Monthly Newsletter

The Healthtech Industry

PROGRESS, CHALLENGES & HOPE: HEALTHCARE FACES MANY OBSTACLES AND OPPORTUNITIES IN 2024, AND BEYOND.

From new technologies to limitations, patients, caregivers, providers and market access have seen a tidal shift in options.

New technologies allow for speed and efficiency, be it burn unit technologies that allow for transformative healing to new AI that allows for speed of diagnosis, but also hurdles in cost, access and equity.

Be it inflation, loss of workforce, or quite simply, lack of interest in the workforce, healthcare must move nimbly. Rare & orphan disease research has obviously seen an uptick in funds, but we cannot forget more commonplace diagnosis. Oncology, mental health and women’s health have seen a tighter focus, but also burn units, pediatrics and the need to ensure our own healthcare providers are cared for, listened to, and understood.

Technology is all, and we must dig deeper into the benefits for all in health. Let us explore, dig deeper, and reach further, for all.

Thank you for reading!

SPECTRAL MD (MDAI) BEST PLACED TO WIN AS PREDICTIVE AI DISRUPTS MULTI-BILLION-DOLLAR BURN CARE AND DFU MARKETS

Key takeaway: *Advancements in Medical Imaging and Predictive AI Technologies present a multi-billion-dollar opportunity in critical health care markets, where response time, accurate wound assessment, and recovery times are extremely important. Improved imaging and use of AI-enabled intelligent mapping with existing image databases can allow medical practitioners to address these unmet needs. Spectral AI (MDAI) is deploying the right combination of medical imaging and Predictive AI technology to disrupt critical care markets such as burn care and DFU. This, coupled with its transition from a development stage to commercial stage company (re-rating trigger), impending sales of the DeepView System in the UK, and a line of multiple regulatory catalysts make MDAI a Healthtech name that should be on investors' radar.*

Predictive artificial intelligence (AI) integrated into medical imaging devices is rapidly changing diagnosis, management, and prevention of critical illnesses. The world of critical care is on the cusp of a transformative era. Predictive AI powerful technology empowers medical professionals to make faster, more informed decisions, ultimately saving lives and improving patient outcomes. Traditionally, critical care has been reactive, relying on identifying and treating problems after they arise. With predictive AI in medical imaging, the paradigm is shifting. AI algorithms can analyze vast amounts of medical image data, such as X-rays, CT scans, and MRIs, to identify subtle patterns and abnormalities that might escape the human eye. This allows for earlier detection of potential complications, enabling healthcare professionals to intervene proactively. We have summarized the major advantages that this technology can bring to critical care markets below (Chart 1). In this report, we study two critical care markets – Burn Care and Diabetic Foot Ulcer (DFU) Treatment market – both of which present large opportunities and challenges that can potentially be addressed using Predictive AI technologies.

Chart 1: Advantages of Using Predictive AI in Critical Care

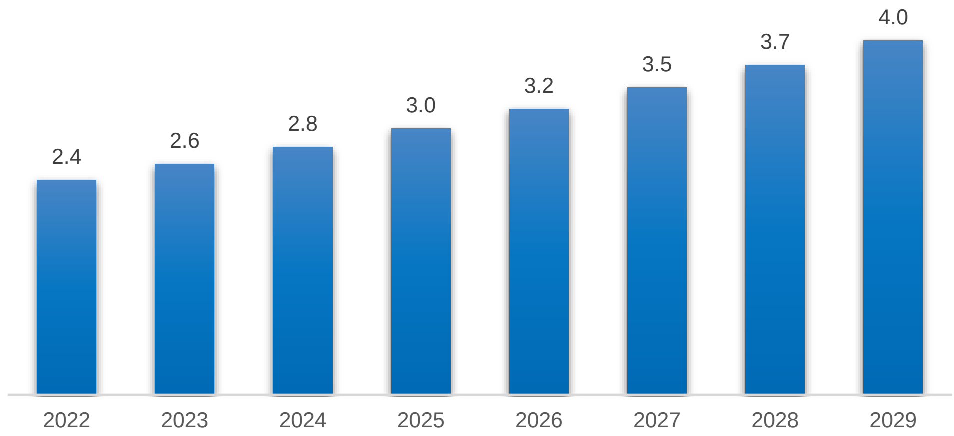
Early Detection of Deterioration	Improved Resource Allocation	Personalized Treatment Plans	Reduced Length of Hospital Stays
• AI can analyze trends in medical images over time, flagging even slight changes that could indicate a patient's condition is worsening. This allows for earlier intervention and treatment adjustments, potentially preventing more severe complications.	• By identifying high-risk patients earlier, critical care units can prioritize their resources and ensure the most critically ill patients receive the necessary attention promptly.	• AI can analyze a patient's medical history and imaging data to recommend personalized treatment plans, potentially leading to more effective interventions with fewer side effects.	• Earlier detection and intervention can lead to faster recovery times and shorter hospital stays, reducing costs and improving patient outcomes.

Source: Intro-act

The market for burn care products has witnessed substantial growth, driven by the rising incidence of burns and the growing public awareness of the importance of immediate and appropriate treatment. The global burn care market is a dynamic and growing sector, responding to a critical and widespread medical need. It is a critical segment of the healthcare sector, addressing the needs arising from burn injuries. These injuries, which are electrical, chemical, electromagnetic, or thermal in nature, vary in severity based on size and depth. They are categorized as first-degree, second-degree, or third-degree burns, each requiring specific treatment protocols. Burn care products play a vital role in the treatment process. They are designed to alleviate pain, reduce the risk of scarring, remove necrotic tissue, prevent infection, and aid in the restoration of function.

- **According to Data Bridge Market Research, the global burn care market, valued at $2.2 billion in 2021, is projected to expand to $4 billion by 2029**, growing at a ~7% CAGR. A significant segment within this market is the care for thermal burns, the largest proportion of burn injuries. This segment's prominence is attributed to the high incidence of fire-related injuries.

Chart 2: Global Burn Care Market ($ billion, CAGR: 7.4%)

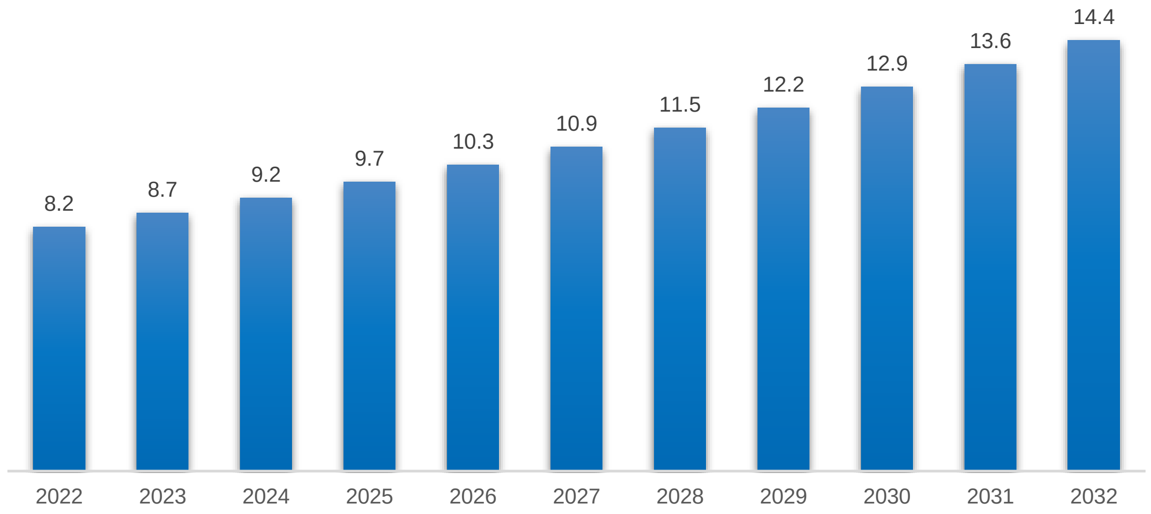


Source: Intro-act, Data Bridge Market Research

The U.S. faces shortage of burn centers and disparity in distribution of these centers, creating an unmet medical need. According to the American Burn Association, 1.1 million Americans suffer from burn injuries each year, with 500,000 presenting to emergency departments and 40,000 requiring hospitalizations. In contrast, only 2% of U.S. hospitals have burn centers and there are only about 250 burn surgeons in the United States. In 2019, a study led by Dr. Heather E. Carmichael of the University of Colorado School of Medicine found that nearly 25% of Americans live in areas with low access to burn care, with the southern region being the most affected. The U.S. had only 59 ABA-verified adult burn centers and the study's findings indicate a stark regional variation in access. The southern and western regions exhibit the lowest access levels, with the southern region having several self-designated burn centers that are yet to undergo the ABA verification process. The study also highlights a scarcity of burn surgeons and the challenges in training new specialists. This creates a demand for technology-enabled solutions that can allow medical practitioners to quickly evaluate burn wounds and objectively determine if those patients need to be transferred to a burn center or not.

Increasing instances of diabetes and increasing awareness among patients contributing to the growth of the multi-billion-dollar diabetic foot ulcers (DFU) treatment market. Diabetes leads to various complications, including the reduced healing ability of the body. This diminished capacity for wound healing is particularly evident in the formation of diabetic foot ulcers. As the number of diabetic patients rises, so does the incidence of foot ulcers, necessitating more robust treatment solutions. These ulcers, which typically develop in the feet, are prone to rapid deterioration and infection, posing significant health risks to diabetic patients. The routine management of diabetes often involves regular insulin injections, which, ironically, can increase the risk of foot ulcers due to minor injuries incurred during the injection process. The rise in sedentary lifestyles and obesity rates has further exacerbated the prevalence of diabetes and its complications. Obesity, a significant risk factor for diabetes, also contributes to the development of diabetic foot ulcers. The additional weight exerted on the feet can lead to injuries, creating an environment conducive to ulcer formation. Another growth driver is the increasing awareness and education about diabetes and its complications. The diabetic foot ulcer treatment market is a critical segment of the healthcare industry, addressing the complications arising from one of the most prevalent chronic diseases worldwide: diabetes. **According to Precedence Research, in 2022, the market was valued at $8.2 billion and is anticipated to expand to ~$14.4 billion by 2032**. This growth trajectory underscores the increasing urgency and demand for effective DFU treatments.

Chart 3: Global Diabetic Foot Ulcer (DFU) Treatment Market ($ billion, CAGR: 5.8%)



Source: Intro-act, Precedence Research

Given a high proportion of the geriatric population, North America is the biggest geographic segment of the DFU treatment market. The DFU treatment market is geographically diverse, with North America leading due to its substantial elderly population. This demographic is particularly prone to diabetes, a prevalent condition that frequently results in diabetic foot ulcers. The region's increase in sedentary lifestyles has further escalated the incidence of DFUs. With a high prevalence of diabetes, North America continues to be a pivotal market for DFU treatments. The Asia Pacific region is also a major segment in the DFU treatment market. This growth is attributed to the region's rapid urbanization, which has led to more sedentary lifestyles and poor dietary habits, contributing to a rise in diabetes and related complications. The European market also significantly contributes to the global DFU treatment market, bolstered by similar trends in lifestyle and an increasing incidence of diabetes.

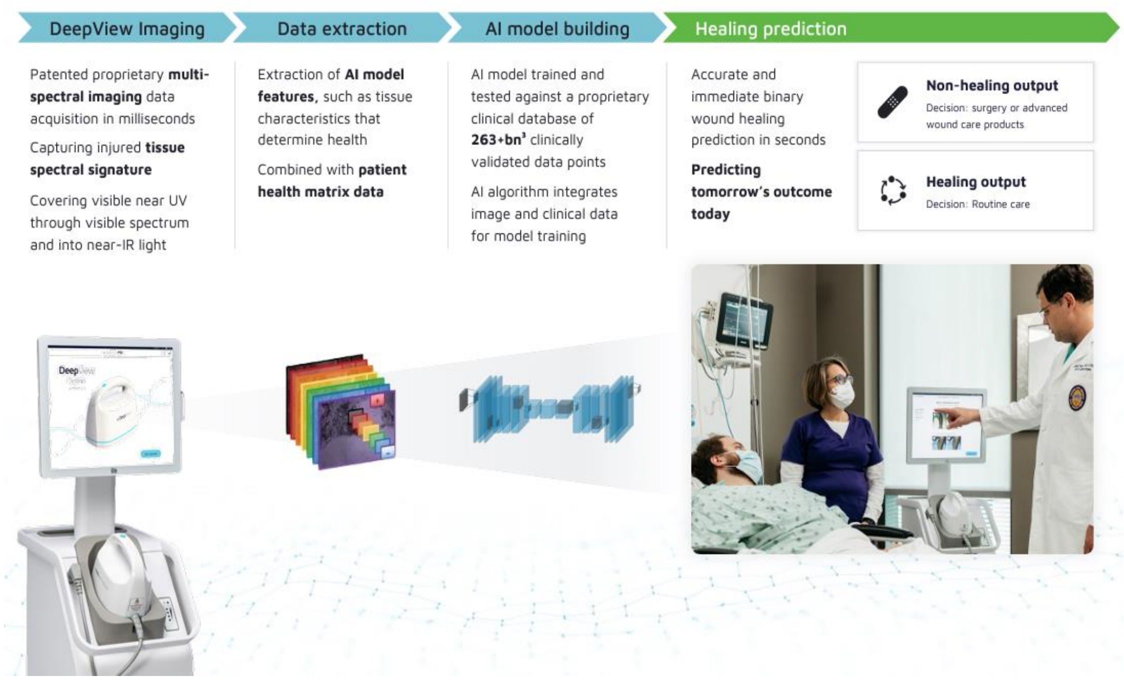
Spectral AI (MDAI) is bringing forth a powerful combination of medical imaging and Predictive AI technology to disrupt critical care markets such as burn care and DFU, taking efficiency, patient, and practitioner experience to a whole new level. While there are several small players trying to address this market, MDAI stands out because of its solid track record of product development, use of AI, and access to a large proprietary image database that it leverages to deliver fast and accurate results in these key markets. We spotlight the company below.

Company Spotlight: Spectral AI (MDAI)

Spectral AI (MDAI) is a predictive AI company focused on medical diagnostics for faster and more accurate treatment decisions in wound care for burns, diabetic foot ulcers (DFU) and future clinical applications. MDAI has a dedicated team striving to revolutionize the management of wound care by "Seeing the Unknown"® with its DeepView® Wound Diagnostics System. Its DeepView® platform is the only predictive diagnostic device that offers clinicians an objective and immediate assessment of a wound's healing potential prior to treatment or other medical intervention. With algorithm-driven results that substantially exceed the current standard of care, Spectral AI's diagnostic platform is expected to provide faster and more accurate treatment insight, significantly improving patient care and clinical outcomes.

- **DeepView System**: The company's DeepView System is an internally developed AI-driven multiple source identifier (MSI) device which has FDA "Breakthrough Device Designation" status since 2017. It uses proprietary AI algorithms to distinguish between fully damaged, partially damaged and healthy human tissue characters invisible to the naked eye, providing a "Day One" healing potential assessments in seconds. Its output is specifically engineered to allow physicians to make a more accurate, timely and informed decision regarding the treatment of the patient's wounds. MDAI's DeepView System employs patented multi-spectral optics and sensors to capture images of injured tissue across a wide spectrum, revealing details beyond human perception. It analyzes these images, classifying tissue severity as non-healing, partially damaged, or healing, providing a visual representation of non-healing areas. The process is swift, with image acquisition taking 0.2 seconds and complete processing and AI classification in about 20 to 25 seconds. DeepView refines its AI model through regulatory submission using extensive clinical data containing approximately 263 billion pixels of DFU and burn image data points as of December 31, 2022.

Chart 4: DeepView System Technological Process



Source: Intro-act, Company Investor Presentation

In a key milestone that marks MDAI's transition from a late-stage development company to one with a commercial product, MDAI's predictive software DeepView AI-Burn recently obtained the final stage of UK Conformity Assessed (UKCA) authorization, for aiding in burn wound diagnosis in the UK. The authorization will allow MDAI to sell its DeepView system in the UK - management expects to deploy six devices for customer evaluation soon and start generating revenue in 2H24. We note that the revenue from commercialization in the UK in 2024 comes as a positive surprise over the $28 million previously guided by the company.

- **We expect commercial launch in the UK to be successful** given DeepView's ability to remove long observation periods with open wounds that risk infection. UKCA marking is a certification system established by the UK government to ensure that products meet specified standards for sale in the UK (England, Wales, and Scotland). MDAI's DeepView AI-Burn is currently indicated for individuals aged eighteen and above. However, the company aims to extend its technology to benefit pediatric populations as well.

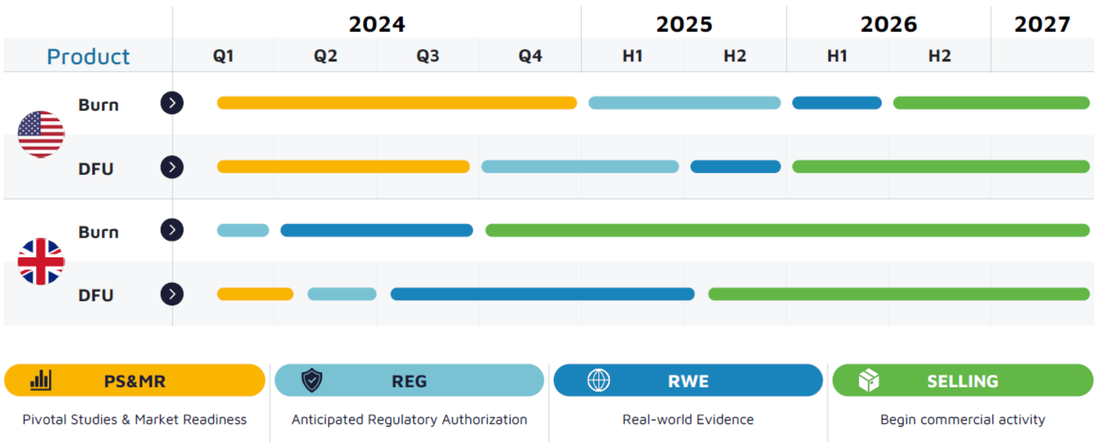
- **The target market in the UK is large** with 40 burn centers, 25 trauma centers, 230 Accident and Emergency centers, 150-foot protection services, and a 500+ nursing community. An early entry into the UK will also give MDAI the opportunity to demonstrate proof of concept for the broader and much bigger U.S. market which has 125 burn centers and 4,500 emergency centers in addition to 1,100 wound care centers. Management currently expects burn wound solution to be launched in the U.S. in 2026.

- **Importantly, the authorization opens up the ability to expand partnerships in regions such as the Middle East** that recognize the UKCA authorization, thus adding to the revenue potential of the DeepView AI-Burn software.

Strong execution continues with sustained progress on all growth and commercialization initiatives centered around its disruptive AI-driven technology in the last 12 months; multiple commercialization catalysts lined up over the next three years. MDAI continues to evolve from being a late-stage development company to one that is embarking on commercialization of its AI-driven technology to disrupt the wound diagnostics space. It is doing so using AI as its DeepView System is an internally developed AI-driven multiple source identifier (MSI) device which has FDA "Breakthrough Device Designation" status since 2017. It uses proprietary AI algorithms to distinguish between fully damaged, partially damaged, and healthy human tissue characters invisible to the naked eye, providing a "Day One" healing potential assessments in seconds. Its output is specifically engineered to allow physicians to make a more accurate, timely and informed decision regarding the treatment of the patient's wounds.

- **MDAI is currently prioritizing Burn and DFU indications in the U.S. and UK markets, and pending regulatory authorization in both countries, it expects to start generating revenue across four separate platforms covering burn and DFU within the next three years.** (See chart below for impending milestones.) In late 2023, MDAI received both FDA and UKCA marking of its proprietary imaging technology, DeepView Snapshot. It recently submitted its predictive software DeepView AI-Burn, to the UK regulatory body for UKCA marking and received approval earlier this week (discussed above).

Chart 5: Planned Near-term Product Deployments



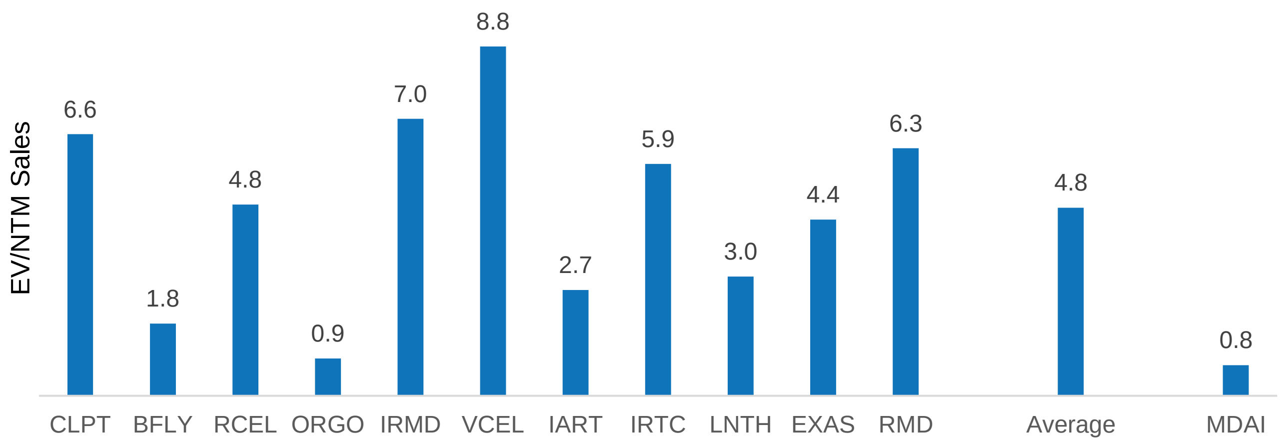
Source: Intro-act, Company Investor Presentation

- **BARDA track record validates and increases probability of success, as well as supports product build-out and commercialization efforts through non-dilutive funding.** In 2023, MDAI secured its largest BARDA contract worth $149 million in September, bringing the total contract awards from BARDA to over $250 million. This contract provides non-dilutive funding for further development, and also secures procurement of medical devices to expand utilization beyond burn centers to emergency departments. We note that the award designates $55 million for development activities through the first quarter of 2026 and $95 million for additional development, procurement, and early-adopter deployment of the DeepView System. It is worth highlighting that in 2013 and 2019, MDAI was awarded BARDA contracts totaling $123 million of which $101 million has been committed to date. We believe management's track record through years of BARDA engagement validates and increases probability of success for DeepView across clinical indications (Burn and DFU) and geography (U.S., UK, EMEA). In addition, the company completed a Committed Equity Facility with B. Riley Financial Inc. in December last year, allowing the company access up to $10 million at any time during the next two years. Any such funds would be utilized to support MDAI's clinical development activities.

- **Clinical trials and product development progressing well**. Over the last one year, MDAI provided interim results of its DFU Clinical Study which will be used in upcoming submissions of DeepView AI-DFU to the FDA (anticipated in 2H 2024). It also initiated its pivotal study to validate DeepView AI – management expects this to be the final clinical trial before seeking FDA marketing authorization for the burn indication in 1H 2025. This study is being conducted in burn centers and emergency departments with an enrollment target of 240 subjects.

Undervalued despite impending commercialization and line up of multiple regulatory catalysts. MDAI currently trades at 0.8x EV/NTM sales – this is a big discount to peer average of 4.8x despite the company's disruptive AI-driven approach to solving unmet medical needs, its transition from a development stage to commercialized company (re-rating trigger), impending sales of the DeepView System in the UK that poses an upside to earlier guidance, and multiple other regulatory catalysts discussed above. Given this context, we expect MDAI to re-rate higher, making it a Healthtech name that should be on investors' radar.

Chart 6: MDAI – Valuation Peer Comparison



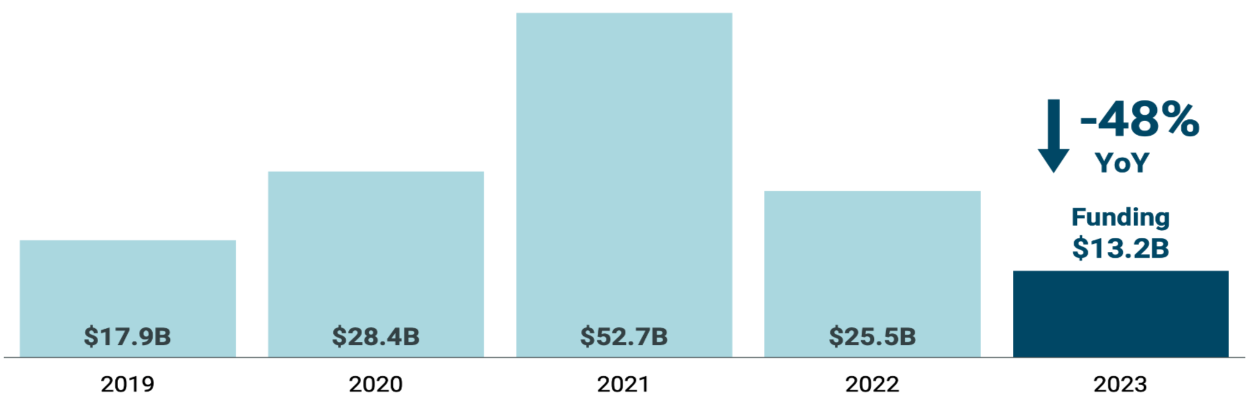
Source: Intro-act, Factset, Data as of 3/8/24.

