatory approvals, and the timing and anticipated results of our chief executive officer succession process. It is important to note that the Company’s goals and expectations are not predictions of actual performance. Such forward-looking statements involve risks and uncertainties that could cause actual results to differ materially from predicted or expected results. Such risks and uncertainties include, but are not limited, to the following: the ongoing and possible future effects of global challenges, including macroeconomic uncertainties, inflation, supply chain disruptions, trade regulation and tariffs, other economic disruptions and U.S. and global recession concerns, on the Company’s customers and on the Company’s business, financial condition, results of operations and cash flows; the Company's ability to execute its operating plan effectively; the Company’s ability to successfully integrate acquired businesses; the Company’s ability to achieve sales growth in a timely fashion; the Company's ability to manufacture and ship sufficient quantities of its products to meet its customers' demands; the ability of third-party suppliers to supply us with raw materials and finished products; global macroeconomic and political conditions, including the war in Ukraine and the conflict in Israel and Gaza; the Company's ability to manage its direct sales channels effectively; the sales performance of third-party distributors on whom the Company relies to generate revenue for certain products and geographic regions; the Company's ability to access and maintain relationships with customers of acquired entities and businesses; physicians' willingness to adopt and third-party payors' willingness to provide or maintain reimbursement for the Company's recently launched, planned and existing products; initiatives launched by the Company's competitors; downward pricing pressures from customers; the Company's ability to secure regulatory approval for products in development; the Company's ability to remediate quality systems violations; fluctuations in hospitals' spending for capital equipment; the Company's ability to comply with regulations regarding products of human origin and products containing materials derived from animal source; difficulties in controlling expenses, including costs to procure and manufacture our products; the impact of changes in management or staff levels; the ability of the Company to successfully identify, recruit and retain qualified management personnel; the impact of goodwill and intangible asset impairment charges if future operating results of acquired businesses are significantly less than the results anticipated at the time of the acquisitions, the Company's ability to leverage its existing selling organizations and administrative infrastructure; the Company's ability to increase product sales and gross margins, and control non-product costs; the Company’s ability to achieve anticipated growth rates, margins and scale and execute its strategy generally; the amount and timing of divestiture, acquisition and integration-related costs; the geographic distribution of where the Company generates its taxable income; new U.S. and foreign government laws and regulations, and changes in existing laws, regulations and enforcement guidance, which affect areas of our operations including, but not limited to, those affecting the health care industry, including the EU Medical Devices Regulation; the scope, duration and effect of additional U.S. and international governmental, regulatory, fiscal, monetary and public health responses to the COVID-19 pandemic and any future public health crises; fluctuations in foreign currency exchange rates; the amount of our bank borrowings outstanding and other factors influencing liquidity; potential negative impacts resulting from environmental, social and governance matters; and the economic, competitive, governmental, technological, and other risk factors and uncertainties identified under the heading “Risk Factors” included in Item 1A of Integra's Annual Report on Form 10-K for the year ended December 31, 2023 filed with the Securities and Exchange Commission.

These forward-looking statements are made only as of the date hereof, and the Company undertakes no obligation to update or revise the forward-looking statements, whether as a result of new information, future events, or otherwise, except to the extent required by applicable law.

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