HEALTHTECH NEWS

INDUSTRY TRENDS

State of Digital Health 2023. In 2023, global digital health funding saw a significant reduction for the second consecutive year, halving to $13.2 billion across 1,397 deals, marking the lowest levels of funding and deals since 2016 and 2014, respectively. Despite a general downturn in the sector, the United States maintained its dominance, securing over half of the total deals. The median deal size in digital health remained stable at $4 million, the highest ever recorded, indicating a long-term upward trend even as venture deal sizes have generally decreased since 2021. Notably, mega-rounds in digital health have become rare, with only three $100 million+ rounds in the fourth quarter of 2023 and a yearly total of 20, significantly below the 2021 quarterly average. Read More (CB Insights)

Chart 7: Digital Health Funding Halved for the Second Consecutive Year in 2023



Source: Intro-act, State of Digital Health 2023 Report, CB Insights

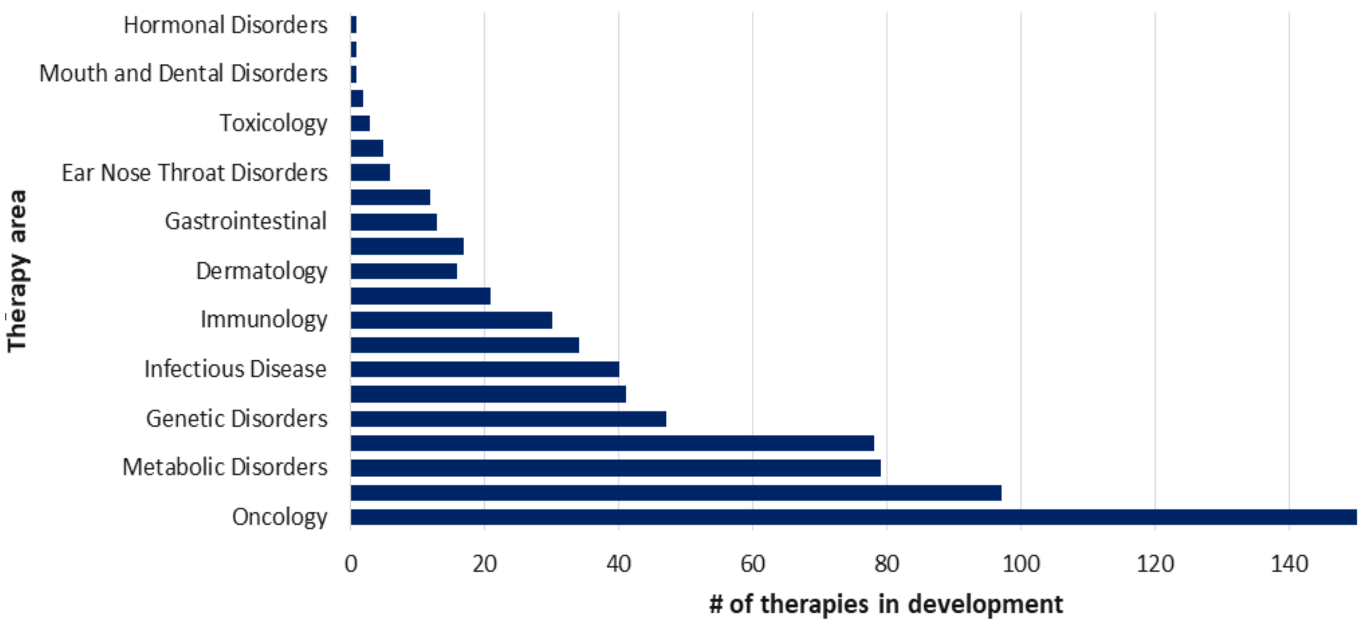
Drugmakers deepen efforts to tap into booming market for obesity drugs. Viking Therapeutics announced promising results from a mid-stage study showing its experimental drug effectively aiding weight loss in obese patients. Meanwhile, Novo Nordisk and Eli Lilly dominate the weight-loss drug market with Wegovy and Zepbound, respectively, targeting a market worth $100 billion by the decade's end. Novo Nordisk's Wegovy, linked to cardiovascular benefits, utilizes the same active ingredient as its diabetes drug Ozempic, while also exploring high-dose oral semaglutide for obesity treatment. Read More (Reuters)

Navigating the challenges of pediatric surgery with robotic-assisted procedures. Pediatric patients, previously overlooked in surgical innovation, are now benefiting from advancements in robotic-assisted surgery. With smaller instrument sizes, surgeons can perform procedures with increased precision, resulting in smaller incisions, faster recovery, and reduced pain. Pediatric surgery presents unique challenges due to the delicate anatomy of young patients, making robotic platforms invaluable for accessing hard-to-reach areas. These technologies also offer ergonomic benefits for surgeons and features like haptic feedback and digital measurements, enhancing surgical outcomes and patient care. Read More (Medcity News)

“Bubble” CRISPR delivery system advances gene editing in living animals. A new CRISPR-Cas9 delivery method termed "bubble" delivery allows gene editing directly within the body, eliminating the need to extract and reinfuse cells. Developed by Jennifer Doudna's lab at UC Berkeley, this method utilizes membrane bubbles decorated with antibodies to target specific cell types, demonstrated in mice to edit immune cells for potential cancer treatments. This advancement aims to streamline gene therapy, making it more accessible and affordable, crucial for broader medical application. Read More (Technology Networks)

Cell and gene therapy landscape in the US. Cell and gene therapies (CGTs) are revolutionizing medical treatment by providing personalized solutions for chronic diseases. They offer benefits such as reduced treatment frequency compared to lifelong therapies, easing strain on healthcare systems. With 14 CGTs approved in the US in the past decade, and 694 in development as of February 2024, CGTs show promise across various therapy areas. However, challenges like regulatory hurdles, affordability, and patient access need to be addressed for wider adoption. Read More (Global Data)

Chart 8: Number of CGTs in Development in the U.S. by Therapy Area



Source: Intro-act, Global Data

Gene editing technique shows promise for rare immune disorder. Researchers utilized gene editing to address a rare immune disorder caused by deficiencies in recombination activating genes (RAGs), which affect lymphocyte production. The technique, homology-directed repair (HDR), offers targeted editing while maintaining normal gene regulation. This approach could mitigate safety concerns associated with gene therapy for RAG1 mutations. The study demonstrated functional rescue of RAG1 defects, paving the way for potential clinical applications and suggesting an alternative to stem cell transplantation. Read More (Inside Precision Medicine)

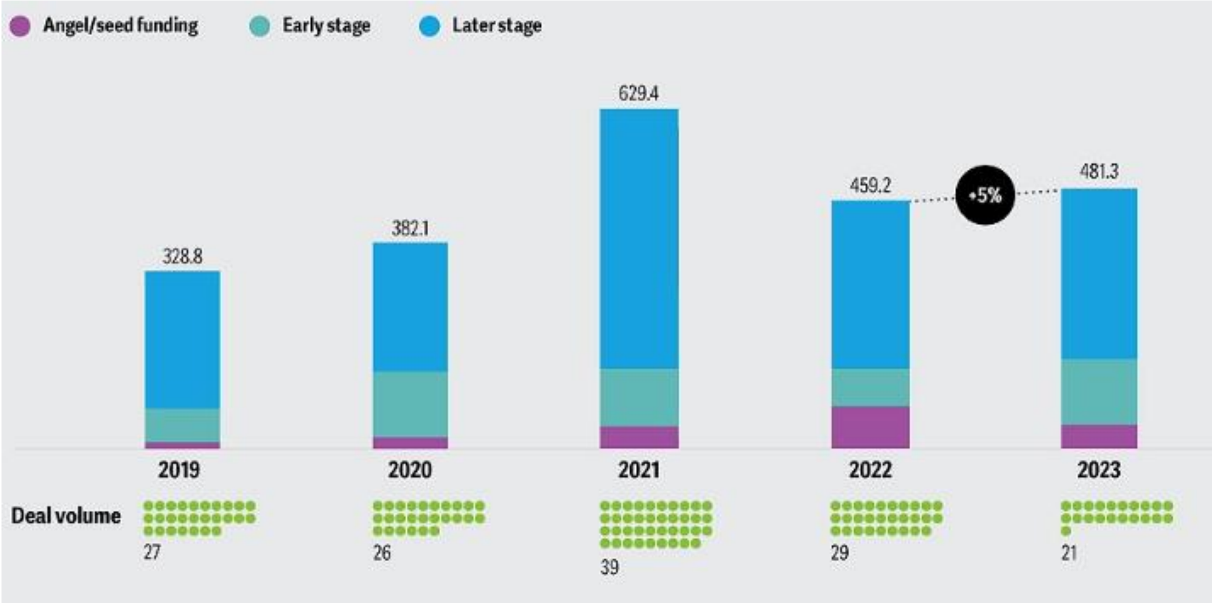
CRISPR: RNA-editing therapies pick up steam. Recent advancements in RNA-editing therapies for genetic disorders mark a significant breakthrough, offering potential safer alternatives to genome editing like CRISPR. RNA-editing techniques, including single-base editing and RNA exon editing, show promise in correcting mutations without permanent genetic changes. Clinical trials for conditions like alpha-1 antitrypsin deficiency and Stargardt disease indicate growing acceptance and maturity in the field, with RNA-based treatments also being explored for liver cancer, showcasing a broadening scope for therapeutic interventions beyond genetic diseases. Read More (Nature)

Genetic test maker Invitae files for bankruptcy protection in US. Genetic test maker Invitae, backed by Softbank, has filed for Chapter 11 bankruptcy protection with plans to pursue a sale. The company aims for business continuity during the process, utilizing existing cash reserves. Assets are estimated between $500 million to $1 billion, with liabilities ranging from $1 billion to $10 billion. Invitae, serving global markets, has thousands of creditors. Legal, financial, and advisory firms are engaged to facilitate the sale amidst previous concerns about financial sustainability. Read More (Reuters)

US study uncovers 275 million entirely new genetic variants. A study analyzing the genetic code of 250,000 U.S. volunteers discovered over 275 million new variants, shedding light on disease predispositions among different demographics. Led by the NIH-funded "All of Us" study, this effort aims to address the lack of diversity in genomic datasets. With nearly 1 billion total genetic variants, the research underscores the importance of diverse population sequencing for drug development and tailored treatments, aiming to fill gaps in understanding and improve healthcare equity. Read More (Reuters)

Funding trends in women's health. The US health system historically neglects women's needs, evident in minimal investment in women's health ventures, comprising only 2% of total health innovation funding in 2023. However, there's growing investor interest, likely influenced by heightened awareness of gender disparities. Despite a decline in 2022, investments rebounded in 2023. Female-led ventures face challenges securing funding due to male-dominated decision-making. Innovative funding approaches, including diverse sources and non-dilutive funding, are being explored amidst changing investment landscapes. Read More (Deloitte)

Chart 9: Investments in US Women's Health Companies Grew in 2023 ($ Million)

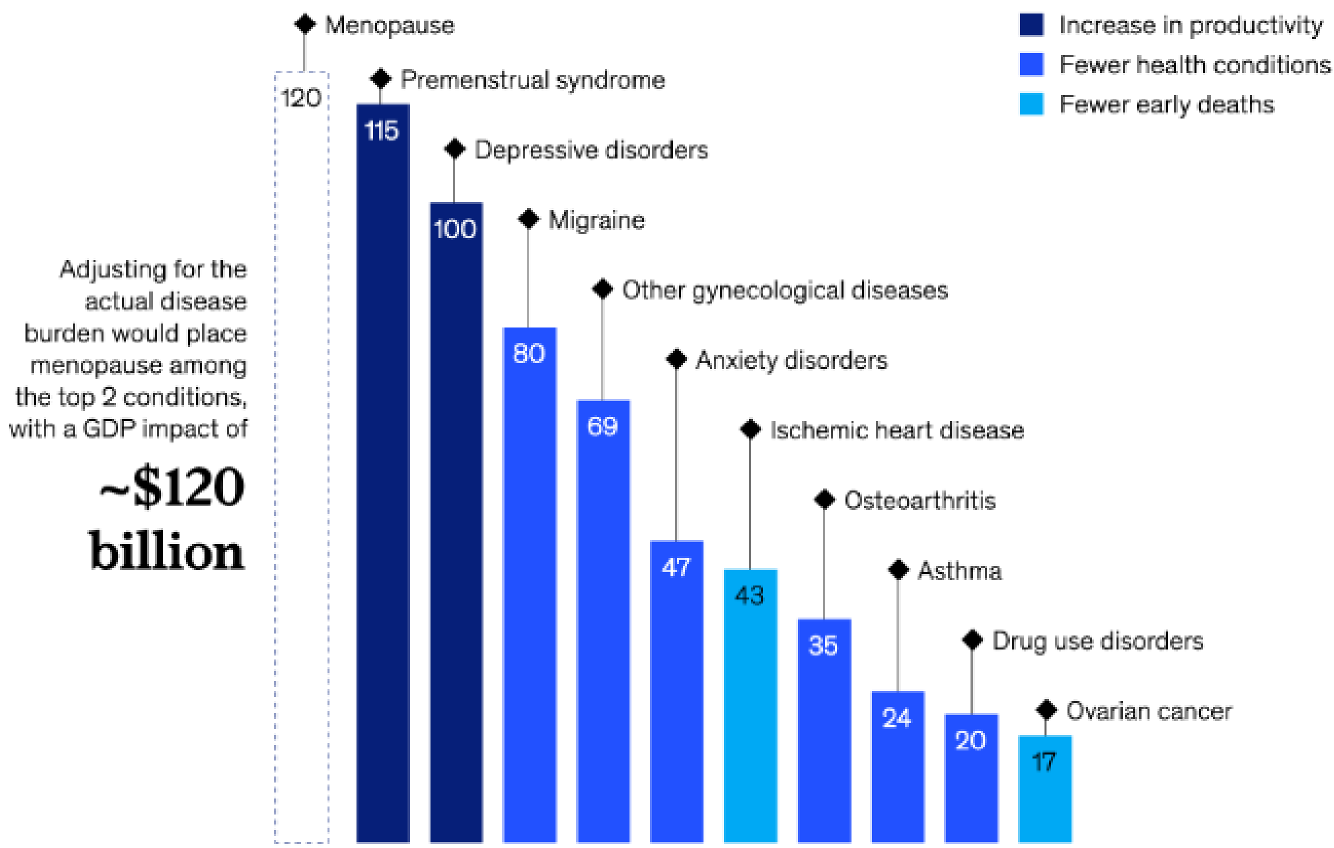


Source: Intro-act, Deloitte Analysis of funding data from Pitchbook Data. Note: Data for US deals worth $1 million and above.

Drug shortages trigger FTC probe. The Federal Trade Commission (FTC) is investigating U.S. drug shortages, focusing on the purchasing and distribution practices within the pharmaceutical supply chain. This probe targets the potential exploitation of market power by key players, which may have driven generic drug prices down to unprofitable levels, leading manufacturers to halt production. The investigation scrutinizes a few dominant companies and their impact on drug availability, including critical chemotherapies. Industry stakeholders attribute these shortages to manufacturing issues and fluctuating demand, while the FTC seeks to identify the underlying causes and address the systemic issues contributing to the scarcity of essential medications. Read More (WSJ)

A $1 trillion boost from better health. Global life expectancy has surged from 30 to 73 years between 1800 and 2018. However, Kweilin Ellingrud and team reveal a disparity: women spend nine more years than men in poor health, impacting productivity and earnings. Closing this gap not only enhances women's quality of life but also boosts the global economy by $1 trillion. Targeting ten conditions, notably premenstrual syndrome and menopause, could contribute over 50% of this economic growth, amounting to $235 billion. Read More (McKinsey)

Chart 10: Top 10 Conditions by GDP Impact of Closing the Women's Health Gap ($ Billion)



Source: Intro-act, McKinsey, Endometriosis prevalence from WHO, prevalence base for GDP impact calculation from Global Burden of Disease Study 2019(GBD 2019). Note: Based on estimated no. of women aged 45-50 (excluding peri-post menopausal women), multiplied by the share of symptomatic cases (92%).

Medication abortions over telehealth effective and safe, researchers share ahead of major SCOTUS case. A study in Nature Medicine found telehealth medication abortions to be as effective and safe as in-person procedures, regardless of synchronous or asynchronous communication. Analyzing over 6,000 cases from three virtual clinics across 20 states, researchers highlighted similarities in outcomes to in-person procedures. Read More (Fierce Health)

EY Health Pulse Survey: digital health solutions boost efficiencies and automation, but ROI has yet to come. The four-year mark of COVID-19 underscores a shift towards digital health solutions in healthcare, promising benefits such as addressing nursing shortages, expediting care, and reducing costs. Despite initial investment concerns, 96% of healthcare executives find the expense worthwhile. A survey by Ernst & Young LLP reveals a growing interest in digital health, with 90% of executives noting improved efficiency. Read More (EY)

As clinician burnout rises, how can technology help? The Physician Sentiment Survey (PSS) by Athena health and The Harris Poll reveals a worsening crisis of burnout and dissatisfaction among physicians. Over 1,000 surveyed physicians reported feeling overwhelmed by administrative burdens and regulatory changes. While technology, including AI, offers promise in alleviating some of these pressures, concerns about losing the human touch in healthcare persist. Optimism about AI's potential to streamline administrative tasks is tempered by the need for careful implementation to ensure patient safety. Read More (Athena Health)

Chart 11: Barriers and Benefits of AI in Healthcare

Source: Intro-act, Physician Sentiment Survey 2023-2024, Athena Health

Unleashing the potential of wearable technologies in healthcare. Wearable monitoring devices offer tailored solutions for various healthcare settings, providing early warnings and preventive measures. In acute and chronic care, user-friendly wearables aid swift vital-sign monitoring and ensure consistent patient adherence. Balancing accuracy with comfort remains a challenge, but advancements in sensor technology aim to strike this balance. Read More (EE Times)

Space surgery: doctors on ground operate robot on ISS for first time. Surgeons conducted the first remote surgery in orbit, controlling a robot on the International Space Station. Despite being a test on rubber bands, it marked significant progress in space surgery development, crucial for future long-duration space missions like Mars expeditions. The technology, exemplified by the spaceMIRA robot, could aid remote surgery on Earth and enhance medical care in isolated regions. NASA supported the project, highlighting the growing need for space emergency procedures. Read More (Science X Daily)

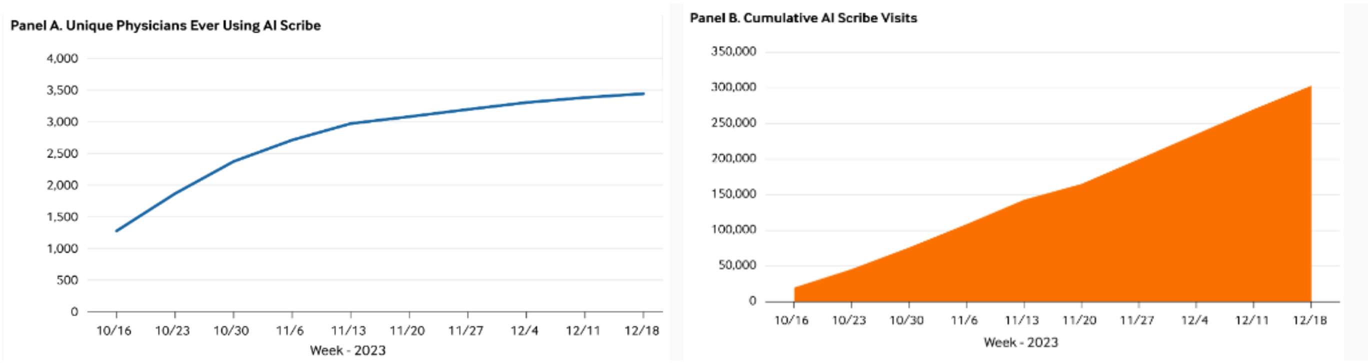
Korea's telemedicine startups seek growth abroad. South Korea's telemedicine startups are expanding overseas due to domestic regulatory hurdles like drug delivery restrictions. Doctornow, backed by SoftBank, plans a subsidiary in Japan for non-contact medical services, citing Japan's robust telemedicine setup. Medihere Co. relocates HQ to the US, offering subscription-based services. Life Semantics Corp. eyes Thailand for expansion. Lulu Medic expands in Vietnam. Regulatory constraints led to closures in South Korea, with Doctornow downsizing its workforce. Read More (The Korean Economic Daily)

AI IN HEALTHCARE

How AI and wearable data could drive better, cheaper health outcomes. The healthcare sector is undergoing transformation with advancements like wearable sensor technology and AI. Research by MIT and Google shows AI's potential to enhance health predictions by up to 23.8% using wearable data. This could lead to more informed decisions and optimized care delivery. Despite concerns about privacy and bias, AI-driven healthcare offers improved diagnoses and streamlined processes. Read More (PYMNTS)

Ambient Artificial Intelligence scribes to alleviate the burden of clinical documentation. The Permanente Medical Group (TPMG) introduced Nabla Copilot, an ambient artificial intelligence (AI) scribe, to assist physicians in real-time clinical documentation without audio recordings. Over 10 weeks, 3,442 physicians adopted the technology, benefiting over 300,000 patient encounters. Physicians praised Nabla Copilot for improving personalized interactions and reducing clerical burdens, indicating a significant advancement in healthcare technology. Read More (NEJM Catalyst)

Chart 12: Cumulative Use of the Ambient Artificial Intelligence (AI) Scribe Tool, Oct 16–Dec 24, 2023

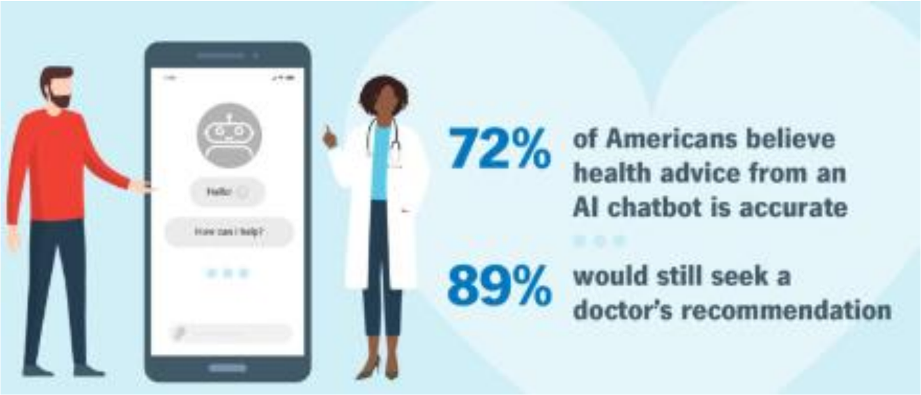


Source: Intro-act, NEJM Catalyst.

Advancing rare disease breakthroughs with genomics, AI and innovation. Mayo Clinic's Center for Individualized Medicine pioneers rare disease diagnostics and treatments, catering to over 300 million affected globally. Dr. Margot Cousin and Dr. Filippo Pinto e Vairo lead innovative research, leveraging technologies like antisense oligonucleotide therapy and CRISPR gene editing. They emphasize the importance of precise diagnoses, facilitated by advanced genomic testing and AI. Collaboration with global organizations ensures progress in transforming lives and shaping the future of healthcare. Read More (News Network)

Cleveland Clinic survey reveals how AI and wearables are impacting heart health. A Cleveland Clinic survey reveals 3 in 5 Americans optimistic about AI improving heart care, though 89% would still consult doctors. Only 22% have used AI for health advice. Dr. Kapadia notes AI's potential in healthcare. 50% use tech to monitor health, mainly tracking steps, heart rate, and calories. 79% report health improvements. Survey results detail increased exercise, better diet, and stress reduction. Conducted for American Heart Month, promoting health awareness. Read More (Cleveland Clinic)

Chart 13: Survey Reveals 3 in 5 Americans Optimistic about AI



Source: Intro-act, Cleveland Clinical Survey

China Medical University Hospital leverages Google's genAI for cancer care. China Medical University Hospital (CMUH) partners with Google Cloud, utilizing MedLM, an AI model, for cancer care. The collaboration aims to enhance precision treatment through genAI-based tools for diagnosis, treatment planning, and patient education. CMUH utilizes Google's AI accelerators for drug development, aiming to establish cutting-edge healthcare AI models for the Chinese-speaking market. Read More (Healthcare IT News)

TechBio unicorn Owkin teams up with AWS to advance generative AI for precision medicine. Owkin, a TechBio company, collaborates with Amazon Web Services (AWS) to revolutionize drug discovery, accelerate clinical trials, and develop AI diagnostics. Leveraging AWS's cloud infrastructure, Owkin aims to optimize data operations and drive research in precision medicine. They will utilize AWS's high-performance computing and machine learning tools, including Amazon SageMaker, to build and deploy AI models. The collaboration aims to address challenges in precision medicine and enhance healthcare outcomes through groundbreaking discoveries and transformative solutions. Read More (Press Release)

Bioptimus start-up aims to lead AI biology. French biotech Bioptimus aims to pioneer a universal AI model for biology, leveraging foundation models similar to ChatGPT. It plans to connect biological elements across scales to deepen understanding and drive innovation in biotechnology. Co-founder Jean-Philippe Vert, formerly of Google Brain, leads the venture. With $35M seed funding, including from Sofinnova Partners and BpiFrance, Bioptimus aims to personalize medicine and unlock biological insights. Partnerships with firms like Owkin enhance access to diverse data for advanced analysis. Read More (Inside Precision Medicine)

Neurophet introduces AI-powered brain imaging analysis technology at AD/PD 2024. Neurophet, an AI company for brain diseases, unveils innovative technologies at AD/PD 2024 conference. It showcases Neurophet AQUA and Neurophet SCALE PET, analyzing brain MRI and PET images respectively. Their technology targets Alzheimer's treatment, including ARIA side effect analysis and amyloid-positive prediction. CEO Jake Junkil Been highlights Neurophet's pivotal role in treatment clinical trials and prognosis. By participating in AD/PD 2024, the company seeks global business opportunities and advancements in Alzheimer's treatment solutions. Read More (Yahoo Finance)

UltraSight partners with SELVAS Healthcare to develop and commercialize AI-powered cardiac ultrasound software in Asia. UltraSight and SELVAS Healthcare have partnered to introduce UltraSight's AI guidance technology for cardiac imaging in Asia, starting with Korea and Southeast Asia. UltraSight aims to make cardiac care more accessible by enabling medical professionals, even those with minimal training, to conduct high-quality ultrasound. SELVAS Healthcare plans to distribute and commercialize UltraSight's technology in Korea to address the increasing need for timely cardiac diagnoses. The partnership aims to expand UltraSight's presence throughout Asia. Read More (Yahoo Finance)

DRUG & DEVICE APPROVALS

CRISPR gene therapy Casgevy secures approval in Europe. European Commission granted conditional marketing authorization to Casgevy (exagamglogene autotemcel), a gene therapy developed by Vertex Pharmaceuticals and CRISPR Therapeutics, making it the sole gene therapy for sickle cell disease and transfusion-dependent beta-thalassemia (TDT) in Europe. This approval follows positive opinions from the European Medicine Agency (EMA) and prior approvals in the UK and US. Read More (Pharmaceutical Technology)

FDA approves first OTC continuous glucose monitor. The FDA has approved Dexcom's Stelo Glucose Biosensor System as the first over-the-counter continuous glucose monitoring (CGM) system. Unlike Dexcom's G6 and G7, it's for adults without insulin-dependent diabetes. The system, worn as a sensor and connected to a smartphone app, monitors glucose levels every 15 minutes. However, it's not intended for managing hypoglycemia. This approval aims to expand access to CGMs, promoting health equity by enabling individuals to monitor their glucose levels without a prescription. Read More (Medscape)

US FDA approval for wearable Electrophysiology monitoring system. X-trodes received FDA 510(k) clearance for its Smart Skin, a wireless wearable technology named X-trodes System M. It features customizable dry-printed electrode patches for monitoring EEG, EKG/ECG, EOG, and EMG signals. The FDA clearance validates its accuracy, equivalent to FDA-cleared devices, in measuring these signals. X-trodes aims to enhance medical-grade electrophysiological monitoring, focusing initially on cardiovascular and sleep monitoring markets, aiming to improve patient care with its versatile remote monitoring system. Read More (Cardiac Rhythm News)

FDA approves sleep apnea tech from EnsoData, Samsung. An estimated 39 million U.S. adults suffer from obstructive sleep apnea (OSA), with 936 million globally affected. This condition, characterized by disrupted breathing during sleep, poses serious health risks including cardiovascular and metabolic diseases. Innovations like EnsoData's AI algorithm for pulse oximeters and Samsung's FDA-approved watch feature aim to improve diagnosis and monitoring. Read More (Healthcare IT News)

FDA approves J&J's combination therapy for a type of lung cancer. The MHRA's Yellow Card Biobank, launched with Genomics England in 2023, investigates genetic impacts on medicine safety. Aiming to improve personalized medicine, it collects genetic data alongside reports of adverse drug reactions (ADRs). A new phase focuses on oral anticoagulants and stroke prevention. Genetic insights may enable targeted prescriptions. MHRA encourages reporting for better understanding and prevention of ADRs. Read More (Reuters)

FDA clears ROSA shoulder robotic surgery system from Zimmer Biomet. Zimmer Biomet announced FDA clearance for its ROSA Shoulder robotic surgery system, a global first for shoulder replacement. Part of the ROSA portfolio, it enhances the company’s digital technologies, aiding precise placement and improved outcomes in shoulder procedures. The system supports data-informed decisions and integrates with Signature ONE surgical planning. Read More (Mass Device)

Chart 14: Snapshot of ROSA Shoulder Surgical Robot System

Source: Intro-act, Mass Device, Zimmer Biomet

Hologic wins FDA clearance for AI-enabled cervical cancer screening system. Hologic obtained regulatory approval for its AI-enabled cervical cancer screening system, the Genius Digital Diagnostics System, in the U.S. This system digitizes Pap test slides and uses AI to identify cells for review, potentially reducing false negatives by 28%. It streamlines the manual process of cytology, enhancing efficiency and accuracy. Read More (Medtech Dive)

TECVAYLI biweekly dosing approved by the U.S. FDA for the treatment of patients with relapsed or refractory multiple myeloma. Johnson & Johnson's TECVAYLI® gains FDA approval for biweekly dosing of 1.5 mg/kg for relapsed or refractory multiple myeloma patients maintaining complete response for six months. Administered subcutaneously, TECVAYLI® targets BCMA on myeloma cells and CD3 on T-cells, activating immune response. Approval, based on MajesTEC-1 study, offers dosing flexibility, addressing unmet needs. Read More (PR Newswire)

FDA approves Amivantamab first-line indication for NSCLC. The FDA approved amivantamab-vmjw (Rybrevant) for certain locally advanced or metastatic non–small cell lung cancer (NSCLC) cases. It's now allowed as a first-line treatment alongside carboplatin and pemetrexed for patients with EGFR exon 20 insertion mutations. Traditional approval was also granted after platinum-based chemotherapy. Approval was based on the PAPILLON trial, showing significant progression-free survival improvement. Read More (Medscape)

Biogen received European Commission approval for SKYCLARYS. Biogen's SKYCLARYS (omaveloxolone) gains European Commission approval for treating Friedreich's ataxia (FA) in adults and adolescents. FA, a rare genetic disorder, leads to progressive neurodegeneration. SKYCLARYS showed significant efficacy in clinical trials, improving patient function. Biogen aims to address the unmet need in FA treatment, emphasizing collaboration with the medical community. Read More (Biogen)

COMPANY NEWS

Algorithmic Biologics makes genomics affordable, eliminating 60 to 90% of library preparation costs. Bengaluru-based Algorithmic Biologics (AlgoBio) launched the Tapestry platform at the Genomics India Conference 2024, aiming to enhance molecular testing efficiency. Tapestry significantly reduces sequencing costs by eliminating a substantial portion of library preparation expenses. Founded by Dr. Manoj Gopalkrishnan, AlgoBio secured $2.5 million in pre-series A funding. The company plans to utilize the funds for product development, sales expansion, and international growth. Read More (Bio Spectrum)

Brightside Health expands Medicaid & Medicare access for greater telemental health coverage. Brightside Health announced new payer partnerships to support Medicaid and Medicare, aiming to reach underserved populations struggling with mental health issues. These partnerships include contracts with CareOregon and Blue Shield of California for Medicaid and Medicare Advantage, and an expanded contract with Blue Cross and Blue Shield of Texas. Traditional Medicare coverage extends to several states. Read More (Yahoo finance)

Philips releases radiation-free device guidance tool LumiGuide. Philips introduced LumiGuide, a radiation-free imaging tool using light reflections to create 3D images of devices within the body. This fiber optic technology enables surgeons to visualize devices without radiation exposure, offering real-time 3D guidance during procedures. Dr. Atul Gupta hailed it as revolutionary, likening it to a "3D human GPS." Meanwhile, Philips faced FDA scrutiny over reported deaths related to its ventilators and sleep apnea machines, leading to recalls and increased medical device reports. Read More (Mobi Healthcare)

Sharp HealthCare launches spatial computing center of excellence featuring Apple Vision Pro. Sharp HealthCare launched the Spatial Computing Center of Excellence in collaboration with Apple, Epic, Elsevier, and others, aiming to integrate spatial computing, facilitated by Apple Vision Pro, into medical practices. This initiative seeks to revolutionize patient care by blending digital content with the physical world. Read More (PR Newswire)

Amazon reportedly to cut hundreds of healthcare jobs. Amazon is trimming over 100 jobs at One Medical and Amazon Pharmacy to curb operating losses. The move, reportedly aiming to save $100 million, includes a reduction of fixed operating costs and per-visit expenses at One Medical. Amazon Health Services' VP confirmed job cuts and restructuring efforts. Amazon's venture into healthcare, acquiring One Medical, reflects a trend of non-traditional players entering primary care. Read More (Healthcare Finance)

Vodafone and eConsult Health join forces to enhance patient access to care. Vodafone partners with eConsult Health to enhance healthcare access by reducing patient waiting times and improving safety. Utilizing eConsult Health's digital triage solution, eTriage, NHS Emergency Departments can prioritize patients efficiently. Vodafone's secure digital infrastructure ensures scalability and continuity of service. This collaboration aims to streamline workflows, automate patient prioritization, and optimize outcomes. Read More (Digital Health)

AstraZeneca to invest $300M in US cell therapy plant. AstraZeneca is investing $300 million in a new manufacturing facility in Rockville, Maryland, specializing in cell therapies for cancer treatment. The facility, expected to be operational by 2026, will create over 150 jobs. AstraZeneca, expanding its presence in cell therapy, acquired Neogene Therapeutics and partnered with Quell Therapeutics. Additionally, it's delving into gene therapy, having acquired LogicBio Therapeutics and securing a deal with Pfizer. Read More (Manufacturing Dive)

Zepp Health unveils Zepp OS 3.5 with Zepp Flow at MWC Barcelona 2024. Zepp Health Corporation unveils Zepp OS 3.5 with Zepp Flow™, revolutionizing wearable intelligence. This upgrade introduces a Natural-Language User Interface (LUI) powered by LLM AI, marking a significant leap in user interaction. Zepp Flow™ enables seamless communication without predefined commands, enhancing user experience in health, fitness, and productivity. Read More (PR Newswire)

Google updates the first-gen Pixel Watch with health monitoring features. Google is enhancing the first-gen Pixel Watch with health monitoring features from its successor, enabling automatic workout detection and activity tracking. Users can monitor heart rate zones, set exercise pace goals, and access breathing exercises via the Fitbit Relax App. For Wear OS 3 devices, Google introduces public transit directions and compass-enabled maps. Read More (Engadget News)

EARNINGS

Zimmer Biomet forecasts upbeat 2024 profit on steady medical devices demand. Zimmer Biomet Holdings Inc forecasts 2024 profit above expectations, citing resilient demand for medical devices. They initiated a restructuring program to cut costs, anticipating $200 million in savings by 2025. Despite beating Q4 revenue and earnings estimates, shares fell 4%. Similar to Abbott Laboratories and Boston Scientific, Zimmer benefits from returning elective surgeries post-pandemic. Analysts expect bullish growth due to pent-up demand, hospital improvements, and robotics interest. Full-year 2024 profit is projected at $8.00-$8.15 per share. Read More (Reuters)

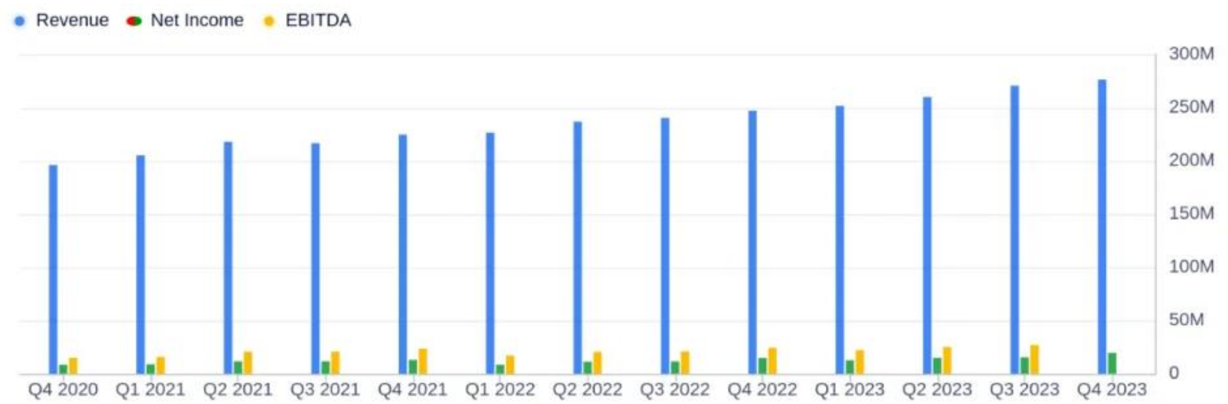
Hims & Hers spotlights increased year-over-year and 2023 Q4 revenue. Hims & Hers Health, a virtual care company, saw significant growth in 2023, with a 65% revenue increase compared to 2022. In Q4 2023, revenue surged by 47% compared to the previous year. The company reported a total Q4 revenue of $246.6 million, up from $167.2 million in Q4 2022, with a yearly revenue of $872.0 million in 2023. Despite a net loss for the year, gross profit and adjusted EBITDA showed substantial improvements. CEO Andrew Dudum anticipates surpassing $1 billion in revenue in 2024, emphasizing personalized treatments' accessibility. Read More (Mobi Healthcare)

Amwell posts $679M loss for the year but plots accelerated growth in 2025, boosted by major defense contract. Mwell, formerly American Well, reduced its workforce by 10% in late 2023 to cut costs amidst $679 million in losses, partly due to a $436 million goodwill impairment. CFO Bob Shepardson expects over $15 million in savings. Despite losses, they foresee profitability by 2025, buoyed by a Defense Health Agency contract. Their Converge platform aims for post-pandemic virtual care, consolidating services. CEO Ido Schoenberg highlights progress and envisions Amwell's transition to a hybrid care facilitator. Read More (Fierce Healthcare)

mPulse reports 106% revenue growth year-over-year. mPulse, an AI-enabled company, saw a 94% growth in Q4 2023 and 106% year-over-year, attributing it to acquisitions of HealthTrio and Decision Point Healthcare Solutions. They partner with major U.S. health plans and care organizations. CEO Bob Farrell highlights their focus on personalized digital engagement. Despite high investment in healthcare tech, survey results show mixed impact on costs. mPulse previously acquired The Big Know and HealthCrowd, indicating its commitment to healthcare innovation. Read More (Mobi Healthcare)

Addus HomeCare reports record annual revenues surpassing $1 billion in 2023. Addus HomeCare Corp (NASDAQ:ADUS) reported robust financial results for Q4 2023 and the full year ending December 31, 2023. Key highlights include a significant 11.9% increase in net service revenues for Q4, reaching $276.4 million, and a full-year revenue surpassing $1.06 billion for the first time. Net income rose to $19.6 million for Q4 and $62.5 million for the full year. Adjusted EBITDA increased by 21.3% for Q4, totaling $34.3 million, and reaching $121.0 million for the full year. Cash and liquidity remained strong, with $64.8 million in cash and $335.6 million in available credit. Chairman and CEO Dirk Allison emphasized strong demand for home-based care, successful integration of Tennessee Quality Care, and plans for growth initiatives in 2024. Read More (Yahoo Finance)

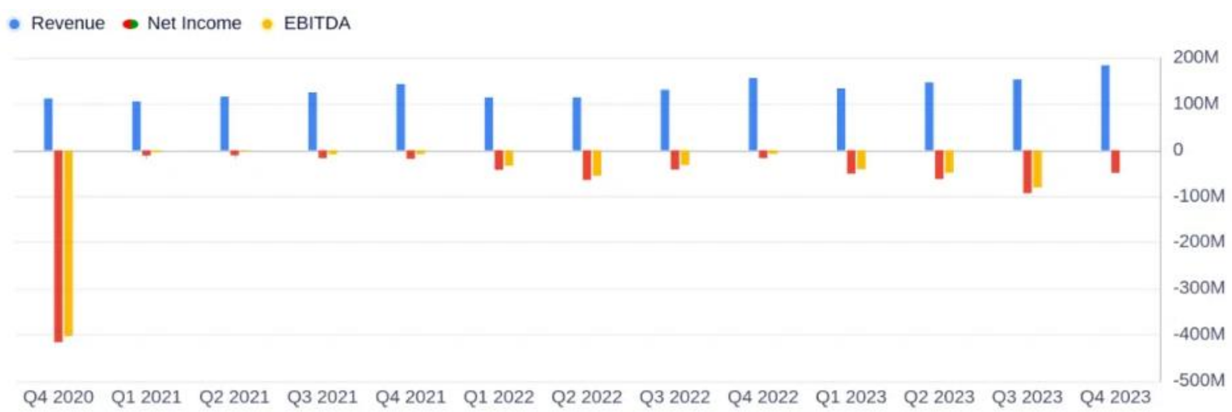
Chart 15: Quarterly Performance – Addus HomeCare



Source: Intro-act, Yahoo! Finance, Guru Focus

10x Genomics Inc (TXG) reports solid revenue growth amid rising operating expenses in FY 2023. 10x Genomics Inc (NASDAQ:TXG) reported a robust revenue growth of 18% in Q4 2023 and 20% for the full year 2023. However, the company experienced a decline in gross margin, attributed to changes in product mix. Operating expenses rose by 20%, leading to widened operating losses and a net loss of $49.0 million in Q4 and $255.1 million for the full year. Despite challenges, TXG forecasts 8% to 12% revenue growth in 2024. Read More (Yahoo Finance)

Chart 16: Quarterly Performance – 10X Genomics Inc



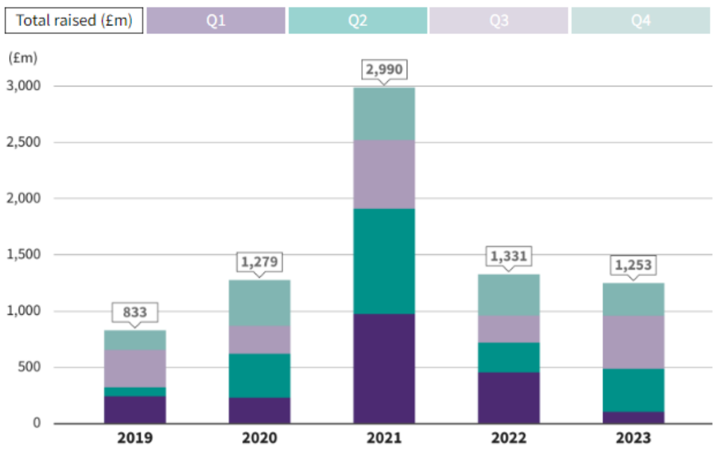
Source: Intro-act, Yahoo! Finance, Guru Focus

CAPITAL MARKETS

Veradigm buys ScienceIO in $140 million deal to build out healthcare AI solutions. Veradigm, a healthcare data and tech company, is acquiring ScienceIO for $140 million to bolster its AI capabilities for healthcare. ScienceIO, specialized in AI for healthcare, aids in organizing patient data and enhancing workflows. Veradigm aims to leverage ScienceIO's platform to develop proprietary large language models. This acquisition aligns with Veradigm's strategy to drive growth and innovation in the healthcare sector, positioning them to lead in value-based care and data intelligence. Read More (Fierce Healthcare)

UK biotech financing 2023. In 2023, UK biotechs secured £1.8 billion in equity financings, down 9% from 2022. Venture capital raised £1.25 billion, only 6% lower year-on-year, accounting for 11% of total UK VC investment despite a 43% reduction in overall UK VC investment. UK leads Europe with 41% of total biotech VC investment. London-quoted UK biotechs' collective share price increased approximately 250% compared to pre-pandemic levels. Public follow-ons decreased by 16%, and no new market launches occurred. [Read More](#) (Biotech Finance)

Chart 17: Total Venture Capital Raised by UK Biotech



Source: Intro-act, UK Biotech Financing Report

Fractyl Health raises $110 million in US IPO. Fractyl Health, a developer of treatments for obesity and diabetes, priced its U.S. IPO at $15 per share, raising about $110 million. The company's focus is on "disease-modifying" therapies addressing root causes of metabolic diseases. With a growing interest in obesity treatments, Fractyl enters a market estimated to reach $100 billion by 2030. Competitors like Novo Nordisk and Eli Lilly are also active. Fractyl will trade under "GUTS" on Nasdaq, amid a tentative IPO market recovery in 2024. [Read More](#) (Reuters)

Chart 18: Product Pipeline – Fractyl Health

Source: Intro-act, Fractyl Health

Chromocell Therapeutics announces closing of IPO for Gross Proceeds of $6.6 Million. Chromocell Therapeutics Corporation (NYSE American: CHRO) completed its initial public offering of 1,100,000 shares at $6.00 per share, raising approximately $6.6 million. A.G.P./Alliance Global Partners managed the offering. The company's common stock is listed on the NYSE American LLC under "CHRO." The offering was made through a prospectus available on the SEC's website. Read More (Yahoo Finance)

Kyverna overshoots raised IPO expectations, landing at $319M for autoimmune cell therapy mission. Kyverna Therapeutics exceeded its IPO expectations, raising its anticipated share price range to $20-$21 from $17-$19 and increasing the number of shares to be sold from 11 million to 14.5 million. However, it further raised the share price to $22, aiming to garner $319 million in gross proceeds, potentially increasing it by $47.8 million. Kyverna focuses on autoimmune diseases, with its lead asset KYV-101 showing promise in trials for lupus nephritis and systemic sclerosis. Analysts predict a recovery phase in the biotech sector based on recent IPO successes. Read More (Fierce Biotech)

M&A

Novo Nordisk's parent to buy Catalent for $16.5 billion to boost Wegovy supply. Novo Nordisk secured a significant advancement by acquiring Catalent, a crucial manufacturing partner for its obesity drug Wegovy, for $16.5 billion. The move aligns with Novo's strategy to bolster production capacity, addressing soaring demand. CEO Kasim Kutay emphasized the importance of expanding fill-finish capacity for Wegovy and Ozempic. Despite competition from Eli Lilly, analysts project a lucrative market. The deal, expected to conclude in 2024, aims to increase filling capacity by 2026, with minimal antitrust concerns and potential impact on Catalent's other clients. Read More (Reuters)

Everside Health, Marathon Health merge to enhance advanced primary care access. Everside Health and Marathon Health merged to expand access to advanced primary care, focusing on a value-based model. Serving employer and union-sponsored clients, they offer a range of healthcare services across the US. The merger aims to strengthen financials, enhance patient care, and foster regional partnerships. Their approach emphasizes long-term patient-provider relationships, incorporating virtual care options. The combined organization prioritizes improving patient outcomes while reducing healthcare costs. Read More (Fierce Health)

Novartis's MorphoSys acquisition comes with cancer drugs & antitrust questions. Novartis' €2.7 billion acquisition of MorphoSys includes promising cancer drug candidates, notably pelabresib for myelofibrosis, potentially setting Novartis apart in treatment. However, regulatory scrutiny looms due to Novartis' existing stake in a similar drug. The acquisition aims to bolster Novartis' cancer therapy pipeline. MorphoSys' tulmimetostat, another drug in testing, also joins Novartis. Despite past setbacks, MorphoSys transitions to small molecule cancer drugs, evident in their deal selling tafasitamab rights to Incyte. Read More (Medcity News)

Aptar Digital Health announces acquisition of Healint to reinforce digital health portfolio and drive future growth. Aptar Digital Health has acquired Healint, a renowned digital health company known for its virtual clinical studies and patient registry platform. Healint's Migraine Buddy and Clarrio apps support those with neurological and immunological conditions. This acquisition enhances Aptar's neurology portfolio, offering AI-driven data collection, patient community management, and clinical trial acceleration. Healint's integration will expand services, aligning with Aptar's mission to improve patient experiences in digital health for Central Nervous System conditions. Read More (Business Wire)

TruDoc acquires Wellthy Therapeutics to deliver digital health services in Gulf and expand to India. Dubai's TruDoc Healthcare acquires India's Wellthy Therapeutics, blending their strengths in virtual healthcare and digital therapeutics. This synergy promises accessible, patient-centered care with personalized treatment plans, potentially reducing healthcare costs. Their shared vision emphasizes seamless integration and aims to impact 10 million lives by 2025. With TruDoc's GCC leadership and Wellthy's Asian success, the partnership strengthens TruDoc's regional dominance in tech-driven primary care, bridging clinical expertise with digital innovation. Read More (Bio Spectrum)

REGULATORY UPDATES

FDA warns against using smartwatches and smart rings to measure blood sugar. The FDA warned against using smartwatches and smart rings claiming to measure blood glucose levels without skin piercing, as they can provide inaccurate readings, posing life-threatening risks for diabetes management. FDA-approved continuous glucose monitoring devices, unlike unauthorized ones, pierce the skin for accurate measurements. Health care providers are urged to discuss risks with patients and assist in selecting authorized devices. Consumers should report issues with unauthorized devices to the FDA. Read More (CNN Health)

HHS finalizes rule on telehealth at opioid treatment programs. The government's new rule marks the first significant update to opioid treatment program standards in over two decades. The finalized regulation permits opioid treatment programs to start medication treatment via telehealth, allowing initiation of buprenorphine treatment through audio-only or audio-visual methods. Methadone treatment can be initiated via audio-visual platforms due to safety concerns, with the regulation making permanent the telehealth allowances introduced during the COVID-19 pandemic to address the escalating opioid crisis. Read More (Healthcare Dive)

Health insurers can't rely on AI to decide Medicare coverage, according to new federal guidelines. The Centers for Medicare and Medicaid Services (CMS) issued new rules to protect patients under Medicare Advantage (MA) plans from AI-related bias. Health insurers are now prohibited from relying solely on AI to determine patient care or coverage, emphasizing individual medical history and physician recommendations. Concerns about AI exacerbating discrimination prompted the CMS to remind insurers of nondiscrimination requirements. Read More (Mashable)

US urges court to preserve Obamacare mandate to cover cancer screenings, HIV drugs. The Biden administration urges a U.S. appeals court to maintain a federal mandate mandating health insurer to cover preventive care, like HIV prevention and cancer screenings, at no extra cost. This appeal follows a federal judge's ruling, challenged by the administration, threatening to strike down the mandate. The dispute centers on the extent of power granted to a federal task force. The court's decision remains uncertain, with arguments focusing on constitutional concerns and potential compromises. Read More (Reuters)

Lawmakers float 'essential health system' designation to help direct funds toward safety-net hospitals. A bipartisan bill introduced by Representatives Lori Trahan and David Valadao aims to designate over 1,000 hospitals nationwide as "essential health systems," opening doors for federal funding and support. The legislation targets hospitals serving vulnerable communities based on specific criteria, including Medicare and Medicaid considerations. These facilities, often underfunded, provide significant uncompensated care but struggle to maintain vital services. Hospital industry groups like America's Essential Hospitals and the Alliance of Safety-Net Hospitals support the initiative. Read More (Fierce Healthcare)

US CDC recommends older Americans should get another COVID shot this spring. CDC's director approved updated COVID vaccines as a second annual shot for adults aged 65+. The recommendation follows an advisory group's suggestion for a spring booster. Last year, the committee recommended an optional additional dose. With over half of COVID-19 hospitalizations in Oct-Dec 2023 among those 65+, the update aims to bolster protection for the vulnerable. Approximately 22% of adults received the updated vaccine, with nearly 42% of those 65+ vaccinated. Read More (Reuters)

CMS final rule cuts Medicaid DSH payments for some safety-net hospitals in 2024: what it means and how it will impact healthcare. The Centers for Medicare and Medicaid Services (CMS) finalized a rule altering Medicaid disproportionate share hospital (DSH) payments, impacting some safety-net hospitals in fiscal year 2024. Effective April 27, 2024, the rule adjusts payment calculations, limiting costs and payments for Medicaid beneficiaries. Safety-net hospitals with high percentages of low-income patients are exempt, but others face potential financial strain. Hospital groups criticize the cuts, urging strategic planning to navigate the changes effectively. Read More (Medriva)

MHRA launches second phase of genetic biobank for stroke prevention medicines. The MHRA's Yellow Card Biobank, launched with Genomics England in 2023, investigates genetic impacts on medicine safety. Aiming to improve personalized medicine, it collects genetic data alongside reports of adverse drug reactions (ADRs). A new phase focuses on oral anticoagulants and stroke prevention. Genetic insights may enable targeted prescriptions. MHRA encourages reporting for better understanding and prevention of ADRs. Read More (Medscape)

Alabama health system sues Humana to recoup MA payments after 340B rate revision. Baptist Health filed a lawsuit against Humana, alleging underpayment for outpatient drugs through the 340B Drug Pricing Program due to a Supreme Court decision. The ruling required HHS to repay $9 billion to impacted hospitals. Baptist Health claims Medicare Advantage plans should also repay. Despite being in-network since 2005, Humana allegedly refused to pay retroactive adjustments, causing financial loss. Read More (Fierce Health)

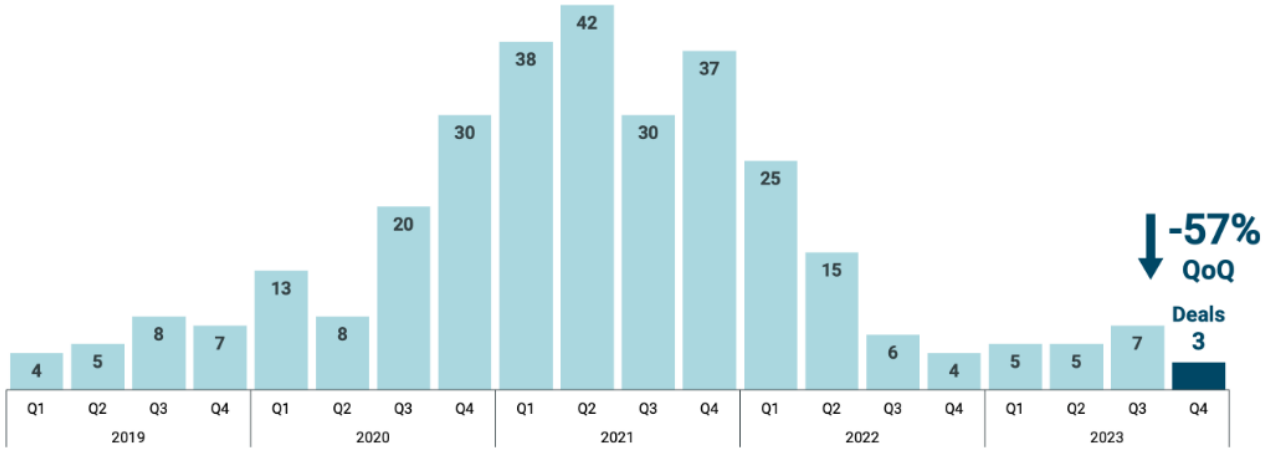
House subcommittee grills VA, Oracle over pharmacy issues amid EHR rollout. Lawmakers questioned VA and Oracle representatives about issues in rolling out the new electronic health record system at a House subcommittee hearing, focusing on pharmacy and scheduling software concerns impacting patient safety. Rep. Matt Rosendale criticized efforts to transform Oracle Cerner pharmacy software. Read More (Healthcare Dive)

A giant unknown': what the alleged $2 billion Medicare catheter fraud scheme means for ACOs. The National Association of ACOs (NAACOS) raised concerns about seven durable medical equipment companies costing Medicare $2 billion due to inflated payments, particularly regarding urinary catheters. The surge in payments, attributed to false claims, may affect accountable care organizations (ACOs) financially, potentially impacting savings and future benchmarking. Read More (Fierce Health)

FTC obtains $195 million judgment against Simple Health for selling 'sham' insurance. Florida-based insurer Simple Health deceived thousands into buying what seemed like comprehensive health coverage, but was actually a medical discount membership. A federal judge imposed a $195 million judgment against Simple, agreeing with FTC claims of deceptive practices. The company, its CEO, and affiliates were banned from future healthcare sales. Simple's tactics included rigged online searches, deceptive scripts, and misrepresentation of affiliations with reputable insurance brands. Read More (Healthcare Dive)

HEALTHTECH CHART OF THE MONTH

Chart 19: Digital Health Mega Rounds (Equity Deals Worth 100+ million) Dry-up



Source: Intro-act, State of Digital Health 2023 Report, CB Insights

HEALTHTECH CAPITAL MARKET ACTION (FEBRUARY 2024)

IPO Activity

Company	Stock Exchange	Offer Date	Gross Proceeds ($m)
Fractyl Health, Inc.	Nasdaq	2-Feb-24	110
Alto Neuroscience, Inc.	NYSE	2-Feb-24	148
Kyverna Therapeutics, Inc.	Nasdaq	8-Feb-24	319
Telomir Pharmaceuticals, Inc.	Nasdaq	9-Feb-24	7
Metagenomi, Inc.	Nasdaq	9-Feb-24	94
Chromocell Therapeutics	NYSE	16-Feb-24	6.6

Source: Intro-act, FactSet

M&A Activity (February 2024)

Target	Target Industry	Target Country	Acquirer	Deal Size ($m)	Announcement Date
Catalent	Pharmaceutical Manufacturing	United Sates	Novo Holdings	16,500	5-Feb-24
Blackberry Clinics	Wellness and Fitness Services	Buckinghamshire	Bupa Health Clinics	-	5-Feb-24
MorphoSys AG	Biotechnology Research	United Sates	Novartis	2,700	6-Feb-24
HealthScape Advisors	Business Consulting and Services	United Sates	Chartis	-	6-Feb-24
Nanophoton Corporation	Nanotechnology Research		Bruker	-	7-Feb-24
Chanelle Pharma	Pharmaceutical Manufacturing	Galway	Exponent	300	8-Feb-24
Wellthy Therapeutics	Technology, Information and Internet	United Sates	TruDoc	-	13-Feb-24
Beacon Hospital	Consumer Services	United Sates	Macquarie	-	14-Feb-24
Cotiviti	IT Services and IT Consulting	United Sates	KKR	-	15-Feb-24
Aiolos Bio	Biotechnology Research	United Sates	GSK	-	15-Feb-24
Healint	IT Services and IT Consulting		Aptar Digital Health	-	22-Feb-24
AssistRx	IT Services and IT Consulting	United Sates	WCAS	-	22-Feb-24
Twill	Mental Health Care	United Sates	DarioHealth	-	22-Feb-24
Prime Diagnostic Centre	Medical and Diagnostic Laboratories	India	Medicentre	-	23-Feb-24
FIGURE 1	Hospitals and Health Care	Canada	Physician's Weekly	-	26-Feb-24
ScienceIO	Biotechnology Research	United Sates	Veradigm	140	27-Feb-24
Patch Biosciences	Biotechnology Research	United Sates	Ginkgo Bioworks	-	28-Feb-24
Proof Diagnostics	Medical Device	United Sates	Ginkgo Bioworks	-	28-Feb-24
Healthwise	Hospitals and Health Care	United Sates	WebMD	-	4-Mar-24

Rovers	Consumer Services		Halma	77.4	4-Mar-24
MedEuropa Romania	Hospitals and Health Care	Romania	Affidea	-	4-Mar-24

Source: Intro-act, FactSet

PE/ VC Funding Activity (February 2024)

Company	Funding Round	Fund raised ($m)	Investors	Date
ArteraAI		20.0	Prosperity7 Ventures, EDBI, Walden Catalyst Ventures, Wilson Sonsini Goodrich & Rosati, Trium Ventures, Navin Chaddha, Rajiv Khemani (AISpace VC), Andrew & Elliott Tan (A&E Investment LLC)	1-Feb-24
Cohere Health		50.0	Deerfield Management, Define Ventures, Flare Capital Partners, Longitude Capital, Polaris Partners	1-Feb-24
Ambience Healthcare	Series B	70.0	kleiner Perkins, OpenAI Startup Fund, Andreessen Horowitz, Optum Ventures	6-Feb-24
DUDE CHEM	Seed	5.9	Vorwerk Ventures, b2venture, Frontline, Borski Fund, Auxxo, Push Ventures	7-Feb-24
Ezra		21.0	Healthier Capital, FirstMark Capital, Allianz Life Ventures, Schwarzman family, Lord David Prior, Gaingels, Republic, Mana Ventures, Credo Ventures, Seedcamp, LDV Capital, Accomplice, Founders Future, Vlad Tenev, Anne Wojcicki, Esther Dyson	8-Feb-24
Zetta Genomics	Seed	1.4	We Venture Capital, XetaBase	8-Feb-24
Deep Look Medical	-	1.7	-	8-Feb-24
Neurona Therapeutics		120.0	Viking Global Investors, Cormorant Asset Management	8-Feb-24
Avation Medical		22.0	ShangBay Capital, Asahi Kasei, Angelini Ventures, JobsOhio Growth Capital Fund, Arbortum Ventures, Tonkawa, Medtronic, Avestria Ventures	9-Feb-24
Lilli	Series A	8.6	West Hill Capital	9-Feb-24
Tortus	Seed	4.2	Khosla Ventures, Entrepreneur First, Lord David Prior, Eric Jang	12-Feb-24
Headlight		18.0	Matrix, Epic Ventures, TJ Parker	13-Feb-24
Anatomy Financial	-	7.6	Lightspeed, Meridian Street Capital, Live Oak Ventures, Cambrian Ventures, Peterson Ventures	13-Feb-24
Optiscan	Grant	3.0	Department of Industry	13-Feb-24
Bio Age	-	170.0	Sofinnova Investments, Longitude Capital, RA Capital	13-Feb-24
Upwards	Series B	21.0	Alpha Edison, M13, Fika Ventures	15-Feb-24
Vessi Medical	Series A	16.5	ALIVE	15-Feb-24
Merit Medicine	Seed	2.0	LiveOak Ventures	15-Feb-24
Freenome		254.0	Roche	16-Feb-24
PatientFi	-	25.0	VC investor Questa Capital	19-Feb-24
WIVI Vision	Series A	3.6	Hearstlab, Avançsa, Caixabank DayOne, BBVA Spark, Banco Santander, Peak Thomas (Pedro Tortosa), VC Go GMBH	19-Feb-24
Siftwell Analytics	-	5.8	Trey Sutten, Chuck Hollowell, AlleyCorp, Arkin Digital Health, Tau Ventures, The Charlotte Fund	20-Feb-24
Reprieve Cardiovascular	Series A	42.0	Lightstone Ventures, Sante Ventures, Deerfield Management, Genesis Capital, Arboretum Ventures	20-Feb-24
9amHealth	Series A	9.5	Cigna Group Ventures, 7Wire Ventures, Define Ventures, Leaps	20-Feb-24
Medical Microinstruments	Series C	110.0	Fidelity Management & Research Company	21-Feb-24
HealthSnap	Series B	25.0	Sands Capital, Comcast Ventures, Acronym Venture Capital, Florida Opportunity Fund, Asclepius Growth	21-Feb-24

			Capital, Florida Funders, MacDonald Ventures, TGH Ventures	
BlackBird	Series A	17.0	Define Ventures, Frist Cressey Ventures, GreyMatter	21-Feb-24
Carewell	Series B	24.7	MBF Healthcare, Sageview Capital, Headline, Primetime Partners, Nextview, Florida Opportunity Fund, Anchor	22-Feb-24
Abridge	Series C	150.0	Lightspeed Venture Partners, Redpoint Ventures, Spark Capital, Union Square Ventures, Bessemer Venture Partners, Wittington Ventures, CVS Health Ventures	23-Feb-24
Frontier Medicines	Series C	80.0	Deerfield Management Company, Droia Ventures, Galapagos NV, DCVC Bio, MPM Capital, RA Capital Management	23-Feb-24
Samphire Neuroscience	Pre-seed	2.3	SOSV, FIRSTPICK, Afterwork, Seaside, Ayuh, CVX Ventures	23-Feb-24
Axle Health	Seed	4.2	Pear VC, TRAC VC	23-Feb-24
Tuned	Seed	3.2	Unum Group, Distributed Ventures	23-Feb-24
FAMS	Pre-seed	0.4	SMOK Ventures, Andrey Avsievich, Dmitry Smirnov, Ilya Lesun	26-Feb-24
Redi Health	Series B	14.0	Blue Heron Capital, North Coast Ventures, Mutual Capital Partners, Rev1 Ventures, M25, Refinery Ventures	28-Feb-24
Salvo	-	5.0	City Light Capital, Human Ventures, Torch Capital, Threshold Ventures, Felicis Ventures, Anmol Madan	29-Feb-24
Moxe Health	-	25.0	Trinity Capital	29-Feb-24
Healthee	Series A	32.0	Fin Capital, Glilot Capital Partners, Group11, TriNet	4-Mar-24

Source: Intro-act, FactSet

FDA CLINICAL TRIALS TRACKER

S. No	Symbol	Company	NCT ID	Completion Date	Title
1	AVIR	Atea Pharmaceuticals, Inc.	NCT05629962	3/1/2024	SUNRISE-3: Efficacy and Safety of Bemnifosbuvir in High-Risk Outpatients With COVID-19
2	BFRI	Biofrontera Inc.	NCT03573401	3/1/2024	Study to Evaluate the Safety and Efficacy of BF-200 ALA (AmeluzÂ®) and BF-RhodoLEDÂ® in the Treatment of Superficial Basal Cell Carcinoma (sBCC) With Photodynamic Therapy (PDT).
3	DCTH	Delcath Systems, Inc.	NCT05022901	3/1/2024	An Open-Label Expanded Access Study of the Melphalan/Hepatic Delivery System (HDS) in Patients with Hepatic Dominant Ocular Melanoma
4	ONPH	Oncology Pharma Inc.	NCT02194842	3/1/2024	Phase III Radium 223 mCRPC-PEACE III
5	OTLK	Outlook Therapeutics, Inc.	NCT05112861	3/1/2024	A 3-month Study to Compare the Safety of ONS-5010 in Vials Versus Pre-Filled Syringe in Subjects with Visual Impairment Due to Retinal Disorders
6	EIGR	Eiger BioPharmaceuticals, Inc.	NCT04727424	2/1/2024	Repurposed Approved and Under Development Therapies for Patients with Early-Onset COVID-19 and Mild Symptoms
7	ARQT	Arcutis Biotherapeutics, Inc.	NCT04286607	26-01-2024	Open-Label Extension Trial of PDE4 Inhibition with Roflumilast for the Management of Plaque Psoriasis
8	NVAX	Novavax, Inc.	NCT05875701	12-01-2024	Phase 3 Study of Novavax Vaccine(s) as Booster Dose After mRNA Vaccines
9	CHHE	China Health Industries Holdings, Inc.	NCT05159947	10-01-2024	SPT-07A Injection in Patients with Acute Ischemic Stroke (AIS): A Phase III Clinical Trial

10	ALVR	AlloVir, Inc.	NCT05179057	01-01-2024	Posoleucel (ALVR105) for the Treatment of Adenovirus Infection in Pediatric and Adult Participants Receiving Standard of Care Following Allogeneic Hematopoietic Cell Transplantation
11	CING	Cingulate Inc.	NCT05286762	01-01-2024	Phase 3 Efficacy and Safety Fixed-Dose Study in Pediatrics (6-17) With ADHD Using CTx-1301
12	CING	Cingulate Inc.	NCT05924594	01-01-2024	Phase 3 Efficacy and Safety Laboratory Classroom Study in Pediatrics (6-12) With ADHD Using CTx-1301
13	MRNS	Marinus Pharmaceuticals, Inc.	NCT05323734	01-01-2024	Adjunctive GNX Treatment Compared with Placebo in Children and Adults With TSC-related Epilepsy
14	AVTX	Avalo Therapeutics, Inc.	NCT05462587	31-12-2023	A Study to Evaluate Efficacy and Safety of AVTX-803 in Patients with Leukocyte Adhesion Deficiency Type II
15	AVTX	Avalo Therapeutics, Inc.	NCT05754450	31-12-2023	An Extension Study Assessing the Safety and Efficacy of AVTX-803 in Subjects with Leukocyte Adhesion Deficiency Type II
16	FGEN	FibroGen, Inc.	NCT03941093	31-12-2023	Evaluation of Efficacy and Safety of Neoadjuvant Treatment with Pamrevlumab in Combination With Chemotherapy (Either Gemcitabine Plus Nab-paclitaxel or FOLFIRINOX) in Participants With Locally Advanced Pancreatic Cancer
17	PHASQ	PhaseBio Pharmaceuticals, Inc.	NCT04286438	31-12-2023	Bentracimab (PB2452) in Ticagrelor-treated Patients with Uncontrolled Major or Life-Threatening Bleeding or Requiring Urgent Surgery or Invasive Procedure
18	SYRS	Syros Pharmaceuticals, Inc.	NCT04797780	31-12-2023	Tamibarotene Plus Azacitidine in Participants with Newly Diagnosed RARA-positive Higher-Risk Myelodysplastic Syndrome

19	PRFX	PainReform Ltd.	NCT05773846	30-12-2023	A Study to Evaluate Analgesic Efficacy and Safety of PRF-110 for Post-surgical Pain
20	RVPH	Reviva Pharmaceuticals Holdings, Inc.	NCT05184335	20-12-2023	Safety and Efficacy of Brilaroxazine (RP5063) in Schizophrenia
21	ANVS	Annovis Bio, Inc.	NCT05357989	04-12-2023	A Double-blind Study to Investigate Efficacy and Safety of Buntanetap Compared with Placebo in Participants With Early PD
22	ANGO	AngioDynamics, Inc.	NCT03899636	01-12-2023	A Pivotal Study of Safety and Effectiveness of NanoKnife IRE for Stage 3 Pancreatic Cancer
23	APLT	Applied Therapeutics, Inc.	NCT04083339	01-12-2023	Safety and Efficacy of AT-001 in Patients with Diabetic Cardiomyopathy
24	BFRI	Biofrontera Inc.	NCT03573401	01-12-2023	Study to Evaluate the Safety and Efficacy of BF-200 ALA (AmeluzÂ®) and BF-RhodoLEDÂ® in the Treatment of Superficial Basal Cell Carcinoma (sBCC) With Photodynamic Therapy (PDT).
25	CYTH	Cyclo Therapeutics, Inc.	NCT04860960	01-12-2023	Phase 3 Study to Evaluate Intravenous Trappsol(R) Cyclo(TM) in Pediatric and Adult Patients With Niemann-Pick Disease Type C1
26	EQ	Equillium, Inc.	NCT05263999	01-12-2023	A Study of Itolizumab in Combination with Corticosteroids for the First-Line Treatment of Acute Graft Versus Host Disease (EQUATOR)
27	RDHL	RedHill Biopharma Ltd.	NCT04616924	01-12-2023	RHB-204 for the Treatment of Pulmonary Mycobacterium Avium Complex Disease
28	VNDA	Vanda Pharmaceuticals Inc.	NCT04028492	01-12-2023	Evaluating the Safety and Efficacy of Tradipitant vs. Placebo in Idiopathic and Diabetic Gastroparesis

Source: Intro-act, FDA Tracker. Note: The tracker displays Phase 3 trials with primary completion dates within the last 3 months for companies with a market cap less than $1 billion.

For More Information Visit - *Trial Tracker – FDA Tracker*

EU CLINICAL TRIALS TRACKER – TOP 25 SPONSORS

S. No	Sponsor Name	Trials on EUCTR	Trials due to report results	% Reported	Trials with inconsistent data
1	Novartis	1544	973	99.90%	332
2	GlaxoSmithKline	1197	725	100.00%	369
3	Pfizer	908	571	99.60%	229
4	Merck Sharp & Dohme (MSD)	867	505	100.00%	208
5	AstraZeneca	748	415	97.80%	133
6	Roche	806	412	98.80%	187
7	Sanofi S.A.	762	392	100.00%	289
8	Johnson & Johnson	589	332	99.70%	139
9	Eli Lilly	490	319	99.40%	77
10	Boehringer Ingelheim	400	311	100.00%	51
11	Medical University of Vienna	452	280	93.60%	35
12	Bayer	345	248	100.00%	58
13	Bristol-Myers Squibb	411	218	100.00%	105
14	Amgen Inc	308	200	100.00%	64

15	KU Leuven	274	193	95.30%	7
16	Novo Nordisk	283	182	100.00%	51
17	Gilead Sciences Inc	269	171	100.00%	64
18	Charité-Universitätsmedizin Berlin	213	162	100.00%	8
19	Takeda	260	152	100.00%	64
20	Rigs Hospitalet	268	151	52.30%	24
21	AbbVie	271	133	99.20%	64
22	Aarhus University	224	128	67.20%	16
23	UCB	238	123	100.00%	91
24	Merck KGaA	179	123	100.00%	34
25	Servier Laboratories	154	116	100.00%	22

Source: Intro-act, EU Trials Tracker. Note: The companies are ranked on the basis of the highest number of trials due to report results.

For More Information Visit - *EU Trials Tracker*

NOVEL DRUG APPROVALS BY FDA – LAST SIX MONTHS

S. No	Drug Name	Active Ingredient	Approval Date	FDA-approved use on approval date
1	Letybo	letibotulinumtoxinA-wlbg	2/29/2024	To temporarily improve the appearance of moderate-to-severe glabellar lines
2	Exblifep	cefepime, enmetazobactam	2/22/2024	To treat complicated urinary tract infections
3	Zelsuvmi	berdazimer	1/5/2024	To treat molluscum contagiosum
4	Wainua	eplontersen	12/21/2023	To treat polyneuropathy of hereditary transthyretin-mediated amyloidosis
5	Filsuvez	birch triterpenes	12/18/2023	To treat wounds associated with dystrophic and junctional epidermolysis bullosa
6	Fabhalta	iptacopan	12/5/2023	To treat paroxysmal nocturnal hemoglobinuria
7	Ogsiveo	nirogacestat	11/27/2023	To treat adults with progressing desmoid tumors who require systemic treatment
8	Truqap	capivasertib	11/16/2023	To treat breast cancer that meets certain disease criteria
9	Ryzneuta	efbemalenograstim alfa-vuxw	11/16/2023	To treat neutropenia
10	Augtyro	repotrectinib	11/15/2023	To treat ROS1-positive non-small cell lung cancer
11	Defencath	taurolidine, heparin	11/15/2023	To reduce the incidence of catheter-related bloodstream infections in adults with kidney failure receiving chronic hemodialysis through a central venous catheter
12	Fruzaqla	fruquintinib	11/8/2023	To treat refractory, metastatic colorectal cancer
13	Loqtorzi	toripalimab-tpzi	10/27/2023	To treat recurrent or metastatic nasopharyngeal carcinoma when used together with or following other therapies
14	Omvoh	mirikizumab-mrkz	10/26/2023	To treat ulcerative colitis
15	Agamree	vamorolone	10/26/2023	To treat Duchenne muscular dystrophy
16	Bimzelx	bimekizumab	10/17/2023	To treat moderate to severe plaque psoriasis in adults who are candidates for systemic therapy or phototherapy

17	Zilbrysq	zilucoplan	10/17/2023	To treat generalized myasthenia gravis in adults who are anti-acetylcholine receptor (AChR) antibody positive
18	Velsipity	etrasimod	10/12/2023	To treat moderately to severely active ulcerative colitis in adults
19	Rivfloza	nedosiran	9/29/2023	To lower urinary oxalate levels in patients 9 years and older with primary hyperoxaluria type 1 and relatively preserved kidney function
20	Pombiliti	cipaglucosidase alfa-atga	9/28/2023	To treat late-onset Pompe disease
21	Exxua	gepirone	9/22/2023	To treat major depressive disorder
22	Ojjaara	momelotinib	9/15/2023	To treat intermediate or high-risk myelofibrosis in adults with anemia
23	Aphexda	motixafortide	9/8/2023	To use with filgrastim (G-CSF) to mobilize hematopoietic stem cells to the peripheral blood for collection and subsequent autologous transplantation in patients with multiple myeloma

Source: Intro-act, FDA

*Note *The listed "FDA-approved use" on this website is for presentation purposes only. To see the FDA-approved conditions of use [e.g., indication(s), population(s), dosing regimen(s)] for each of these products, see the most recent A-approved Prescribing Information (click on the Drug Name).*

MEDICAL DEVICES APPROVALS BY FDA – LAST SIX MONTHS

S. No	Device Name	Category	Date
1	Edwards EVOQUE Tricuspid Valve Replacement System – P230013	Tricuspid Valve Replacement System	02/01/2024
2	RHA 3 dermal filler - P170002/S030	Dermal Filler	10/27/2023
3	OncomineTM Dx Target Test - P160045/S025	Lab Test	09/29/2023
4	CRCdx(R) RAS Mutation Detection Kit - P220005	Lab Test	09/29/2023
5	LimFlowTM System	Stent	09/11/2023

Source: Intro-act, FDA

HEALTHTECH INSTITUTIONAL INVESTOR LEAGUE

Chart 20: Healthtech Institutional Owners League (Current)

Rank	Institution Name	Invested in Healthtech ($)	Q/Q Change ($)	#Healthtech Positions	% of Instit Ownership
1	The Vanguard Group, Inc.	1,067,856,027,919	(50,214,918,300)	439	11.1%
2	BlackRock Fund Advisors	609,245,873,281	(27,722,313,849)	428	6.3%
3	SSgA Funds Management, Inc.	482,273,978,035	(14,344,873,845)	438	5.0%
4	Fidelity Management & Research Co. LLC	259,592,221,001	(14,944,779,382)	332	2.7%
5	Geode Capital Management	246,566,374,993	(8,727,588,377)	452	2.6%
6	Norges Bank Inv Mgt	187,031,099,228	186,029,759,925	298	1.9%
7	T. Rowe Price Associates, Inc. (Investment Management)	186,716,966,735	(18,018,725,983)	233	1.9%
8	Wellington Management Co	164,487,241,493	(2,948,171,557)	226	1.7%
9	Berkshire Hathaway, Inc. (Investment Management)	158,453,041,832	(22,764,727,382)	2	1.6%
10	Capital Research & Mgt Co. (World Investors)	148,614,106,242	(9,612,450,488)	107	1.5%
11	Northern Trust Investments	113,684,047,333	(6,872,658,147)	430	1.2%
12	JPMorgan Investment Management, Inc.	109,965,630,081	(9,463,583,110)	313	1.1%
13	Capital Research & Mgt Co. (Global Investors)	103,378,665,179	(1,315,888,437)	69	1.1%
14	BlackRock Investment Management (UK) Ltd.	102,571,829,030	3,308,912,984	357	1.1%
15	BlackRock Advisors (UK) Ltd.	99,919,542,111	(2,963,790,038)	367	1.0%
16	Capital Research & Mgt Co. (International Investors)	89,221,923,719	(666,316,351)	62	0.9%
17	Charles Schwab Investment Management, Inc.	86,142,041,900	(1,265,175,108)	392	0.9%
18	Morgan Stanley Smith Barney LLC (Investment Management)	70,270,782,415	(3,414,579,422)	300	0.7%
19	Legal & General Investment Management Ltd.	66,202,423,001	(1,714,250,398)	360	0.7%
20	Massachusetts Financial Services Co.	66,026,760,975	(4,932,147,894)	109	0.7%
21	AllianceBernstein LP	63,546,099,344	(5,314,275,771)	325	0.7%
22	Goldman Sachs Asset Management LP	61,127,642,699	(589,512,096)	357	0.6%
23	Dimensional Fund Advisors LP	54,409,739,767	(2,511,740,109)	359	0.6%
24	Parametric Portfolio Associates	50,723,088,266	(3,440,001,007)	329	0.5%
25	Columbia Management Investment Advisers LLC	49,754,046,337	(3,879,394,868)	267	0.5%
	OTHERS	**4,932,759,318,350**	**(227,571,019,694)**	**203,290**	**51.2%**
	TOTAL	**9,630,540,511,266**	**(255,874,208,704)**	**210,641**	**100.0%**

Source: Intro-act, 13F Filings

Chart 21: Top 25 Healthtech Buyers (Q/Q)

Rank	Institution Name	Invested in Healthtech ($)	Q/Q Change ($)	#Healthtech Positions	% of Instit Ownership
1	Norges Bank Investment Management	187,031,099,228	186,029,759,925	298	1.9%
2	LGIM Singapore Pte Ltd.	17,045,122,057	17,045,122,057	87	0.2%
3	Morgan Stanley & Co. LLC	33,130,313,132	6,178,872,721	298	0.3%
4	Dodge & Cox	36,753,098,682	5,000,608,360	46	0.4%
5	JPMorgan Chase Bank, NA (Investment Management)	21,281,183,832	4,485,347,398	249	0.2%
6	DWS Investments (UK) Ltd.	25,467,715,543	4,101,849,820	362	0.3%
7	UBS Asset Management Switzerland AG	37,538,270,651	3,402,642,719	318	0.4%
8	BlackRock Investment Management (UK) Ltd.	102,571,829,030	3,308,912,984	357	1.1%
9	TCI Fund Management Ltd.	4,972,202,140	3,306,159,431	3	0.1%
10	The Bank of Nova Scotia (Private Banking)	7,792,337,273	3,189,626,060	94	0.1%
11	Olayan Europe Ltd.	2,886,320,032	2,886,320,032	16	0.0%
12	BMO Asset Management Corp.	16,820,997,332	2,647,106,038	174	0.2%
13	Jane Street Capital LLC	7,459,891,263	2,541,000,521	269	0.1%
14	Degroof Petercam Asset Management SA	3,256,380,537	2,354,592,734	158	0.0%
15	PNC Bank, NA (Investment Management)	42,047,819,713	2,339,514,096	226	0.4%
16	Barclays Bank Plc (Private Banking)	27,125,307,288	2,241,296,298	268	0.3%
17	RBC Global Asset Management, Inc.	17,315,197,030	2,237,869,575	255	0.2%
18	Aegon Asset Management UK PLC	2,209,321,388	1,780,632,049	27	0.0%
19	Zurcher Kantonalbank (Investment Management)	13,651,136,083	1,603,828,778	344	0.1%
20	Groupama Asset Management SA	1,458,874,184	1,457,869,035	71	0.0%
21	Epoch Investment Partners, Inc.	5,518,555,099	1,430,281,481	67	0.1%
22	Sapient Capital LLC	1,415,737,816	1,415,737,816	36	0.0%
23	APG Asset Management US, Inc.	1,278,076,644	1,278,076,644	70	0.0%
24	Morningstar Investment Services LLC	2,365,237,820	1,169,470,460	40	0.0%
25	Qube Research & Technologies Ltd.	6,794,497,108	1,163,378,150	202	0.1%

Source: Intro-act, 13F Filings

Chart 22: Top 25 Healthtech Sellers (Q/Q)

Rank	Institution Name	Invested in Healthtech ($)	Q/Q Change ($)	#Healthtech Positions	% of Instit Ownership
1	The Vanguard Group, Inc.	1,067,856,027,919	(50,214,918,300)	439	11.1%
2	BlackRock Fund Advisors	609,245,873,281	(27,722,313,849)	428	6.3%
3	Berkshire Hathaway, Inc. (Investment Management)	158,453,041,832	(22,764,727,382)	2	1.6%
4	T. Rowe Price Associates, Inc. (Investment Management)	186,716,966,735	(18,018,725,983)	233	1.9%
5	Fidelity Management & Research Co. LLC	259,592,221,001	(14,944,779,382)	332	2.7%
6	SSgA Funds Management, Inc.	482,273,978,035	(14,344,873,845)	438	5.0%
7	Union Investment Privatfonds GmbH	10,914,643,183	(13,216,056,525)	18	0.1%
8	Capital Research & Management Co. (World Investors)	148,614,106,242	(9,612,450,488)	107	1.5%
9	JPMorgan Investment Management, Inc.	109,965,630,081	(9,463,583,110)	313	1.1%
10	Geode Capital Management LLC	246,566,374,993	(8,727,588,377)	452	2.6%
11	Northern Trust Investments, Inc.(Investment Management)	113,684,047,333	(6,872,658,147)	430	1.2%
12	Northern Trust Global Investments Ltd.	11,499,597,790	(5,993,166,816)	341	0.1%
13	AllianceBernstein LP	63,546,099,344	(5,314,275,771)	325	0.7%
14	Massachusetts Financial Services Co.	66,026,760,975	(4,932,147,894)	109	0.7%
15	JPMorgan Securities LLC (Investment Management)	11,911,459,917	(4,563,478,128)	280	0.1%
16	Mellon Investments Corp.	44,591,910,766	(4,549,614,982)	375	0.5%
17	Arrowstreet Capital LP	20,590,370,656	(4,459,978,128)	81	0.2%
18	T. Rowe Price Investment Management, Inc.	34,211,257,243	(4,353,531,783)	79	0.4%
19	Baillie Gifford & Co.	20,315,279,375	(4,255,888,783)	76	0.2%
20	Columbia Management Investment Advisers LLC	49,754,046,337	(3,879,394,868)	267	0.5%
21	Bank of America, NA (Private Banking)	25,081,627,300	(3,463,984,439)	301	0.3%
22	Parametric Portfolio Associates LLC	50,723,088,266	(3,440,001,007)	329	0.5%
23	Morgan Stanley Smith Barney LLC (Investment Management)	70,270,782,415	(3,414,579,422)	300	0.7%
24	BlackRock Investment Management LLC	37,006,839,892	(3,400,472,852)	340	0.4%
25	Janus Henderson Investors US LLC	39,791,139,098	(3,332,451,186)	229	0.4%

Source: Intro-act, 13F Filings

ETF SPOTLIGHT

ARK Genomic Revolution ETF (ARKG)

Closing Price ($)	CUSIP	Expense Ratio	Inception
31.51	00214Q302	0.75	10/31/2014

AUM ($ million)	Shares Outstanding (#)	Fund Flows (1M, $)	Fund Flows (YTD, $)
1,866,471,304.72	59350000	(50,396,650.00)	(256,661,850.00)

Fund Description

ARKG is an actively managed Exchange Traded Fund (ETF) with the primary objective of achieving long-term capital growth. The fund invests, under normal circumstances, at least 80% of its assets in both domestic and foreign equity securities. These securities belong to companies spanning various sectors such as health care, information technology, materials, energy, and consumer discretionary, aligning with the fund's investment theme of the genomics revolution. The companies within ARKG focus on and are poised to benefit significantly from incorporating genomics-related technological and scientific advancements into their business, with a concentration on issuers in the healthcare sector, including those in the biotechnology industry.

ETF Returns Annualized (As of 01/31/2024)

1 Year	3 Year	5 Year	Since Inception
-15.46%	-34.50%	1.12%	4.78%

ETF Returns Cumulative (As of 01/31/2024)

1 Month	3 Month	YTD	Since Inception
-13.32%	23.54%	-13.32%	53.76%

Top 10 Holdings (updated as of 03/04/24)

Holdings	% Allocation	Market Value
CRISPR THERAPEUTICS AG	8.16%	$152,430,192.50
RECURSION PHARMACEUTICALS-A	6.13%	$114,607,214.19
TWIST BIOSCIENCE CORP	5.93%	$110,766,809.12
EXACT SCIENCES CORP	4.89%	$91,432,331.76
BEAM THERAPEUTICS INC	4.81%	$89,844,020.64
INTELLIA THERAPEUTICS INC	4.13%	$77,193,673.64
CAREDX INC	3.95%	$73,898,202.56
SCHRODINGER INC	3.79%	$70,835,290.82
ARCTURUS THERAPEUTICS HOLDIN	3.77%	$70,446,375.44
GINKGO BIOWORKS HOLDINGS INC	3.75%	$70,070,259.99

Source: Intro-act, FactSet

For more information on ARKF visit: https://ark-funds.com/funds/arkg/

iShares Global Healthcare ETF (IXJ)

Closing Price ($)	CUSIP	Expense Ratio	Inception
90.96	464287325	0.42	11/13/2001

AUM ($ million)	Shares Outstanding (#)	Fund Flows (1M, $)	Fund Flows (YTD, $)
4,111,811,316.78	44600000	(45,205,220.00)	(172,674,795.00))

Fund Description

The objective of this investment is to replicate the performance of the S&P Global 1200 Health Care Index™. Typically, the fund allocates a minimum of 80% of its assets to the component securities of its underlying index and investments with economic traits closely resembling those of the said securities. Additionally, it may allocate up to 20% of its assets to specific futures, options, and swap contracts, along with cash and cash equivalents. The index evaluates the performance of companies within the healthcare sector deemed significant to global markets by the index provider.

ETF Returns Annualized (As of 01/31/2024)

1 Year	3 Year	5 Year	Since Inception
6.76%	6.30%	9.82%	7.57%

ETF Returns Cumulative (As of 01/31/2024)

YTD	1 Month	3 Months	Since Inception
2.42%	2.42%	12.69%	405.62%

Top 10 Holdings (updated as of 03/01/24)

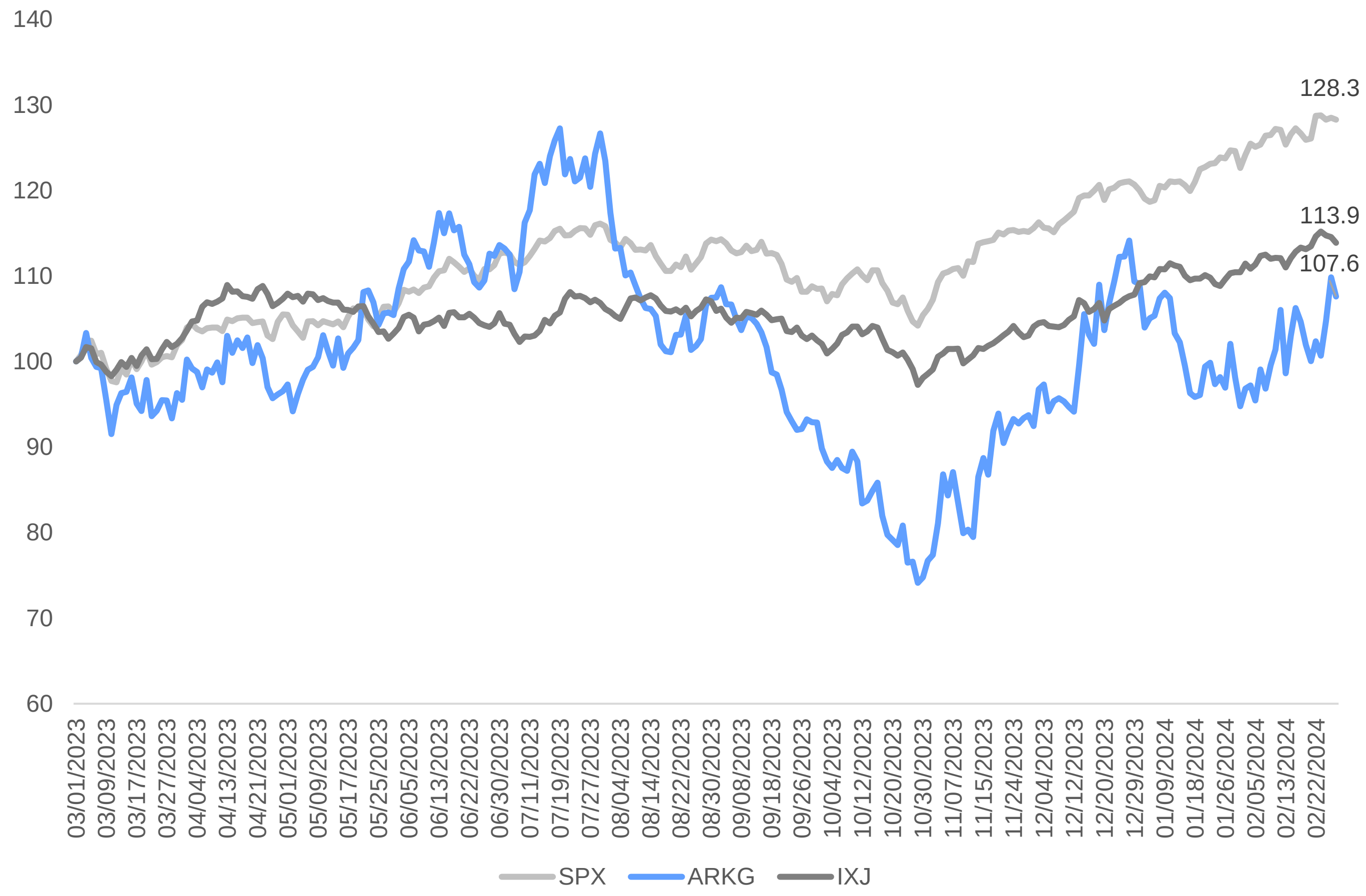
Holdings	% Allocation	Market Value
ELI LILLY	8.28%	33,93,34,493.80
UNITEDHEALTH GROUP INC	6.02%	24,66,53,117.21
NOVO NORDISK CLASS B	5.30%	21,70,90,695.61
JOHNSON & JOHNSON	4.91%	20,11,99,674.48
MERCK & CO INC	4.34%	17,76,86,994.96
ABBVIE INC	4.21%	17,23,73,523.15
THERMO FISHER SCIENTIFIC INC	2.95%	12,10,47,742.56
NOVARTIS AG	2.82%	11,55,81,570.69
ABBOTT LABORATORIES	2.74%	11,22,57,816.30
ASTRAZENECA PLC	2.62%	10,74,54,756.98

Source: Intro-act, FactSet

For more information visit: https://www.ishares.com/us/products/239744/ishares-global-healthcare-etf

ETF COMPARISION

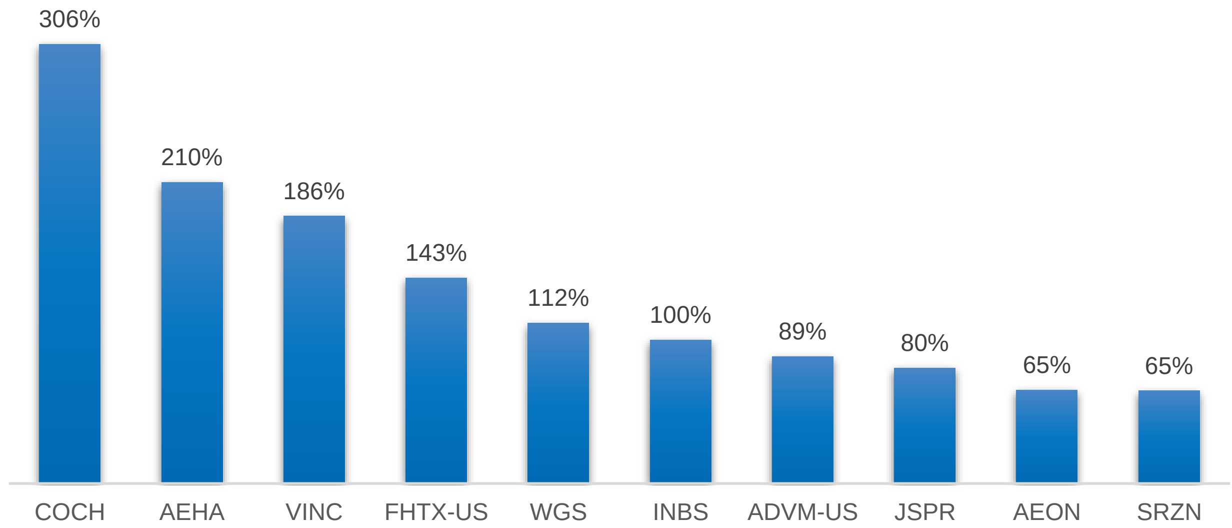
Chart 23: ARKG, IXJ Vs SPX



Source: Intro-act, FactSet. Data as of February 29, 2024.

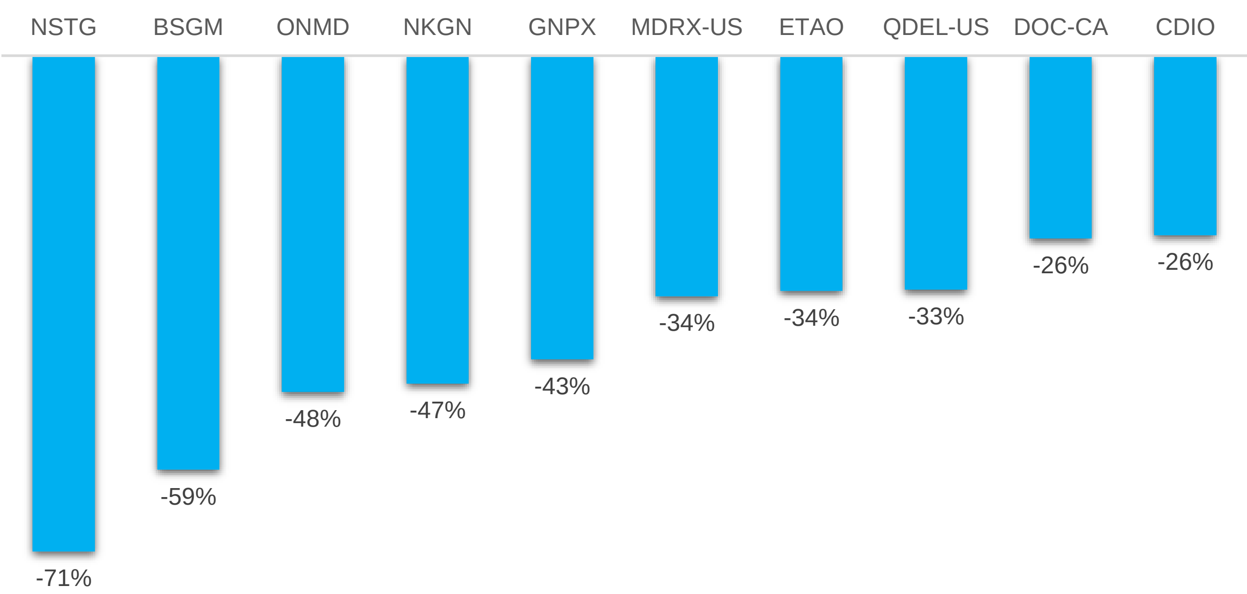
GAINERS AND LOSERS – HEALTHTECH STOCKS

Chart 24: Top 10 M/M Healthtech Gainers (Feb 2024)



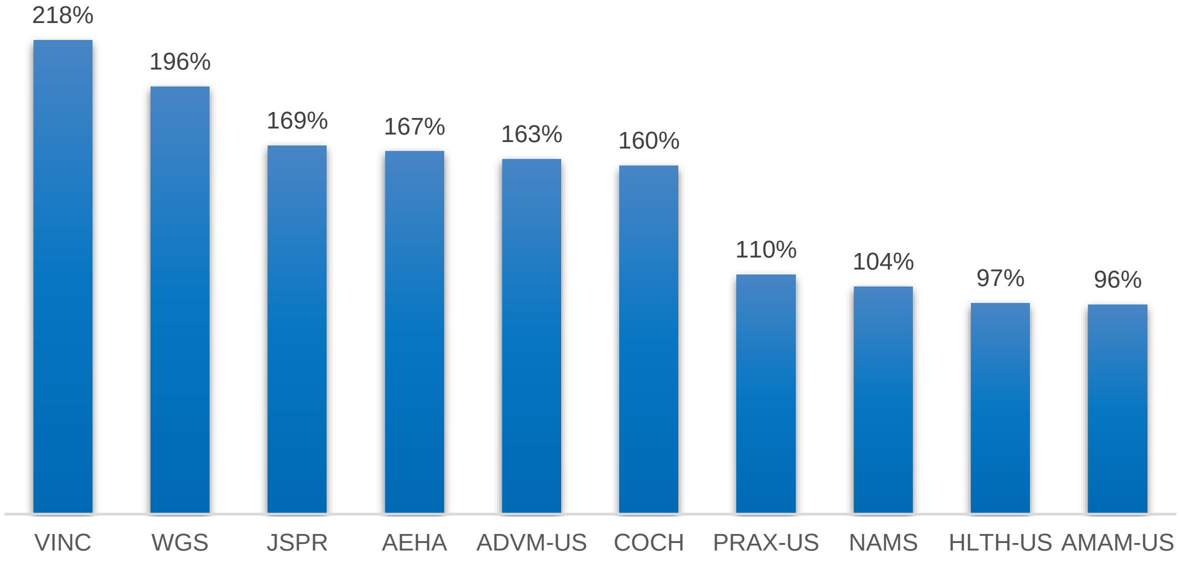
Source: Intro-act, FactSet. Data as of February 29, 2024.

Chart 25: Top 10 M/M Healthtech Losers (Feb 2024)



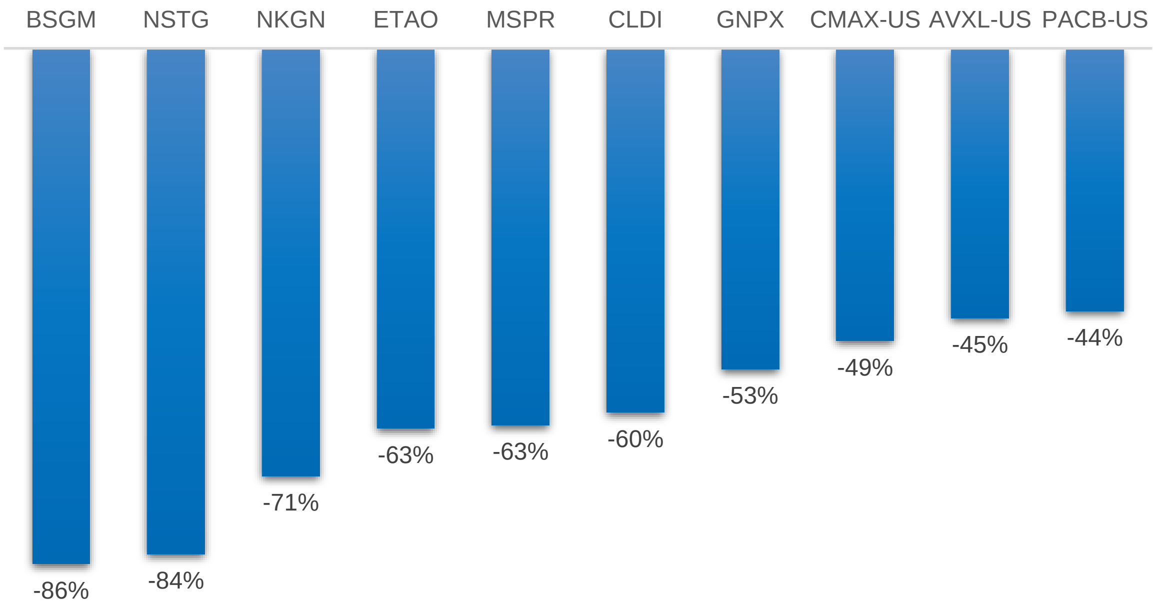
Source: Intro-act, FactSet. Data as of February 29, 2024.

Chart 26: Top 10 YTD Healthtech Gainers



Source: Intro-act, FactSet. YTD Data as of February 29, 2024.

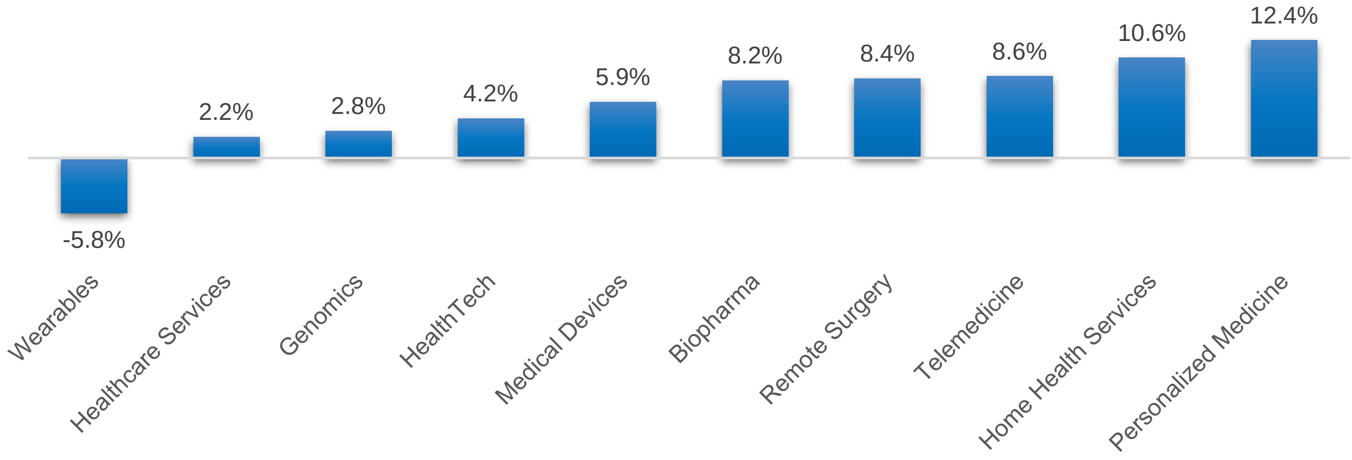
Chart 27: Top 10 YTD Healthtech Losers



Source: Intro-act, FactSet. YTD Data as of February 29, 2024.

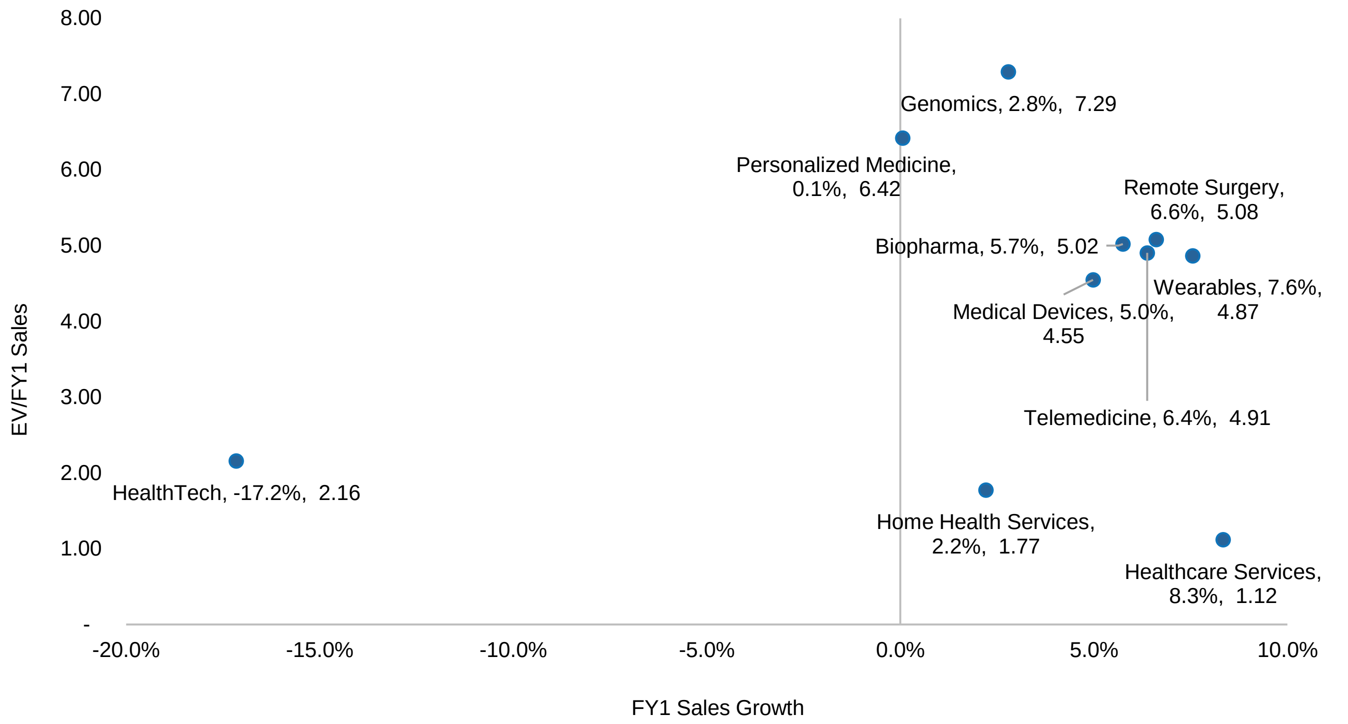
SEGMENT RETURN AND VALUATION

Chart 28: YTD Stock Price Returns by Segment



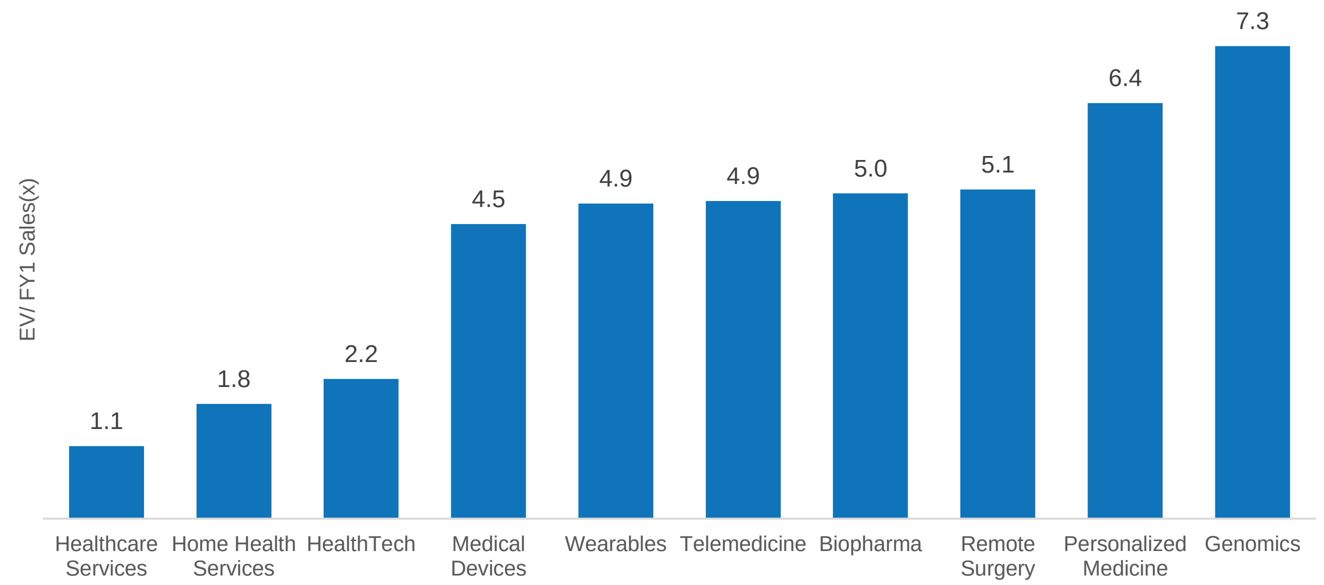
Source: Intro-act, FactSet. YTD Data as of February 29, 2024.

Chart 29: Healthtech Industry Growth and Valuation by Segment



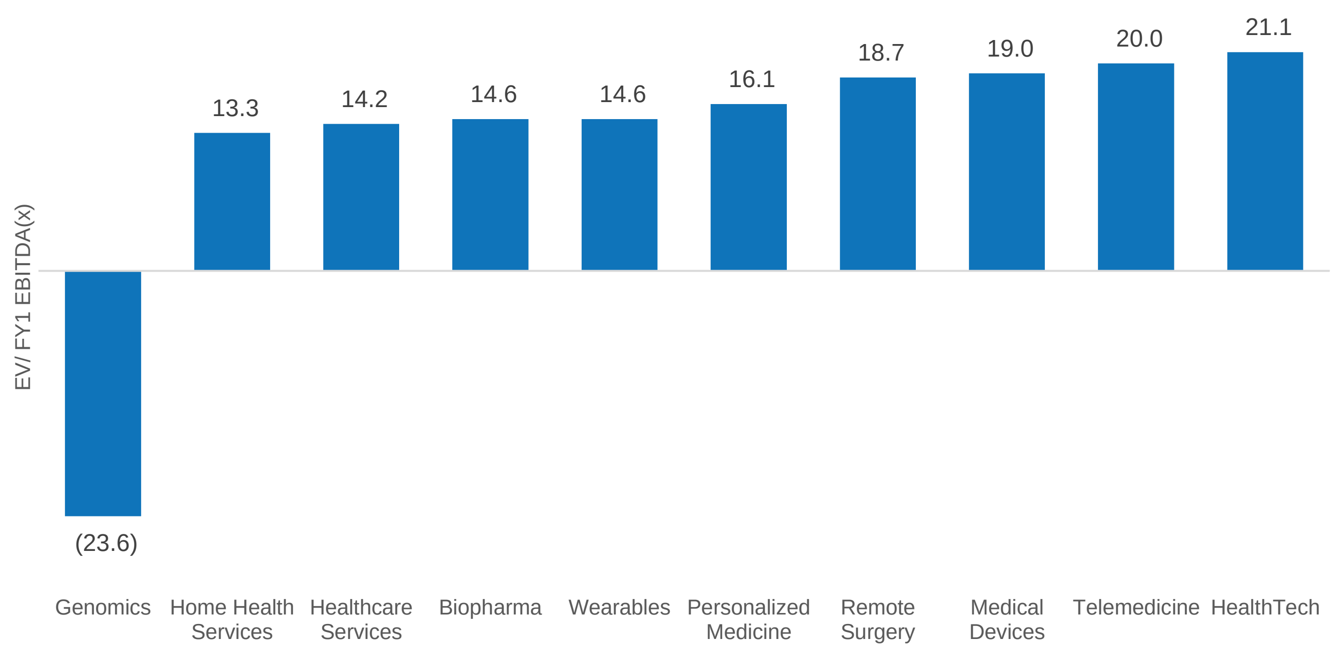
Source: Intro-act, FactSet. Data as of February 29, 2024.

Chart 30: EV/ FY1 Sales Multiple by Segment



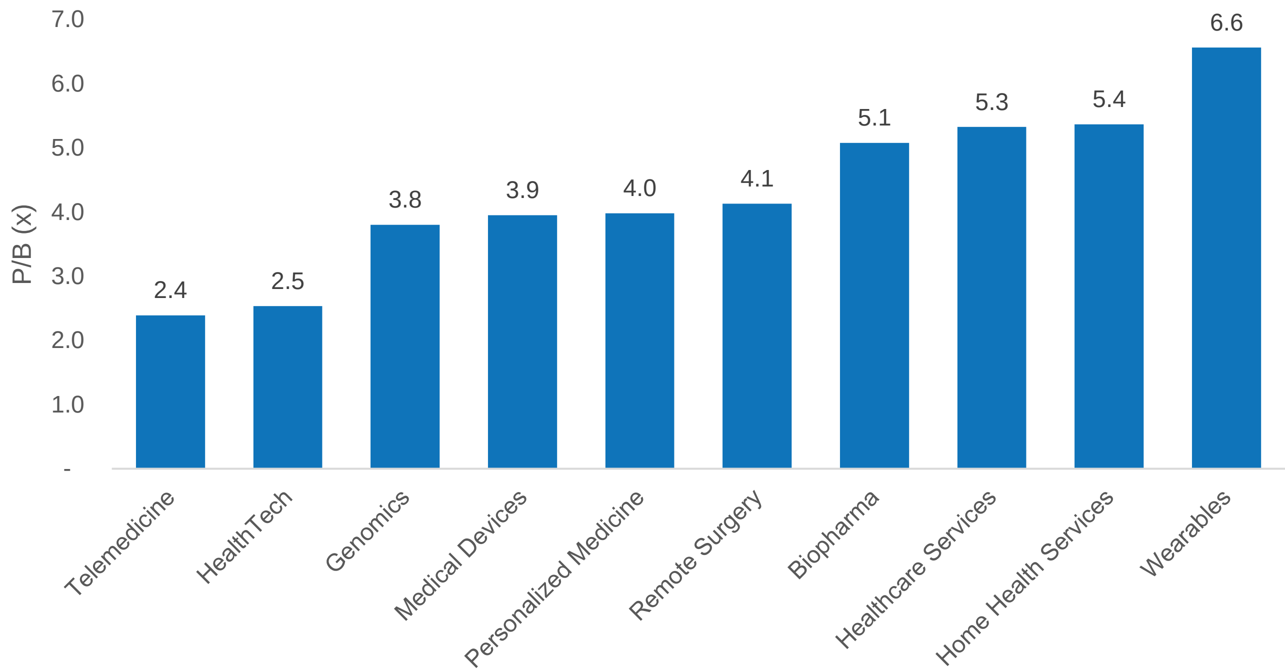
Source: Intro-act, FactSet. Data as of February 29, 2024.

Chart 31: EV/ FY1 EBITDA Multiple by Segment



Source: Intro-act, FactSet. Data as of February 29, 2024.

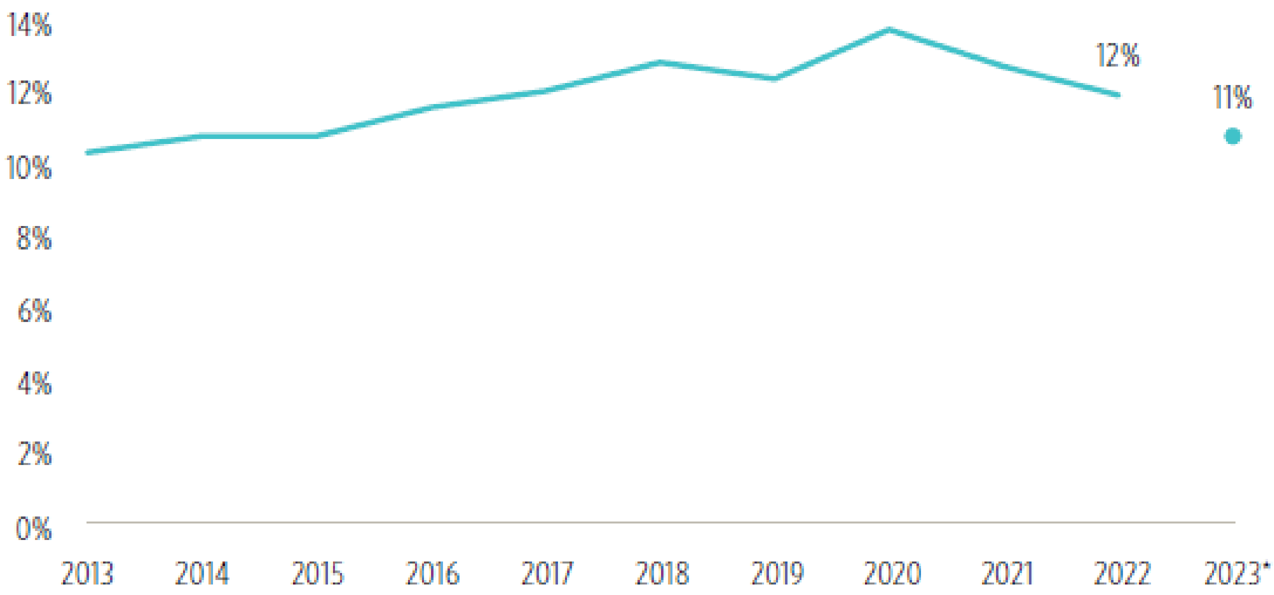
Chart 32: Price-to-Book Multiple by Segment



Source: Intro-act, FactSet. Data as of February 29, 2024.

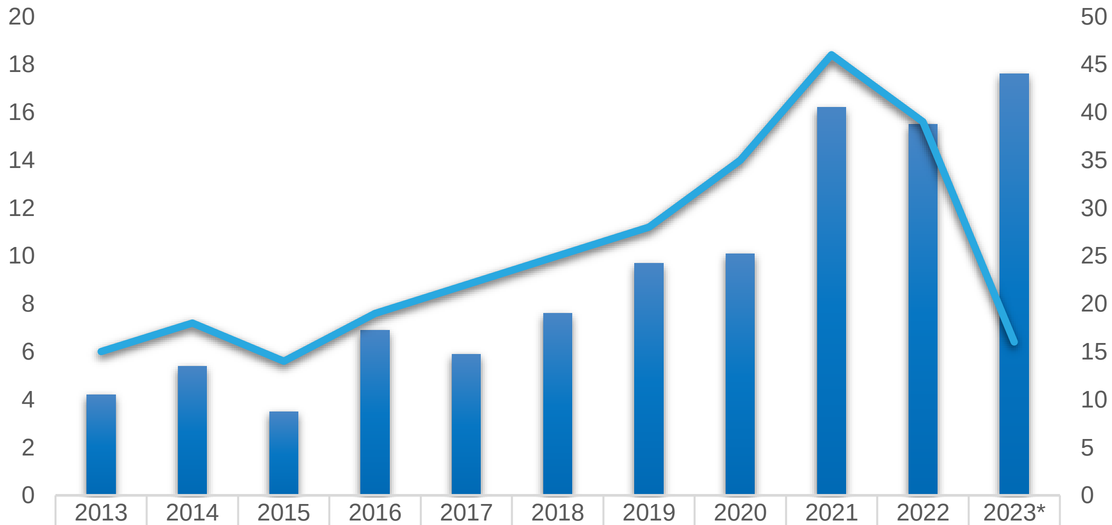
HEALTHTECH CAPITAL MARKET TRENDS

Chart 33: Healthcare PE Deals as a Share of All PE Deal Count



*Source: Intro-act, PitchBook, *As of September 30, 2023.*

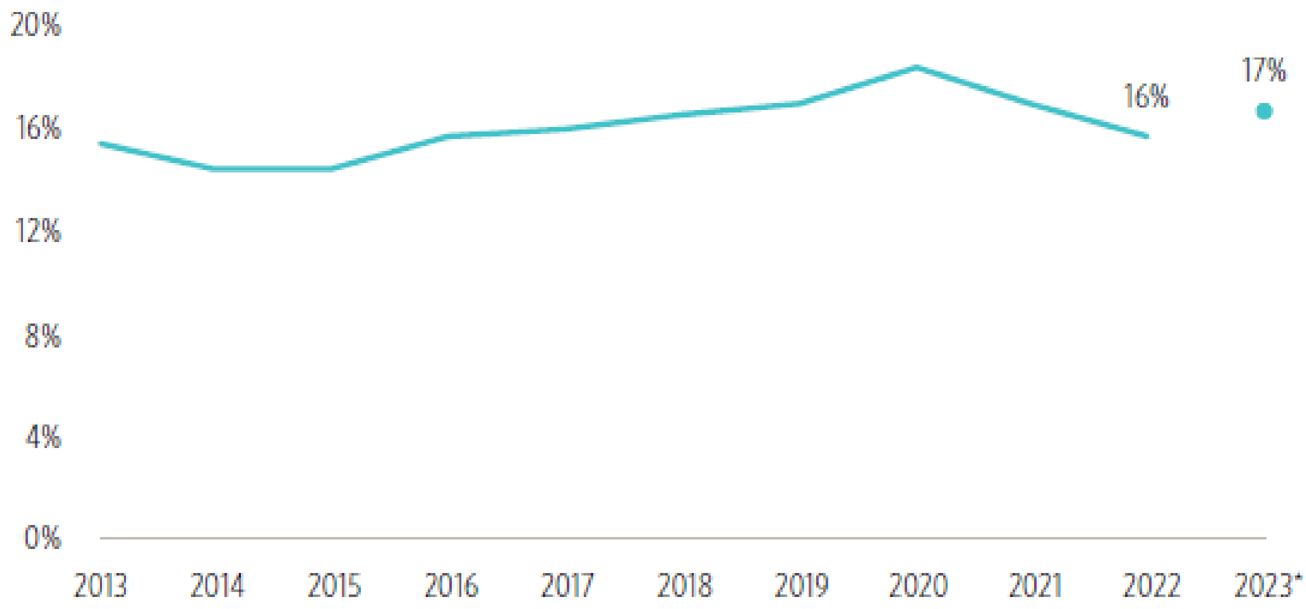
Chart 34: Healthcare Specialist PE Fundraising Activity



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023*
Capital Raised $B	4.2	5.4	3.5	6.9	5.9	7.6	9.7	10.1	16.2	15.5	17.6
Fund Count	15	18	14	19	22	25	28	35	46	39	16

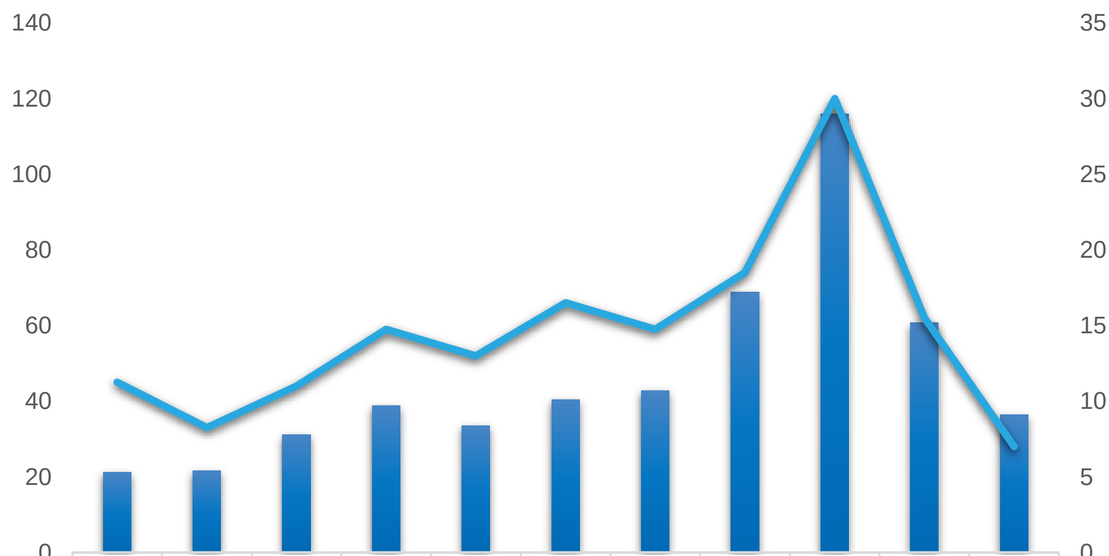
*Source: Intro-act, PitchBook, *As of September 30, 2023.*

Chart 35: Healthcare VC Deals as a Share of All VC Deal Count



*Source: Intro-act, PitchBook, *As of September 30, 2023.*

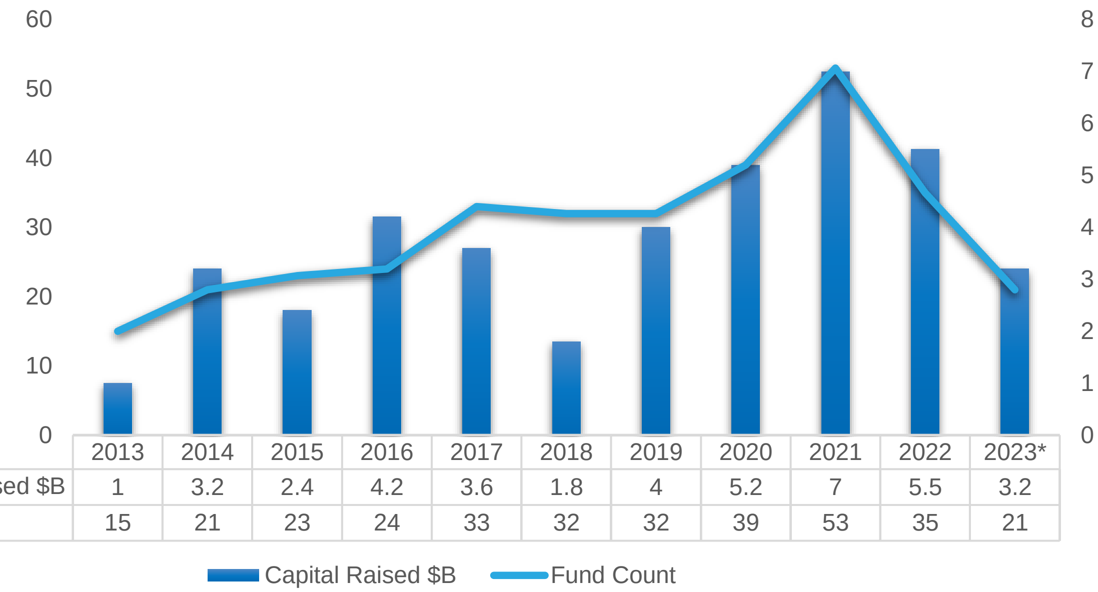
Chart 36: Life Sciences Specialist VC Fundraising Activity



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023*
Capital Raised $B	5.3	5.4	7.8	9.7	8.4	10.1	10.7	17.2	29	15.2	9.1
Fund Count	45	33	44	59	52	66	59	74	120	62	28

*Source: Intro-act, PitchBook, *As of September 30, 2023.*

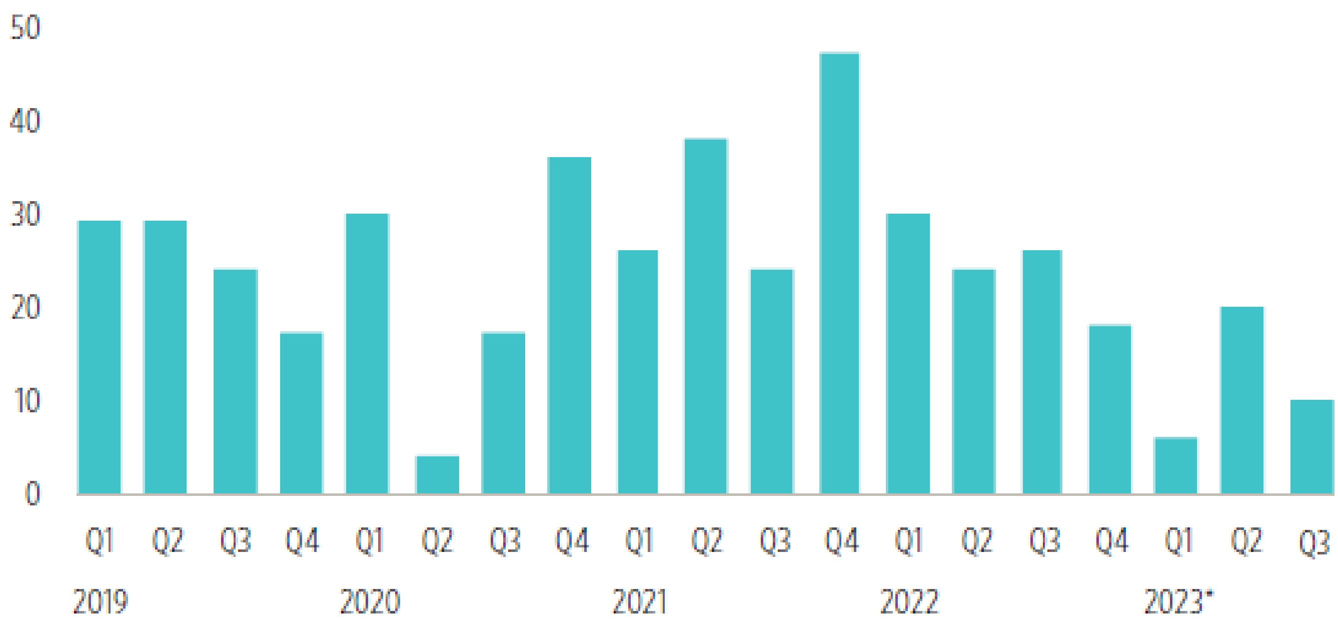
Chart 37: Other Healthcare Specialist VC Fundraising Activity



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023*
Capital Raised $B	1	3.2	2.4	4.2	3.6	1.8	4	5.2	7	5.5	3.2
Fund Count	15	21	23	24	33	32	32	39	53	35	21

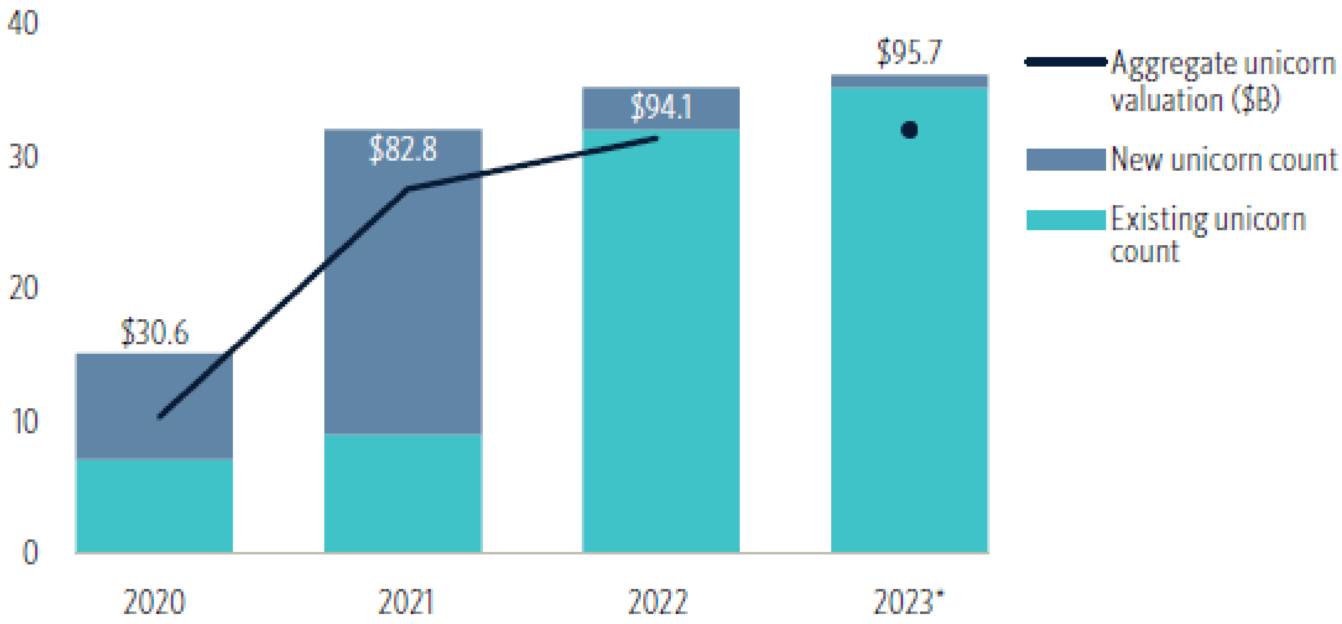
*Source: Intro-act, PitchBook, *As of September 30, 2023.*

Chart 38: Healthcare Services PE Platform Buyout Count by Quarter



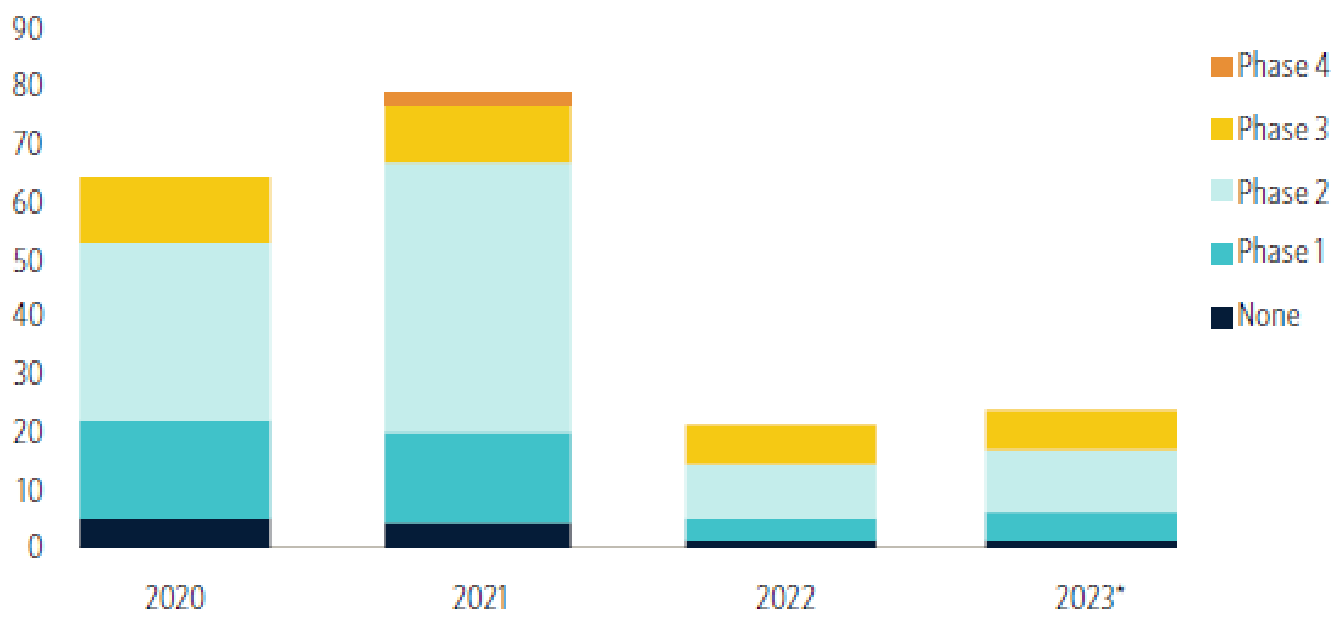
*Source: Intro-act, PitchBook, *As of September 30, 2023.*

Chart 39: Digital Health VC Unicorn Activity



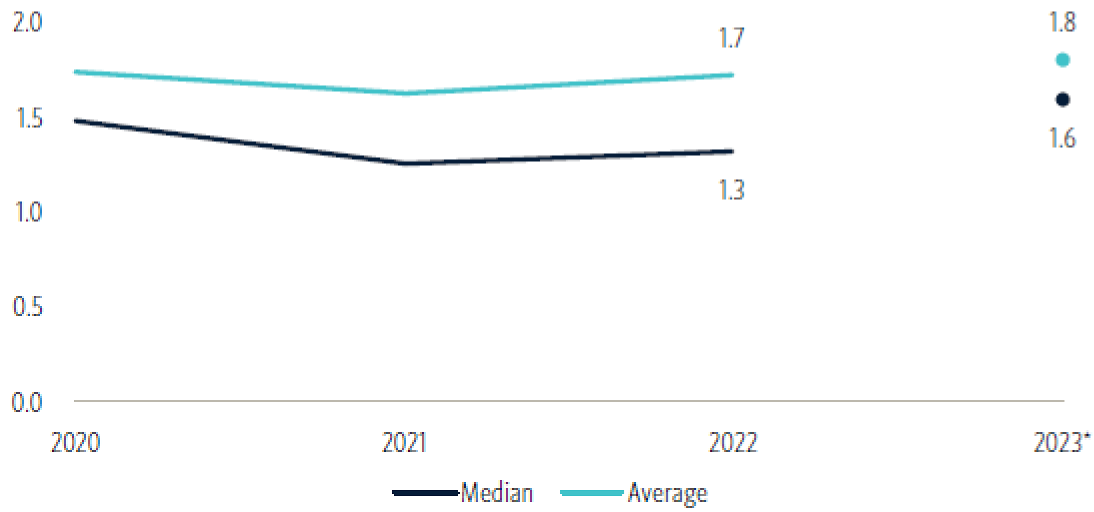
*Source: Intro-act, PitchBook, *As of September 30, 2023.*

Chart 40: Biopharma VC IPO Count by Highest Clinical Trial Phase Reached



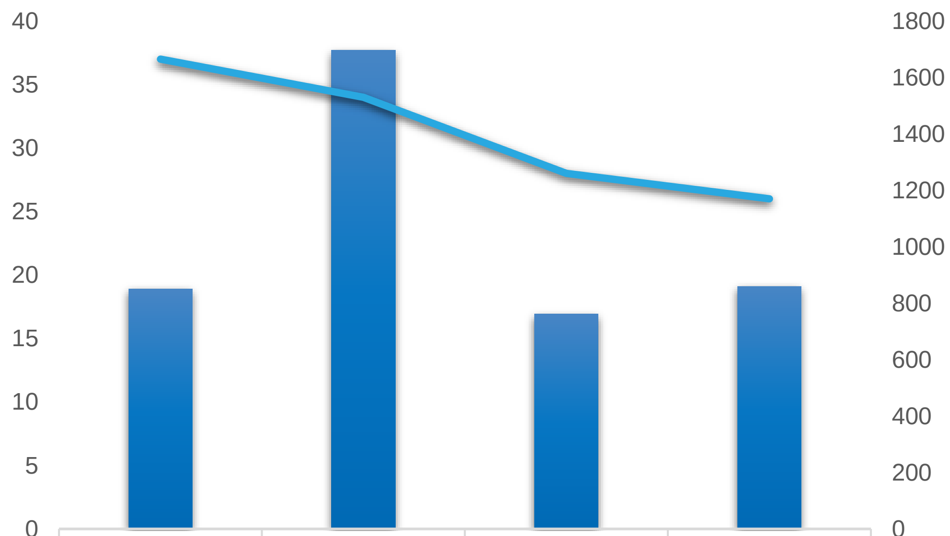
Note: Determined as the Highest Phase of a Trial that Started Prior to the Round Closing. Data Combines Trials Between Phases to the Highest Phase.
*Source: Intro-act, PitchBook, *As of September 30, 2023*

Chart 41: Median and Average Time (Years) Since Last Biopharma VC Round



*Source: Intro-act, PitchBook, *As of September 30, 2023.*

Chart 42: Surgical Robotics VC Deal Activity



	2020	2021	2022	2023*
Deal Value $B	850.9	1696.7	761.9	860.1
Deal Count	37	34	28	26

Deal Value $B Deal Count

*Source: Intro-act, FT Partners, PitchBook, *As of September 30, 2023.*

Chart 43: Select AI Biotech VC Investors*

Investor	Last Closed Fund	Last Closed Fund Size ($M)	Last Closed Fund Date
ARCH Venture Partners	ARCH Venture XII	2,975.0	June 29, 2022
Lux Capital	Lux Ventures VIII	1,150.0	April 13, 2023
Qiming Venture Partners	Qiming Venture RMB VII	939.6	May 18, 2023
Felicis	Felicis Ventures IX	825.0	March 2, 2023
DCVC	DCVC V	725.0	September 18, 2019
General Catalyst	Health Assurance II	670.0	July 20, 2022
Innovation Endeavors	Innovation Endeavors V	600.0	October 13, 2023
Khosla Ventures	Khosla Ventures Opportunity I	557.4	December 22, 2021
S32	Section 32 5	525.0	October 5, 2023
F-Prime Capital	F-Prime Capital Partners Life Sciences VIII	500.0	February 8, 2023

*Source: Intro-act, Pitchbook, *As of December 12, 2023.*

HEALTHTECH SPAC ACTION

Chart 44: Healthtech SPACs (Searching)

S. No	SPAC Name	Ticker	Trust Value ($ Mn)	IPO Date	Completion Date
1	Aimei Health Technology Co., Ltd.	AFJK	69	12/01/23	06/01/25
2	Cactus Acquisition Corp. 1 Ltd	CCTS	126	10/28/21	11/02/24
3	Future Health ESG Corp.	FHLT	200	09/09/21	12/31/23
4	Healthcare AI Acquisition Corp.	HAIA	216	12/09/21	12/14/24
5	Helix Acquisition Corp. II	HLXB	184	09/02/24	09/02/26
6	HH&L Acquisition Co.	HHLA	414	02/04/21	02/09/24
7	PepperLime Health Acquisition Corp	PEPL	170	10/14/21	04/19/24

Source: Intro-act, Boardroom Alpha

Chart 45: Healthtech SPACs (Business Combination Agreement Announced)

S. No	SPAC Name	Ticker	Target Company	EV ($ Mn)	Expected Closing
1	ARYA Sciences Acquisition Corp IV	ARYD	Adagio Medical, Inc.	113	1Q25
2	Achari Ventures Holdings Corp. I	AVHI	Vaso Corp	176	1Q24
3	Bellevue Life Sciences Acquisition Corp.	BLAC	OSR Holdings Co., Ltd.	-	1Q24
4	BlueRiver Acquisition Corp	BLUA	Spinal Stabilization Technologies, LLC	300	1Q24
5	Digital Health Acquisition Corp.	DHAC	VSee Health	110	3Q24
6	Swiftmerge Acquisition Corp.	IVCP	HDL Therapeutics, Inc.	130	4Q23
7	Pono Capital Two, Inc.	PTWO	SBC Medical Group	1,200	3Q24
8	Viveon Health Acquisition Corp.	VHAQ	Clearday Inc	370	1Q24

Source: Intro-act, Boardroom Alpha

Chart 46: Healthtech SPACs (Closed Deals Since January 2022)

S. No	SPAC Name	Ticker (Old)	DE-SPAC	Ticker	Closing Date
1	Petra Acquisition Inc	PAIC	Revelation Biosciences, Inc	REVB	11-Jan-22
2	Capstar Special Purpose Acquisition Corp.	CPSR	Gelesis Inc	GLS	13-Jan-22
3	Healthcare Capital Corp.	HCCC	Alpha Tau Medical Ltd	DRTS	7-Mar-22
4	HELIX ACQUISITION CORP	HLXA	MoonLake Immunotherapeutics AG	MLTX	5-Apr-22
5	Artisan Acquisition Corp.	ARTA	Prenetics Global Ltd	PRE	18-May-22
6	OTR Acquisition Corp	OTRA	Comera Life Sciences Holdings Inc	CMRA	19-May-22
7	Lionheart Acquisition Corporation II	LCAP	MSP Recovery	MSPR	23-May-22
8	Haymaker Acquisition Corp. III	HYAC	Biote	BTMD	26-May-22
9	Dynamics Special Purpose Corp.	DYNS	Senti Biosciences, Inc.	SNTI	8-Jun-22
10	Oaktree Acquisition Corp II	OACB	Alvotech	ALVO	7-Jun-23
11	Social Capital Suvretta Holdings Corp. III	DNAC	ProKidney	PROK	12-Jul-22
12	Social Capital Suvretta Holdings Corp. I	DNAA	Akili Interactive Labs, Inc.	AKLI	19-Aug-22
13	Mana Capital Acquisition Corp.	MAAQ	Cardio Diagnostics Inc.	CDIO	25-Oct-22
14	LMF Acquisition Opportunities, Inc.	LMAO	SeaStar Medical, Inc.	ICU	28-Oct-22

15	Bull Horn Holdings Corp	BHSE	Coeptis Therapeutics Inc.	COEP	31-Oct-22
16	Avista Public Acquisition Corp. II	AHPA	OmniAb, Inc.	OABI	1-Nov-22
17	Vickers Vantage Corp. I	VCKA	Scilex Holding Company	SCLX	10-Nov-22
18	8i Acquisition 2 Corp.	LAX	EUDA Health	EUDA	17-Nov-22
19	Frazier Lifesciences Acquisition Corporation	FLAC	NewAmsterdam Pharma Holding B.V.	NAMS	22-Nov-22
20	Lakeshore Acquisition I Corp.	LAAA	ProSomnus	OSA	6-Dec-22
21	Larkspur Health Acquisition Corp.	LSPR	Zyversa Therapeutics, Inc.	ZVSA	12-Dec-22
22	Health Sciences Acquisitions Corporation 2	HSAQ	Orchestra BioMed, Inc.	OBIO	26-Jan-23
23	Aesther Healthcare Acquisition Corp.	AEHA	Ocean Biomedical Holdings, Inc.	AEHA	15-Feb-23
24	Mountain Crest Acquisition Corp. III	MCAE	ETAO International Group	ETAO	17-Feb-23
25	European Biotech Acquisition Corp.	EBAC	Oculis Holding Ag	OCS	2-Mar-23
26	Maxpro Capital Acquisition Corp.	JMAC	Apollomics Inc.	APLM	29-Mar-23
27	Priveterra Acquisition Corp.	PMGM	AEON Biopharma, Inc.	AEON	24-Jul-23
28	Compute Health Acquisition Corp.	CPUH	Allurion Technologies, Inc.	ALUR	1-Aug-23
29	MedTech Acquisition Corporation	MTAC	TriSalus Life Sciences, Inc.	TLSI	10-Aug-23
30	First Light Acquisition Group, Inc.	FLAG	Calidi Biotherapeutics	CLDI	12-Sep-23

31	Rosecliff Acquisition Corp I	RCLF	Spectral MD, Inc.	MDAI	12-Sep-23
32	Digital Transformation Opportunities Corp.	DTOC	The American Oncology Network	AONC	20-Sep-23
33	Murphy Canyon Acquisition Corp.	MURF	Conduit Pharmaceuticals Limited	CDT	21-Sep-23
34	Anzu Special Acquisition Corp I	ANZU	Envoy Medical Corp	COCH	29-Sep-23
35	Graf Acquisition Corp. IV	GFOR	NKGen Biotech, Inc.	NKGN	29-Sep-23
36	Data Knights Acquisition Corp.	DKDCA	OneMedNet Corp	ONMD	7-Nov-23
37	Aurora Technology Acquisition Corp.	ATAK	DIH	DHAI	7-Feb-24
38	Phoenix Biotech Acquisition Corp.	PBAX	CERo Therapeutics, Inc.	CERO	14-Feb-24
39	Semper Paratus Acquisition Corp	LGST	Tevogen Bio	TVGN	14-Feb-24

Source: Intro-act, Boardroom Alpha

HEALTHTECH EVENTS CALENDAR

S. No.	Event	Place	Dates
1	9th International Conference on Neurological Disorders and Stroke	Paris, France	11-Mar to 12-Mar-2024
2	Global Meet on Nursing & Healthcare (GMNH 2024)	Florence, Italy	11-Mar to 13-Mar-2024
3	HiMSS 24 - The Healthcare Information and Management Systems Society Conference 2024	Florida, United States	11-Mar to 15-Mar-2024
4	Health 2.0 Conference	Nevada, United States	18-Mar to 20-Mar-2024
5	WIRED Health	London, United Kingdom	19-Mar-2024
6	21st Orphan Drugs & Rare Diseases Global Congress 2024 Americas	California, United States	21-Mar to 22-Mar-2024
7	International Pharmaceutical Business Expo (iPharma Expo 2024)	California, United States	21-Mar to 22-Mar-2024
8	Synthetic Biology US 2023	Massachusetts, United States	21-Mar to 22-Mar-2024
9	7th Gene Therapy for Rare Disorders	Massachusetts, United States	25-Mar to 28-Mar-2024
10	Cell & Gene Therapy at Pharma USA	Philadelphia, United States	26-Mar to 28-Mar-2024
11	6th International Conference on Digital Health	London, United Kingdom	27-Mar to 28-Mar-2024
12	7th International Conference on Medicine and Surgery	Dubai, United Arab Emirates	28-Mar to 29-Mar-2024
13	Community Oncology Conference	Orlando, United States	04- Apr to 05-Apr-2024
14	American Organization for Nursing Leadership Inspiring Leaders Conference	New Orleans, United States	08- Apr to 11-Apr-2024
15	Business Group on Health 2024 Annual Conference	Tucson, United States	09- Apr to 12-Apr-2024
16	National Association of ACOs Spring Conference	Baltimore, United States	10- Apr to 12-Apr-2024
17	American Hospital Association Annual Meeting	Washington, D.C.	14- Apr to 16-Apr-2024
18	24th Annual Employee Health Care Conference	New York	16- Apr to 17-Apr-2024
19	National Association of Healthcare Access Management Annual Conference	Dallas, United States	23- Apr to 26-Apr-2024
20	MGMA Focus | Financial Conference	San Diego	25- Apr to 27-Apr-2024
21	American Telemedicine Association ATA Nexus 2024	Phoenix, United States	05-May to 07-May-2024
22	Milken Institute Global Conference	California, United States	05-May to 08-May-2024
23	thINc360 – The Healthcare Innovation Congress	Washington, D.C.	29-May to 31-May-2024
24	American Society of Clinical Oncology Annual Meeting	Chicago, United States	31-May to 04-Jun-2024

Source: Intro-act, Multiple Web Sources

HEALTHTECH COMP TABLE

						Price Performance			Sales			EBITDA			Book Value	
			Price	Mkt Cap ($ Mns)	Ent Val ($ Mns)	% to High	% to Low	% YTD	FY0	FY1	EV/Sales	FY0	FY1	EV/ EBITDA	Book/ Share	P/ Book
Peer Set																
Genomics		Ticker		150,687	140,605			3%	18,752	19,276	7.3 x	(6,085)	(5,946)	-23.6 x		3.8 x
1	Illumina, Inc.	ILMN-US	140.5	22,325	23,679	70%	-37%	1%	4,504	4,504	5.3 x	496	507	46.7 x	36.13	3.9 x
2	BioMarin Pharmaceutical	BMRN-US	87.1	16,441	16,395	15%	-13%	-10%	2,419	2,757	5.9 x	271	519	31.6 x	26.25	3.3 x
3	Bio-Techne Corporation	TECH-US	74.4	11,692	12,089	21%	-30%	-4%	1,137	1,148	10.5 x	442	403	30.0 x	12.50	6.0 x
4	Legend Biotech	LEGN	65.5	11,913	10,809	18%	-35%	9%	117	297	36.4 x	(470)	(420)	-	7.37	8.9 x
5	Natera, Inc.	NTRA-US	89.4	10,797	10,198	2%	-59%	43%	1,083	1,340	7.6 x	(421)	(260)	-	6.40	14.0 x
6	Ionis Pharmaceuticals	IONS-US	45.5	6,626	6,301	20%	-28%	-10%	788	630	10.0 x	(338)	(522)	-	2.68	17.0 x
7	CRISPR Therapeutics	CRSP-US	83.8	7,051	5,205	9%	-55%	34%	371	86	60.3 x	(174)	(495)	-	23.52	3.6 x
8	Blueprint Medicines	BPMC-US	95.1	5,824	5,878	6%	-57%	3%	249	389	15.1 x	(449)	(322)	-	2.14	44.5 x
9	10x Genomics	TXG	45.6	4,789	5,167	40%	-26%	-19%	619	678	7.6 x	(223)	(155)	-	6.22	7.3 x
10	Ultragenyx Pharmaceutical	RARE	53.7	4,421	4,928	2%	-41%	12%	434	512	9.6 x	(568)	(462)	-	3.35	16.0 x
11	Arrowhead Pharmaceuticals	ARWR-US	36.1	4,470	3,874	18%	-43%	18%	241	126	30.8 x	(173)	(327)	-	1.49	24.2 x

12	Genscript	1548-HK	2.0	4,204	3,086	61%	-19%	-21%	626	860	3.6 x	(315)	(234)	-	0.65	3.1 x
13	Krystal Biotech	KRYS-US	167.8	4,748	4,185	13%	-58%	35%	51	251	16.7 x	(108)	50	83.5 x	27.58	6.1 x
14	Xiamen Amoytop	688278-CN	8.2	3,327	3,240	11%	-48%	11%	222	293	11.1 x	65	85	38.2 x	0.58	14.2 x
15	Rocket Pharmaceuticals	RCKT-US	30.5	2,763	2,344	7%	-51%	2%	0	23	101.4 x	(243)	(277)	-	5.46	5.6 x
16	Intellia Therapeutics	NTLA-US	32.7	3,139	2,301	45%	-31%	7%	36	52	44.2 x	(481)	(510)	-	11.29	2.9 x
17	Beam Therapeutics	BEAM-US	39.8	3,253	2,411	24%	-57%	46%	378	65	37.3 x	(163)	(445)	-	12.02	3.3 x
18	Ginkgo Bioworks	DNA-US	1.3	2,130	1,778	97%	-13%	-24%	251	241	7.4 x	(530)	(439)	-	0.58	2.2 x
19	NeoGenomics, Inc.	NEO-US	16.0	2,038	2,238	33%	-31%	-1%	592	655	3.4 x	3	23	97.7 x	7.39	2.2 x
20	Pacific Biosciences	PACB-US	5.2	1,391	1,557	180%	-23%	-47%	201	240	6.5 x	(305)	(266)	-	2.62	2.0 x
21	Genus	GNS-GB	22.0	1,454	1,760	71%	-16%	-20%	861	859	2.0 x	139	131	13.4 x	11.09	2.0 x
22	Myriad Genetics	MYGN-US	22.2	1,993	2,109	9%	-38%	16%	753	826	2.6 x	(1)	33	64.7 x	8.71	2.5 x
23	Takara Bio	4974-JP	6.7	801	551	102%	-4%	-25%	578	326	1.7 x	184	52	10.5 x	6.23	1.1 x
24	Verve Therapeutics	VERV-US	16.3	1,280	927	31%	-50%	17%	12	16	59.4 x	(220)	(264)	-	7.31	2.2 x
25	Novogene Co.	688315-CN	2.2	908	751	180%	-22%	-34%	280	295	2.5 x	49	49	15.3 x	0.72	3.0 x
26	Fulgent Genetics	FLGT-US	23.2	692	243	90%	-3%	-20%	289	286	0.8 x	1	(26)	-	38.31	0.6 x
27	Prime Medicine	PRME-US	8.7	1,048	703	97%	-37%	22%	0	13	54.7 x	(186)	(212)	-	1.37	6.4 x
28	Silence Therapeutics	SLN	25.8	926	926	4%	-82%	38%	21	36	25.4 x	(58)	(58)	-	0.63	40.8 x

29	Castle Biosciences	CSTL-US	19.9	547	331	34%	-54%	-8%	220	237	1.4 x	(5)	3	127.2 x	14.27	1.4 x
30	Editas Medicine	EDIT-US	10.5	861	546	13%	-42%	4%	78	35	15.8 x	(165)	(229)	-	4.27	2.5 x
31	Allogene Therapeutics	ALLO-US	4.9	831	462	39%	-55%	54%	0	0	3,429.4 x	(326)	(305)	-	3.47	1.4 x
32	OraSure Technologies	OSUR-US	7.3	534	324	16%	-40%	-11%	405	191	1.7 x	87	(2)	-	5.51	1.3 x
33	REGENXBIO Inc.	RGNX-US	21.2	941	722	36%	-44%	18%	90	140	5.2 x	(243)	(108)	-	7.08	3.0 x
34	Anavex Life Sciences	AVXL-US	5.3	434	282	98%	-9%	-43%	0	9	30.1 x	-	-	-	1.65	3.2 x
35	Voyager Therapeutics	VYGR	9.4	513	184	52%	-36%	12%	250	36	5.1 x	125	(100)	-	5.37	1.8 x
36	SOPHiA GENETICS	SOPH-US	4.8	315	201	52%	-56%	3%	62	80	2.5 x	(62)	(57)	-	2.32	2.1 x
37	uniQure N.V.	QURE-US	5.6	267	130	302%	-11%	-17%	16	56	2.3 x	(272)	(192)	-	4.34	1.3 x
38	Stoke Therapeutics	STOK-US	7.6	341	127	83%	-56%	45%	12	10	13.3 x	(95)	(104)	-	3.91	2.0 x
39	bluebird bio	BLUE-US	1.6	302	288	253%	-44%	13%	4	40	7.2 x	(300)	(266)	-	2.08	0.8 x
40	Biodesix, Inc.	BDSX-US	1.6	143	183	40%	-35%	-20%	49	65	2.8 x	-	-	-	0.05	33.2 x
41	ProQR Therapeutics	PRQR-US	2.0	160	56	94%	-44%	0%	5	19	3.0 x	(73)	(37)	-	0.60	3.3 x
42	Devyser Diagnostics	DVYSR-SE	8.8	142	125	7%	-40%	12%	16	23	5.4 x	(5)	1	124.2 x	2.29	3.9 x
43	Generation Bio	GBIO-US	2.6	173	(39)	166%	-67%	59%	6	4	-9.1 x	(127)	(92)	-	3.52	0.7 x
44	Jasper Therapeutics	JSPR	22.1	332	146	23%	-82%	180%	0	0	-	-	-	-	7.03	3.1 x
45	Kinnate Biopharma	KNTE-US	2.6	122	(42)	177%	-60%	9%	0	0	-	(118)	(118)	-	3.66	0.7 x

46	**Adverum Biotechnologies**	**ADVM-US**	2.0	408	157	51%	-65%	162%	0	4	43.7 x	(157)	(132)	-	1.02	1.9 x
47	**GeneDx Holdings**	**WGS**	8.5	222	181	101%	-86%	210%	194	226	0.8 x	(109)	(53)	-	8.78	1.0 x
48	**Bionano Genomics**	**BNGO-US**	1.3	49	4	1056%	-17%	-34%	36	40	0.1 x	(202)	(69)	-	2.10	0.6 x
49	**Precision BioSciences**	**DTIL**	12.7	52	(49)	181%	-35%	16%	25	53	-0.9 x	(93)	(46)	-	7.54	1.7 x
50	**Singular Genomics**	**OMIC**	0.6	44	(69)	256%	-49%	31%	1	3	-26.0 x	(89)	(96)	-	2.71	0.2 x
51	**Freeline Therapeutics**	**FRLN**	6.5	28	3	34%	-67%	2%	0	-	-	(95)	-	-	6.89	0.9 x
52	**SENTI BIOSCIENCES, INC.**	**SNTI**	0.4	19	17	241%	-37%	-35%	4	-	-	(69)	-	-	1.86	0.2 x
53	**NanoString Technologies**	**NSTG**	0.1	4	155	12144%	-56%	-88%	127	176	0.9 x	(109)	-	-	(1.05)	-0.1 x
54	**Metagenomi**	**MGX**	12.0	450	556	6%	-19%	-	43	27	21.0 x	(80)	(103)	-	(3.17)	-3.8 x
55	**Genprex**	**GNPX**	4.5	7	(5)	927%	-13%	-51%	-	-	-	-	-	-	8.28	0.5 x

						Price Performance			Sales			EBITDA			Book Value	
			Price	Mkt Cap ($ Mns)	Ent Val ($ Mns)	% to High	% to Low	% YTD	FY0	FY1	EV/Sales	FY0	FY1	EV/ EBITDA	Book/ Share	P/ Book
Peer Set																
HealthTech		Ticker		107,463	94,740			4%	53,021	43,925	2.2 x	16,041	4,496	21.1 x		2.5 x
56	Veeva Systems	VEEV-US	222.0	35,747	31,851	4%	-28%	15%	2,364	2,737	11.6 x	829	1,056	30.2 x	27.21	8.2 x
57	BioNTech	BNTX	90.9	22,100	7,543	51%	-3%	-12%	18,663	4,569	1.7 x	13,764	1,139	6.6 x	88.48	1.0 x
58	R1 RCM,	RCM-US	14.0	5,884	7,533	34%	-37%	32%	2,254	2,669	2.8 x	614	666	11.3 x	6.55	2.1 x
59	Engagesmart, Inc.	ESMT-US	23.1	3,880	3,532	0%	-33%	1%	304	381	9.3 x	49	74	48.0 x	5.02	4.6 x
60	Evolent Health	EVH-US	34.4	3,972	4,540	7%	-32%	4%	1,964	2,456	1.8 x	195	254	17.9 x	9.38	3.7 x
61	Sectra AB	SECT.B-SE	20.5	3,703	3,894	5%	-48%	15%	218	282	13.8 x	51	62	63.0 x	0.67	30.4 x
62	Certara, Inc.	CERT-US	18.3	2,925	2,956	36%	-35%	4%	354	389	7.6 x	123	125	23.7 x	6.55	2.8 x
63	Privia Health	PRVA-US	22.3	2,646	2,364	35%	-14%	-3%	1,658	1,753	1.3 x	72	88	27.0 x	4.75	4.7 x
64	Oscar Health	OSCR-US	16.6	3,220	2,704	12%	-81%	81%	5,686	8,340	0.3 x	(45)	165	16.4 x	3.50	4.7 x
65	Alphatec Holdings	ATEC-US	13.4	1,852	2,308	43%	-35%	-11%	482	596	3.9 x	(9)	22	106.4 x	0.56	23.9 x
66	Peloton Interactive	PTON	4.6	1,605	3,280	212%	-14%	-24%	2,800	2,704	1.2 x	(209)	(62)	-	(1.37)	-3.4 x
67	Schrodinger, Inc.	SDGR-US	26.8	1,693	1,561	121%	-23%	-25%	217	214	7.3 x	(172)	(200)	-	7.60	3.5 x
68	Omnicell, Inc.	OMCL-US	26.4	1,210	1,350	193%	-3%	-30%	1,147	1,069	1.3 x	138	106	12.7 x	26.11	1.0 x
69	Phreesia, Inc.	PHR-US	25.0	1,390	1,300	56%	-52%	8%	281	355	3.7 x	(92)	(39)	-	4.76	5.2 x
70	Model N	MODN-US	24.3	950	940	48%	-14%	-10%	249	262	3.6 x	43	49	19.2 x	3.19	7.6 x

71	Definitive Healthcare	DH-US	9.0	1,056	1,350	39%	-38%	-9%	251	266	5.1 x	74	86	15.7 x	7.39	1.2 x
72	NEXUS AG	NXU-DE	62.8	1,086	1,096	11%	-25%	-2%	263	295	3.7 x	56	65	16.8 x	15.57	4.0 x
73	Autolus Therapeutics	AUTL	6.2	1,448	879	20%	-74%	29%	6	2	451.0 x	(169)	(165)	-	0.87	7.1 x
74	Veradigm, Inc.	MDRX-US	6.1	670	395	144%	-18%	-41%	633	667	0.6 x	143	152	2.6 x	10.77	0.6 x
75	B-Soft Co.	300451-CN	0.7	1,044	922	153%	-30%	-27%	223	243	3.8 x	21	47	19.6 x	0.42	1.6 x
76	Accolade, Inc.	ACCD-US	10.0	771	778	71%	-36%	-17%	363	413	1.9 x	(37)	(8)	-	5.65	1.8 x
77	Craneware Plc	CRW-GB	26.7	944	930	5%	-51%	21%	174	185	5.0 x	55	58	16.2 x	9.22	2.9 x
78	Equasnes	EQS-FR	51.0	774	769	85%	-2%	-24%	231	240	3.2 x	74	76	10.2 x	14.02	3.6 x
79	HealthStream, Inc.	HSTM-US	27.1	822	771	7%	-25%	0%	279	294	2.6 x	61	66	11.8 x	11.25	2.4 x
80	Simulations Plus	SLP-US	41.5	829	716	27%	-21%	-7%	60	67	10.7 x	21	22	33.1 x	8.63	4.8 x
81	Health Catalyst	HCAT-US	8.1	472	371	78%	-18%	-13%	296	309	1.2 x	11	24	15.4 x	6.29	1.3 x
82	Sharecare, Inc.	SHCR-US	1.0	335	267	176%	-19%	-12%	442	455	0.6 x	16	24	11.1 x	1.28	0.7 x
83	OptimizeRx Corporation	OPRX-US	16.0	290	230	11%	-57%	11%	62	70	3.3 x	5	3	65.9 x	6.31	2.5 x
84	Cegedim SA	CGM-FR	17.4	244	542	47%	-4%	-9%	605	671	0.8 x	105	122	4.5 x	22.07	0.8 x
85	RaySearch Laboratories	RAY.B-SE	10.0	266	361	4%	-49%	12%	99	110	3.3 x	39	47	7.8 x	2.07	4.8 x
86	Augmedix, Inc.	AUGX-US	4.6	218	191	37%	-71%	-10%	31	45	4.3 x	(19)	(15)	-	0.02	257.0 x
87	Quantum-Si Incorporated	QSI-US	1.9	225	3	111%	-39%	-8%	1	4	0.8 x	(94)	(95)	-	1.92	1.0 x
88	Computer Programs	CPSI-US	9.2	134	279	237%	-18%	-18%	339	344	0.8 x	48	46	6.0 x	12.83	0.7 x
89	Allurion Technologies, Inc.	ALUR	3.3	154	135	237%	-19%	-13%	-	53	2.5 x	-	(72)	-	(1.11)	-2.9 x

90	Nordhealth AS	NORDH-NO	2.5	112	174	21%	-28%	2%	40	48	3.6 x	1	3	51.7 x	1.09	2.3 x
91	Mach7 Technologies	M7T-AU	0.5	110	95	45%	-24%	-16%	19	20	4.8 x	1	(1)	-	0.15	3.1 x
92	MedAdvisor Limited	MDR-AU	0.2	104	103	19%	-46%	29%	64	75	1.4 x	(2)	3	39.9 x	0.07	2.9 x
93	Aiforia Technologies	AIFORIA-FI	3.7	96	80	55%	-10%	-4%	3	5	16.2 x	(10)	(7)	-	0.97	3.8 x
94	FORIAN INC.	FORA-US	2.9	89	69	53%	-35%	-2%	28	21	3.3 x	(3)	1	62.6 x	0.82	3.5 x
95	Omda AS	OMDA-NO	2.5	53	87	126%	-17%	-30%	39	45	1.9 x	6	10	8.9 x	0.51	5.0 x
96	ContextVision AB	CONTX-NO	0.7	52	47	37%	-13%	-11%	12	13	3.6 x	5	5	10.3 x	0.10	7.1 x
97	DarioHealth Corp.	DRIO-US	2.0	54	40	174%	-66%	16%	28	21	1.9 x	(41)	(32)	-	2.50	0.8 x
98	Owlet Baby	OWLT	5.7	49	53	32%	-56%	8%	69	54	1.0 x	(68)	(16)	-	(3.73)	-1.5 x
99	Alcidion Group	ALC-AU	0.0	40	32	202%	-14%	-41%	26	25	1.3 x	(1)	(2)	-	0.04	0.7 x
100	Spectral AI	MDAI	2.0	33	26	870%	-11%	-18%	18	31	0.8 x	-	-	-	0.09	21.7 x
101	Beachbody Company	BODY	8.1	33	41	447%	-22%	-2%	692	521	0.1 x	(23)	(14)	-	22.56	0.4 x
102	EUDA Health	EUDA	1.4	34	37	151%	-68%	-5%	-	-	-	-	-	-	(0.23)	-5.9 x
103	Science 37	SNCE	5.7	35	(22)	126%	-35%	7%	70	58	-0.4 x	(63)	(32)	-	8.69	0.7 x
104	Akili Interactive	AKLI	0.4	27	(44)	494%	-45%	-28%	2	8	-5.7 x	(52)	(38)	-	0.88	0.4 x
105	CloudMD Software	DOC-CA	0.1	17	25	180%	-26%	-14%	84	69	0.4 x	(8)	(1)	-	0.24	0.2 x
106	Medi Assist Health	544088-IN	6.1	423	398	9%	-16%	-	-	-	-	-	-	-	0.66	9.3 x
107	Brightspring Health Services	BTSG	9.0	1,532	4,845	36%	-2%	-	8,826	9,451	0.5 x	538	561	8.6 x	4.97	1.8 x
108	iCoreConnect	ICCT	1.5	13	17	1323%	-37%	4%	-	-	-	-	-	-	0.76	1.9 x

109	Xybion Digital	XYBN-CA	0.3	0	(5)	408%	-22%	-14%	-	16	-0.3 x	-	-	-	5.56	0.1 x

			Price	Mkt Cap ($ Mns)	Ent Val ($ Mns)	Price Performance: % to High	% to Low	% YTD	Sales: FY0	FY1	EV/Sales	EBITDA: FY0	FY1	EV/ EBITDA	Book Value: Book/ Share	P/ Book
Peer Set																
Home Health Services		Ticker		79,715	112,674			11%	62,150	63,526	1.8 x	7,632	8,478	13.3 x		5.4 x
110	**Clorox Company**	**CLX**	152.1	18,874	21,723	17%	-25%	7%	7,389	7,265	3.0 x	1,168	1,243	17.5 x	0.43	356.0 x
111	**DaVita Inc.**	**DVA-US**	126.9	11,131	23,471	7%	-44%	21%	12,140	12,606	1.9 x	2,407	2,577	9.1 x	11.89	10.7 x
112	**Chemed Corp.**	**CHE**	613.8	9,279	9,208	6%	-20%	5%	2,264	2,423	3.8 x	452	515	17.9 x	73.69	8.3 x
113	**AptarGroup, Inc.**	**ATR**	140.3	9,261	10,318	2%	-22%	13%	3,487	3,635	2.8 x	703	770	13.4 x	35.00	4.0 x
114	**Encompass Health**	**EHC-US**	74.2	7,430	10,815	4%	-31%	11%	4,801	5,250	2.1 x	971	1,043	10.4 x	16.43	4.5 x
115	**Bright Horizons**	**BFAM**	116.1	6,728	8,517	1%	-38%	23%	2,418	2,663	3.2 x	352	394	21.6 x	20.97	5.5 x
116	**Option Care**	**OPCH**	32.1	5,573	6,388	11%	-25%	-5%	4,302	4,707	1.4 x	425	440	14.5 x	8.14	3.9 x
117	**Amedisys, Inc.**	**AMED-US**	93.3	3,049	3,499	3%	-26%	-2%	2,236	2,322	1.5 x	247	251	13.9 x	31.87	2.9 x
118	**BrightSpring Health**	**BTSG**	9.0	1,532	4,845	36%	-2%	-	8,826	9,451	0.5 x	538	561	8.6 x	4.97	1.8 x
119	**Addus HomeCare**	**ADUS-US**	93.9	1,523	1,660	22%	-18%	1%	1,057	1,144	1.5 x	120	130	12.8 x	43.55	2.2 x
120	**AdaptHealth Corp.**	**AHCO**	10.5	1,398	3,649	51%	-39%	44%	3,200	3,317	1.1 x	671	682	5.4 x	11.00	1.0 x
121	**Adaptive Biotechnologies**	**ADPT-US**	4.0	585	445	125%	-35%	-18%	170	176	2.5 x	(120)	(102)	-	2.13	1.9 x
122	**Enhabit Inc**	**EHAB**	8.8	442	1,056	68%	-19%	-15%	1,046	1,080	1.0 x	98	99	10.7 x	13.51	0.7 x
123	**Aveanna Healthcare**	**AVAH**	2.4	456	1,751	26%	-64%	-11%	1,788	1,881	0.9 x	129	136	12.9 x	(0.55)	-4.3 x

124	Clover Health	CLOV	0.9	346	121	88%	-18%	-9%	3,477	1,997	0.1 x	(299)	(66)	-	0.67	1.3 x
125	Ambulnz, Inc.	DCGO	4.1	430	402	162%	-33%	-26%	624	745	0.5 x	54	82	4.9 x	2.89	1.4 x
126	Humacyte, Inc.	HUMA	3.2	379	255	73%	-40%	14%	2	0	5,091.5 x	-	-	-	0.36	9.1 x
127	Orchestra BioMed, Inc.	OBIO	6.9	245	148	241%	-38%	-25%	4	5	29.7 x	(52)	(49)	-	2.23	3.1 x
128	Scilex Holding Company	SCLX	1.3	211	249	1166%	-33%	-35%	45	94	2.7 x	-	-	-	(1.73)	-0.8 x
129	ALPHA TAU MEDICAL LTD	DRTS	3.0	208	124	60%	-10%	0%	0	0	-	(31)	(35)	-	1.29	2.3 x
130	InfuSystems Holdings	INFU	9.3	197	233	23%	-28%	-12%	110	124	1.9 x	21	21	11.1 x	2.43	3.8 x
131	The Oncology Institute	TOI	1.7	126	156	55%	-81%	-16%	252	321	0.5 x	(24)	(26)	-	0.97	1.8 x
132	P3 Health Partners	PIII	1.1	121	497	430%	-33%	-26%	1,050	1,223	0.4 x	(128)	(46)	-	1.65	0.6 x
133	CareRx Corporation	CRRX-CA	1.2	68	140	57%	-32%	-3%	277	276	0.5 x	23	21	6.7 x	1.01	1.2 x
134	Cardio Diagnostics Inc.	CDIO	1.8	36	21	269%	-90%	-29%	0	1	31.6 x	-	-	-	0.17	10.1 x
135	Cue Health	HLTH-US	0.3	41	(22)	794%	-39%	63%	483	70	-0.3 x	(129)	(210)	-	2.52	0.1 x
136	ATI Physical Therapy	ATIP	6.9	29	992	194%	-16%	12%	699	751	1.3 x	36	46	21.6 x	(25.05)	-0.3 x
137	MSP Recovery	MSPR	1.0	15	2,010	2618%	-30%	-55%	-	-	-	-	-	-	20.67	0.0 x

						Price Performance			Sales			EBITDA			Book Value	
			Price	Mkt Cap ($ Mns)	Ent Val ($ Mns)	% to High	% to Low	% YTD	FY0	FY1	EV/Sales	FY0	FY1	EV/ EBITDA	Book/ Share	P/ Book
Peer Set																
Personalized Medicine		Ticker		393,818	442,110			12%	68,849	68,889	6.4 x	26,533	27,500	16.1 x		4.0 x
138	AbbVie Inc.	ABBV-US	178.9	316,040	363,435	2%	-27%	15%	54,318	54,416	6.7 x	25,566	25,994	14.0 x	5.87	30.5 x
139	Biogen Inc.	BIIB-US	221.0	32,117	37,439	45%	-3%	-15%	9,836	9,484	3.9 x	2,741	3,321	11.3 x	102.14	2.2 x
140	Exact Sciences	EXAS-US	59.4	10,790	12,620	70%	-6%	-20%	2,500	2,833	4.5 x	219	331	38.1 x	17.34	3.4 x
141	MGI Tech	688114-CN	9.6	3,982	3,333	59%	-13%	838%	614	429	7.8 x	68	(10)	-	3.07	3.1 x
142	Amicus Therapeutics	FOLD-US	13.3	3,926	4,076	10%	-27%	-6%	399	533	7.6 x	(59)	65	63.0 x	0.55	24.4 x
143	Springworks Therapeutics	SWTX-US	51.0	3,764	3,333	5%	-65%	40%	5	87	38.4 x	(342)	(353)	-	8.52	6.0 x
144	IDEAYA Biosciences	IDYA-US	46.2	3,406	2,539	3%	-71%	30%	23	19	133.5 x	(133)	(166)	-	9.55	4.8 x
145	Rhythm Pharmaceuticals	RYTM-US	43.7	2,629	2,404	20%	-65%	-5%	77	137	17.5 x	(183)	(265)	-	2.86	15.3 x
146	Twist Bioscience	TWST-US	38.9	2,249	2,005	11%	-71%	6%	245	293	6.8 x	(185)	(151)	-	10.21	3.8 x
147	Anhui Anke Biotech	300009-CN	1.4	2,308	2,109	30%	-24%	-2%	339	405	5.2 x	130	156	13.6 x	0.30	4.6 x
148	Kymera Therapeutics	KYMR-US	43.5	2,658	2,141	4%	-78%	71%	79	55	38.8 x	(153)	(192)	-	7.11	6.1 x
149	Ambrx Biopharma,	AMAM-US	28.0	1,771	1,503	1%	-77%	96%	7	2	910.4 x	(75)	(83)	-	4.05	6.9 x
150	Gemini Therapeutics	GMTX	75.3	1,818	1,450	3%	-76%	30%	0	0	-	(47)	(81)	-	14.87	5.1 x
151	Edgewise Therapeutics	EWTX-US	16.7	1,554	892	24%	-69%	53%	0	0	-	(113)	(130)	-	4.53	3.7 x

152	Fusion Pharmaceuticals	FUSN	12.0	868	690	17%	-81%	25%	1	2	313.3 x	(87)	(105)	-	2.73	4.4 x
153	Exscientia Plc	EXAI	6.5	802	389	40%	-36%	0%	33	46	8.5 x	(174)	(190)	-	3.84	1.7 x
154	ORIC Pharmaceuticals	ORIC-US	14.7	988	575	14%	-72%	59%	0	0	-	(89)	(108)	-	4.54	3.2 x
155	Praxis Precision Med.	PRAX-US	49.5	624	337	18%	-76%	219%	2	2	146.6 x	(126)	(112)	-	7.92	6.3 x
156	Tenaya Therapeutics	TNYA-US	6.7	514	345	21%	-75%	106%	0	0	-	(117)	(124)	-	2.42	2.8 x
157	Monte Rosa	GLUE-US	6.3	316	183	40%	-61%	12%	0	4	52.0 x	(107)	(112)	-	3.69	1.7 x
158	INmune Bio	INMB	12.4	223	193	19%	-53%	10%	0	0	1,368.7 x	-	-	-	2.49	5.0 x
159	Foghorn Therapeutics	FHTX-US	7.9	335	122	26%	-66%	23%	19	32	3.8 x	(107)	(109)	-	(1.36)	-5.8 x
160	Personalis, Inc.	PSNL-US	1.7	85	12	93%	-47%	-20%	73	74	0.2 x	(95)	(77)	-	2.56	0.7 x
161	Prenetics Global Ltd	PRE	4.9	52	(17)	258%	-21%	-18%	276	36	-0.5 x	58	-	-	18.67	0.3 x

						Price Performance			Sales			EBITDA			Book Value	
			Price	Mkt Cap ($ Mns)	Ent Val ($ Mns)	% to High	% to Low	% YTD	FY0	FY1	EV/Sales	FY0	FY1	EV/ EBITDA	Book/ Share	P/ Book
Peer Set																
Remote Surgery		Ticker		569,567	631,423			8%	116,562	124,273	5.1 x	31,494	33,845	18.7 x		4.1 x
162	**Intuitive Surgical,**	**ISRG-US**	397.9	140,190	133,789	1%	-44%	18%	7,124	8,000	16.7 x	2,793	3,080	43.4 x	37.77	10.5 x
163	**Stryker Corporation**	**SYK-US**	353.2	134,317	145,512	1%	-29%	18%	20,498	22,159	6.6 x	5,402	6,036	24.1 x	48.92	7.2 x
164	**Medtronic**	**MDT-US**	83.6	111,006	128,692	10%	-18%	1%	31,227	32,221	4.0 x	9,315	9,160	14.0 x	38.95	2.1 x
165	**Becton, Dickinson**	**BDX-US**	235.3	67,982	82,903	22%	-3%	-3%	19,372	20,302	4.1 x	5,306	5,714	14.5 x	87.68	2.7 x
166	**Siemens Healthineers**	**SHL-DE**	60.4	68,103	83,465	6%	-22%	5%	23,212	24,824	3.4 x	4,402	5,059	16.5 x	17.29	3.5 x
167	**Zimmer Biomet**	**ZBH-US**	124.0	25,432	30,694	20%	-18%	2%	7,394	7,753	4.0 x	2,513	2,712	11.3 x	60.70	2.0 x
168	**Smith & Nephew**	**SN-GB**	13.3	11,589	14,315	25%	-19%	-3%	5,549	5,839	2.5 x	1,422	1,479	9.7 x	5.98	2.2 x
169	**Globus Medical,**	**GMED-US**	54.5	6,150	7,478	15%	-20%	2%	1,568	2,465	3.0 x	493	730	10.2 x	29.32	1.9 x
170	**PROCEPT BioRobotics**	**PRCT-US**	49.1	2,500	2,283	7%	-49%	18%	136	210	10.9 x	(87)	(80)	-	5.53	8.9 x
171	**Shanghai MicroPort**	**2252-HK**	1.8	1,683	1,677	117%	-30%	-34%	3	-	-	(116)	-	-	0.14	12.9 x
172	**Accuray Incorporated**	**ARAY-US**	2.6	259	386	65%	-10%	-8%	448	462	0.8 x	24	28	13.8 x	0.48	5.4 x
173	**Stereotaxis, Inc.**	**STXS-US**	2.7	218	207	22%	-51%	54%	27	30	6.8 x	(14)	(11)	-	0.20	13.4 x
174	**Asensus Surgical**	**ASXC**	0.3	81	53	182%	-33%	-4%	7	9	6.2 x	-	-	-	0.18	1.7 x
175	**Vicarious Surgical**	**RBOT**	0.4	57	(31)	656%	-45%	0%	0	0	-	(75)	(62)	-	0.56	0.7 x

			Price			Price Performance			Sales			EBITDA			Book Value	
			Share Price	Mkt Cap ($ Mns)	Ent Val ($ Mns)	% to High	% to Low	% YTD	FY0	FY1	EV/Sales	FY0	FY1	EV/ EBITDA	Book/ Share	P/ Book
Peer Set																
Telemedicine		Ticker		3,444,153	3,463,873			9%	663,835	706,175	4.9 x	150,586	173,231	20.0 x		2.4 x
176	Microsoft	MSFT	415.5	3,087,346	3,049,726	1%	-41%	10%	211,915	244,380	12.5 x	103,406	127,762	23.9 x	32.06	13.0 x
177	Cisco Systems	CSCO	48.4	195,981	180,812	20%	-6%	-4%	56,998	52,182	3.5 x	20,128	19,113	9.5 x	11.42	4.2 x
178	CVS Health	CVS	73.8	92,924	159,091	13%	-13%	-6%	357,776	369,928	0.4 x	20,049	19,598	8.1 x	59.36	1.2 x
179	Philips Healthcare	PHG	20.3	18,572	26,381	19%	-26%	-12%	19,620	20,328	1.3 x	3,266	3,295	8.0 x	14.66	1.4 x
180	Zoom	ZM	70.9	18,280	15,389	7%	-17%	-1%	4,527	4,618	3.3 x	1,879	1,822	8.4 x	26.07	2.7 x
181	Grab Holdings	GRAB	3.1	11,616	7,990	26%	-15%	-8%	2,359	2,791	2.9 x	771	192	41.6 x	1.63	1.9 x
182	Doximity, Inc.	DOCS-US	28.1	3,427	4,507	32%	-30%	0%	419	473	9.5 x	184	224	20.2 x	4.64	6.0 x
183	Teladoc, Inc.	TDOC-US	15.0	2,506	3,052	103%	-5%	-30%	2,602	2,670	1.1 x	328	368	8.3 x	13.96	1.1 x
184	LifeStance Health	LFST-US	7.8	2,964	3,392	23%	-41%	-1%	1,056	1,217	2.8 x	59	84	40.4 x	3.77	2.1 x
185	Hims & Hers	HIMS-US	13.1	2,701	2,593	13%	-57%	47%	872	1,190	2.2 x	50	114	22.8 x	1.61	8.1 x
186	JMDC, Inc.	4483-JP	25.3	1,656	1,637	80%	-12%	-16%	207	230	7.1 x	57	75	21.9 x	7.16	3.5 x
187	Terveystalo Oyj	TTALO-FI	7.8	991	1,648	20%	-12%	-8%	1,382	1,462	1.1 x	209	238	6.9 x	4.41	1.8 x
188	Medley, Inc.	4480-JP	33.7	1,103	999	23%	-25%	9%	137	194	5.1 x	23	32	31.1 x	3.62	9.3 x
189	InnovAge Holding	INNV-US	4.9	662	651	67%	-3%	-19%	688	754	0.9 x	(1)	16	41.0 x	2.10	2.3 x
190	WELL Health	WELL-CA	3.1	742	1,062	43%	-16%	6%	414	565	1.9 x	76	83	12.7 x	2.28	1.4 x

191	GoodRx	GDRX	8.4	772	3,207	12%	-50%	25%	750	800	4.0 x	217	248	13.0 x	1.93	4.3 x
192	Talkspace, Inc.	TALK-US	3.0	500	374	3%	-81%	18%	150	191	2.0 x	(14)	6	61.9 x	0.70	4.2 x
193	DocGo, Inc.	DCGO-US	4.1	430	402	162%	-33%	-26%	624	745	0.5 x	54	82	4.9 x	2.89	1.4 x
194	American Well	AMWL-US	1.1	272	(82)	164%	-13%	-29%	259	262	-0.3 x	(170)	(158)	-	1.61	0.7 x
195	23andMe Holding	ME-US	0.5	172	86	378%	-11%	-40%	299	217	0.4 x	(161)	-	-	0.78	0.7 x
196	LifeMD, Inc.	LFMD-US	8.0	314	284	14%	-86%	-3%	119	148	1.9 x	(15)	10	28.8 x	(0.37)	-21.9 x
197	Vitalhub Corp.	VHI-CA	4.3	178	164	5%	-59%	38%	29	39	4.2 x	7	9	17.6 x	1.35	3.2 x
198	CareMax, Inc.	CMAX-US	7.7	29	460	1728%	-47%	-49%	631	789	0.6 x	22	19	23.9 x	140.40	0.1 x
199	ETAO International Group	ETAO	0.2	18	48	2029%	-21%	-60%	-	-	-	-	-	-	(0.16)	-1.1 x

						Price Performance			Sales			EBITDA			Book Value	
			Price	Mkt Cap ($ Mns)	Ent Val ($ Mns)	% to High	% to Low	% YTD	FY0	FY1	EV/Sales	FY0	FY1	EV/ EBITDA	Book/ Share	P/ Book
Peer Set																
Wearables		Ticker		4,054,543	4,912,784			-6%	938,875	1,009,779	4.9 x	286,188	335,592	14.6 x		6.6 x
200	Apple	AAPL	179.7	2,774,288	2,839,959	11%	-18%	-7%	383,285	388,233	7.3 x	126,233	132,323	21.5 x	4.79	37.5 x
201	Alphabet	GOOGL	137.1	808,166	1,618,275	12%	-35%	-2%	307,394	342,740	4.7 x	122,164	140,398	11.5 x	22.74	6.0 x
202	Samsung Electronics	005930-KR	55.1	329,064	317,964	11%	-19%	-10%	194,013	226,113	1.4 x	33,505	56,735	5.6 x	39.05	1.4 x
203	DexCom, Inc.	DXCM-US	121.7	46,933	46,397	15%	-39%	-2%	3,622	4,327	10.7 x	1,023	1,220	38.0 x	5.37	22.7 x
204	Xiaomi Corporation	1810-HK	1.7	34,892	31,619	28%	-26%	-15%	40,688	37,670	0.8 x	1,528	2,884	11.0 x	0.88	1.9 x
205	Garmin	GRMN	137.4	26,356	24,771	3%	-32%	7%	5,228	5,721	4.3 x	1,271	1,344	18.4 x	36.56	3.8 x
206	Axon Enterprise	AAXN	314.3	23,664	23,183	4%	-44%	22%	1,563	1,927	12.0 x	329	432	53.6 x	21.41	14.7 x
207	Universal Display	OLED	174.7	8,274	7,809	12%	-28%	-9%	576	653	12.0 x	266	297	26.3 x	30.55	5.7 x
208	Tandem Diabetes	TNDM-US	27.6	1,810	1,728	63%	-50%	-7%	748	848	2.0 x	(9)	1	1,963.8 x	4.78	5.8 x
209	GoPro, Inc.	GPRO	2.4	293	275	127%	-9%	-32%	1,005	1,010	0.3 x	(27)	(7)	-	3.71	0.6 x
210	Augmedix, Inc.	AUGX	4.6	218	191	37%	-71%	-10%	31	45	4.3 x	(19)	(15)	-	0.02	257.0 x
211	Catapult Group	CAT-AU	0.8	209	214	17%	-51%	-11%	84	100	2.1 x	(4)	9	23.3 x	0.32	2.6 x
212	QuickLogic	QUIK	16.2	225	226	7%	-69%	17%	21	28	8.2 x	5	10	23.0 x	1.20	13.5 x
213	Vuzix	VUZI	1.7	112	72	250%	-14%	-17%	12	13	5.5 x	(25)	(24)	-	1.51	1.1 x
214	Zepp Health	ZEPP	1.2	39	100	71%	-22%	-14%	603	353	0.3 x	(51)	(14)	-	6.27	0.2 x

						Price Performance			Sales			EBITDA			Book Value	
			Price	Mkt Cap ($ Mns)	Ent Val ($ Mns)	% to High	% to Low	% YTD	FY0	FY1	EV/Sales	FY0	FY1	EV/ EBITDA	Book/ Share	P/ Book
Peer Set																
Medical Devices		Ticker		1,187,551	1,261,233			6%	264,135	277,286	4.5 x	63,023	66,231	19.0 x		3.9 x
215	Abbott Laboratories	ABT-US	118.6	205,828	214,390	2%	-24%	8%	40,109	41,992	5.1 x	10,264	10,779	19.9 x	22.26	5.3 x
216	Boston Scientific	BSX-US	67.1	98,486	106,860	1%	-31%	16%	14,240	15,586	6.9 x	4,037	4,530	23.6 x	13.16	5.1 x
217	Edwards Lifesciences	EW-US	85.2	51,243	50,122	11%	-29%	12%	6,005	6,522	7.7 x	1,902	2,100	23.9 x	11.06	7.7 x
218	Shenzhen Mindray	300760-CN	40.3	48,873	46,068	15%	-14%	-1%	4,383	4,944	9.3 x	1,610	1,852	24.9 x	4.23	9.5 x
219	HOYA CORPORATION	7741-JP	132.8	46,604	43,556	1%	-31%	6%	5,365	5,076	8.6 x	1,945	1,782	24.4 x	16.79	7.9 x
220	Alcon AG	ALC-CH	86.0	42,977	46,688	1%	-26%	12%	9,370	9,928	4.7 x	2,286	2,565	18.2 x	39.97	2.2 x
221	GE Healthcare	GEHC-US	92.7	42,221	50,233	1%	-33%	20%	19,552	20,305	2.5 x	3,507	3,706	13.6 x	15.67	5.9 x
222	ResMed Inc.	RMD-US	174.6	25,683	26,970	39%	-24%	2%	4,223	4,635	5.8 x	1,343	1,535	17.6 x	30.47	5.7 x
223	West Pharmaceutical	WST-US	358.7	26,294	25,774	16%	-14%	2%	2,950	3,011	8.6 x	829	841	30.6 x	39.20	9.2 x
224	Terumo Corporation	4543-JP	39.5	29,504	29,618	2%	-37%	21%	6,009	6,065	4.9 x	1,389	1,438	20.6 x	10.93	3.6 x
225	Straumann Holding	STMN-CH	161.3	25,719	25,838	6%	-33%	0%	2,743	2,907	8.9 x	805	879	29.4 x	13.08	12.3 x
226	Coloplast A/S	COLO.B-DK	133.3	28,019	33,016	10%	-26%	19%	3,520	4,009	8.2 x	1,140	1,299	25.4 x	9.77	13.6 x
227	Sartorius Stedim	DIM-FR	274.2	26,693	29,253	24%	-38%	4%	3,015	3,255	9.0 x	848	1,008	29.0 x	30.97	8.9 x
228	Align Technology,	ALGN-US	300.0	22,532	21,820	38%	-41%	9%	3,862	4,043	5.4 x	964	1,012	21.6 x	49.64	6.0 x
229	Baxter International	BAX-US	41.0	20,826	32,020	22%	-24%	6%	14,813	15,104	2.1 x	3,082	3,100	10.3 x	16.55	2.5 x

230	Koninklijke Philips	PHIA-NL	20.3	18,589	24,910	19%	-26%	-12%	19,620	20,525	1.2 x	3,264	3,325	7.5 x	14.36	1.4 x
231	Sonova Holding	SOON-CH	312.4	18,628	20,562	7%	-27%	-4%	4,172	4,175	4.9 x	1,132	1,075	19.1 x	40.20	7.8 x
232	Cooper Companies	COO-US	102.2	20,309	23,007	2%	-26%	8%	3,593	3,875	5.9 x	1,028	1,148	20.0 x	38.73	2.6 x
233	Olympus Corp.	7733-JP	14.2	17,216	15,578	33%	-14%	5%	6,478	6,185	2.5 x	1,859	1,019	15.3 x	4.23	3.3 x
234	Hologic, Inc.	HOLX-US	73.7	17,288	17,456	19%	-13%	3%	4,030	4,029	4.3 x	1,298	1,319	13.2 x	19.84	3.7 x
235	Insulet Corporation	PODD-US	169.3	11,835	12,567	98%	-26%	-22%	1,697	1,963	6.4 x	327	381	33.0 x	10.48	16.1 x
236	Revvity, Inc.	RVTY-US	107.1	13,233	15,806	30%	-26%	-2%	2,751	2,817	5.6 x	834	849	18.6 x	63.79	1.7 x
237	Cochlear Limited	COH-AU	219.8	14,398	14,163	4%	-33%	8%	1,270	1,492	9.5 x	308	398	35.6 x	17.71	12.4 x
238	bioMerieux SA	BIM-FR	111.2	13,158	13,223	4%	-19%	0%	3,787	4,009	3.3 x	925	895	14.8 x	33.23	3.3 x
239	Teleflex Incorporated	TFX-US	223.0	10,494	11,982	24%	-20%	-11%	2,974	3,093	3.9 x	842	892	13.4 x	92.43	2.4 x
240	Sysmex Corporation	6869-JP	56.0	11,748	11,353	31%	-20%	1%	3,034	3,042	3.7 x	777	776	14.6 x	13.06	4.3 x
241	Shanghai United	688271-CN	19.2	11,371	14,230	27%	-28%	1038%	1,342	1,606	8.9 x	299	288	49.4 x	3.04	6.3 x
242	Demant A/S	DEMANT-DK	51.4	11,501	13,312	6%	-42%	19%	3,233	3,411	3.9 x	810	901	14.8 x	6.09	8.4 x
243	QIAGEN NV	QGEN-US	43.5	9,618	10,085	13%	-18%	-3%	1,970	2,013	5.0 x	660	706	14.3 x	17.20	2.5 x
244	Penumbra, Inc.	PEN-US	236.7	9,160	9,135	47%	-24%	-6%	1,059	1,244	7.3 x	120	164	55.6 x	30.48	7.8 x
245	Carl Zeiss	AFX-DE	125.9	11,261	11,569	20%	-39%	15%	2,253	2,446	4.7 x	467	470	24.6 x	26.13	4.8 x
246	Imeik Technology	300896-CN	44.6	9,655	9,101	94%	-17%	8%	278	403	22.6 x	205	295	30.9 x	4.18	10.7 x
247	Fisher & Paykel	FPH-NZ	15.1	8,818	8,943	15%	-22%	1%	955	1,055	8.5 x	260	285	31.4 x	1.83	8.2 x
248	Shockwave Medical	SWAV-US	263.4	9,851	9,591	20%	-40%	38%	730	921	10.4 x	169	226	42.5 x	16.30	16.2 x

249	Bio-Rad Laboratories	BIO-US	332.3	7,783	9,118	51%	-21%	3%	2,671	2,698	3.4 x	536	497	18.3 x	306.51	1.1 x
250	Shenzhen New	300832-CN	11.2	8,801	8,345	3%	-36%	2%	443	547	15.3 x	221	261	32.0 x	1.26	8.9 x
251	DENTSPLY SIRONA	XRAY-US	33.3	6,899	8,704	30%	-21%	-7%	3,965	3,997	2.2 x	691	740	11.8 x	15.89	2.1 x
252	Masimo Corporation	MASI-US	126.5	6,693	7,551	57%	-41%	8%	2,048	2,102	3.6 x	394	393	19.2 x	25.85	4.9 x
253	Inspire Medical	INSP-US	183.5	5,429	4,986	80%	-33%	-10%	625	781	6.4 x	27	47	105.8 x	19.37	9.5 x
254	Convatec Group	CTEC-GB	3.2	6,495	7,649	10%	-25%	2%	2,142	2,268	3.4 x	531	580	13.2 x	0.80	4.0 x
255	SCHOTT Pharma	1SXP-DE	42.7	6,430	6,483	10%	-33%	15%	976	1,073	6.0 x	258	287	22.6 x	4.96	8.6 x
256	Getinge AB	GETI.B-SE	20.1	5,098	6,017	33%	-20%	-10%	3,050	3,268	1.8 x	548	634	9.5 x	10.70	1.9 x
257	Asahi Intecc	7747-JP	20.7	5,629	5,493	4%	-23%	2%	621	697	7.9 x	178	209	26.3 x	3.40	6.1 x
258	DiaSorin S.p.A.	DIA-IT	100.2	5,606	6,317	21%	-15%	2%	1,436	1,251	5.0 x	521	407	15.5 x	30.38	3.3 x
259	QuidelOrtho Corporation	QDEL-US	45.5	3,044	5,513	117%	-8%	-38%	2,998	2,822	2.0 x	723	611	9.0 x	75.05	0.6 x
260	Merit Medical	MMSI-US	76.3	4,418	4,707	12%	-18%	0%	1,257	1,320	3.6 x	261	290	16.2 x	20.78	3.7 x
261	Glaukos Corporation	GKOS-US	88.8	4,394	4,446	9%	-50%	12%	315	357	12.5 x	(68)	(61)	-	9.40	9.4 x
262	Jiangsu Yuyue	002223-CN	5.0	4,657	4,211	6%	-15%	3%	1,025	1,171	3.6 x	253	342	12.3 x	1.62	3.1 x
263	Envista Holdings	NVST-US	20.9	3,589	4,401	96%	-4%	-13%	2,567	2,604	1.7 x	463	430	10.2 x	24.34	0.9 x
264	Giant Biogene	2367-HK	4.6	4,537	4,068	64%	-21%	2%	343	474	8.6 x	170	221	18.4 x	0.50	9.2 x
265	Haemonetics Corporation	HAE-US	74.2	3,766	4,177	28%	-5%	-13%	1,169	1,295	3.2 x	280	358	11.7 x	18.57	4.0 x
266	Ambu A/S	AMBU.B-DK	17.7	4,148	4,753	4%	-47%	15%	685	770	6.2 x	87	125	38.0 x	2.96	6.0 x
267	Sichuan Kelun	002422-CN	3.8	4,596	6,235	24%	-21%	-7%	2,761	2,984	2.1 x	507	561	11.1 x	1.78	2.1 x

268	Autobio Diagnostics	603658-CN	8.9	5,220	5,291	5%	-37%	12%	645	635	8.3 x	242	247	21.4 x	1.97	4.5 x
269	iRhythm Technologies	IRTC-US	120.5	3,734	3,704	16%	-42%	13%	493	581	6.4 x	(5)	21	177.2 x	6.79	17.8 x
270	Lantheus Holdings	LNTH-US	64.6	4,429	4,519	56%	-22%	4%	1,296	1,425	3.2 x	607	702	6.4 x	11.68	5.5 x
271	APT Medical	688617-CN	62.5	4,180	4,030	7%	-36%	14%	177	231	17.5 x	69	88	46.0 x	3.70	16.9 x
272	Axonics, Inc.	AXNX-US	67.7	3,454	3,097	3%	-30%	9%	366	445	7.0 x	47	68	45.3 x	12.56	5.4 x
273	Inari Medical	NARI-US	45.4	2,631	2,303	58%	-10%	-30%	494	588	3.9 x	(4)	(22)	-	8.05	5.6 x
274	Enovis Corporation	ENOV-US	60.4	3,298	3,732	10%	-29%	8%	1,707	2,102	1.8 x	269	369	10.1 x	62.61	1.0 x
275	Integra LifeSciences	IART-US	36.0	2,815	4,227	65%	-7%	-17%	1,542	1,616	2.6 x	370	383	11.0 x	20.31	1.8 x
276	Shandong Weigao	1066-HK	0.6	2,923	2,776	179%	-11%	-34%	1,982	1,862	1.5 x	578	471	5.9 x	0.66	1.0 x
277	iRay Technology	688301-CN	33.0	3,362	3,253	45%	-20%	-28%	226	264	12.3 x	93	104	31.2 x	5.63	5.9 x
278	Medacta Group	MOVE-CH	143.5	2,870	3,048	9%	-28%	-4%	465	561	5.4 x	126	152	20.0 x	16.56	8.7 x
279	Lepu Medical	300003-CN	2.1	3,381	4,092	74%	-23%	-7%	1,533	1,232	3.3 x	476	393	10.4 x	1.20	1.7 x
280	CONMED Corporation	CNMD-US	80.0	2,461	3,442	73%	-1%	-27%	1,245	1,350	2.6 x	235	279	12.4 x	27.12	2.9 x
281	Guardant Health	GH-US	19.0	2,309	2,511	116%	-4%	-30%	564	664	3.8 x	(476)	(333)	-	1.30	14.5 x
282	TransMedics Group	TMDX-US	82.7	2,706	2,791	20%	-56%	5%	242	367	7.6 x	(12)	27	101.5 x	4.20	19.7 x
283	Winner Medical	300888-CN	4.9	2,929	2,216	45%	-18%	-5%	1,641	1,185	1.9 x	341	274	8.1 x	3.11	1.6 x
284	Elekta AB	EKTA.B-SE	7.5	2,781	3,378	15%	-15%	-7%	1,559	1,774	1.9 x	248	327	10.3 x	2.59	2.9 x
285	LivaNova Plc	LIVN-US	55.2	2,981	3,067	8%	-27%	7%	1,150	1,210	2.5 x	219	251	12.2 x	23.70	2.3 x
286	RadNet, Inc.	RDNT	44.4	3,037	4,387	10%	-49%	28%	1,617	1,746	2.5 x	232	268	16.4 x	9.28	4.8 x

287	Telix Pharmaceuticals	TLX-AU	7.8	2,525	2,444	10%	-45%	13%	330	457	5.4 x	16	58	42.0 x	0.30	26.0 x
288	ICU Medical	ICUI-US	105.4	2,544	4,061	102%	-26%	6%	2,213	2,277	1.8 x	376	352	11.5 x	87.95	1.2 x
289	Ovctek China	300595-CN	2.9	2,567	2,341	95%	-26%	-10%	222	235	10.0 x	122	119	19.7 x	0.66	4.3 x
290	Vitrolife AB	VITR-SE	17.8	2,416	2,538	31%	-38%	-8%	335	367	6.9 x	110	123	20.6 x	9.08	2.0 x
291	Sonoscape Medical	300633-CN	5.4	2,331	2,106	63%	-19%	-19%	256	301	7.0 x	61	81	25.9 x	0.99	5.5 x
292	Eyebright Medical	688050-CN	23.2	2,437	2,386	47%	-22%	-5%	84	129	18.5 x	48	58	40.8 x	2.74	8.4 x
293	Jafron Biomedical	300529-CN	2.9	2,318	2,143	65%	-23%	-6%	363	285	7.5 x	161	97	22.1 x	0.55	5.2 x
294	Ansell Limited	ANN-AU	15.3	1,929	2,252	25%	-13%	-10%	1,655	1,630	1.4 x	276	245	9.2 x	12.06	1.3 x
295	InMode Ltd.	INMD-US	22.9	1,932	1,253	110%	-19%	3%	492	499	2.5 x	220	220	5.7 x	9.38	2.4 x
296	Hartalega Holdings	5168-MY	0.5	1,842	1,516	22%	-40%	-8%	541	418	3.6 x	(17)	33	46.3 x	0.29	1.9 x
297	Micro-Tech (Nanjing)	688029-CN	10.2	1,912	1,748	38%	-21%	-25%	286	333	5.2 x	51	73	24.0 x	2.60	3.9 x
298	NovoCure Limited	NVCR-US	16.3	1,740	1,407	414%	-33%	9%	509	540	2.6 x	(106)	(132)	-	3.39	4.8 x
299	Top Glove	7113-MY	0.2	1,392	1,528	62%	-14%	-11%	479	657	2.3 x	(35)	62	24.7 x	0.12	1.4 x
300	Nakanishi Inc.	7716-JP	15.8	1,486	1,172	63%	-16%	4%	396	524	2.2 x	118	-	-	8.87	1.8 x
301	CLASSYS, Inc.	214150-KR	24.1	1,564	1,504	38%	-41%	-17%	135	169	8.9 x	70	90	16.6 x	3.18	7.6 x
302	STAAR Surgical	STAA-US	33.3	1,628	1,475	120%	-20%	7%	322	337	4.4 x	57	36	40.7 x	7.90	4.2 x
303	Lunit, Inc.	328130-KR	45.7	1,313	1,116	115%	-72%	-17%	19	40	27.8 x	(30)	(10)	-	1.47	31.1 x
304	Butterfly Networks	BFLY	1.3	235	145	123%	-42%	20%	66	73	2.0 x	(68)	(60)	-	1.06	1.2 x
305	Hyperfine, Inc.	HYPR	1.1	63	(7)	195%	-18%	-1%	7	12	-0.5 x	(62)	(55)	-	1.31	0.8 x

306	SeaStar Medical, Inc.	ICU	0.8	51	32	287%	-79%	78%	-	-	-	-	-	-	(0.58)	-1.4 x
307	OneMedNet Corp	ONMD	0.8	26	8	1592%	-47%	-1%	-	-	-	-	-	-	1.57	0.5 x
308	Envoy Medical Corp	COCH	6.3	122	106	88%	-88%	245%	0	0	341.7 x	-	-	-	0.24	25.5 x
309	BioSig Technologies	BSGM	0.7	7	6	2240%	-63%	-85%	0	2	4.0 x	-	-	-	(0.15)	-4.8 x
310	Rapid Dose Therapeutics	DOSE-CA	0.1	13	15	63%	-55%	-3%	-	-	-	-	-	-	(0.03)	-3.8 x
311	Intelligent Bio Solutions	INBS	5.5	12	99	1296%	-59%	36%	1	-	-	-	-	-	0.19	29.8 x

						Price Performance			Sales			EBITDA			Book Value	
			Price	Mkt Cap ($ Mns)	Ent Val ($ Mns)	% to High	% to Low	% YTD	FY0	FY1	EV/Sales	FY0	FY1	EV/ EBITDA	Book/ Share	P/ Book
Peer Set																
Biopharma		Ticker		4,434,278	4,863,986			8%	915,902	968,560	5.0 x	283,704	332,608	14.6 x		5.1 x
312	Eli Lilly	LLY-US	782.1	743,143	760,290	2%	-60%	34%	34,124	41,328	18.4 x	8,458	14,941	50.9 x	11.35	68.9 x
313	Johnson & Johnson	JNJ-US	162.1	390,509	396,645	9%	-11%	3%	85,159	88,398	4.5 x	32,267	33,435	11.9 x	28.57	5.7 x
314	Novo Nordisk	NOVO.B-DK	123.7	424,885	550,961	4%	-45%	21%	33,848	42,023	13.1 x	16,270	20,350	27.1 x	3.47	35.6 x
315	Merck & Co.	MRK-US	127.0	321,544	347,517	3%	-22%	16%	60,115	63,780	5.4 x	9,062	28,955	12.0 x	14.84	8.6 x
316	Novartis AG	NOVN-CH	101.8	231,955	221,409	7%	-21%	13%	45,440	48,258	4.6 x	17,993	19,081	11.6 x	21.82	4.7 x
317	AstraZeneca	AZN-GB	127.5	197,725	220,402	21%	-6%	-6%	45,811	50,985	4.3 x	14,887	17,739	12.4 x	25.06	5.1 x
318	Roche Holding	ROG-CH	263.5	185,117	235,026	23%	-4%	-8%	68,152	68,431	3.4 x	25,382	25,685	9.2 x	41.76	6.3 x
319	Amgen Inc.	AMGN-US	280.3	150,234	175,816	18%	-24%	-3%	28,190	33,050	5.3 x	17,338	17,146	10.3 x	11.64	24.1 x
320	Pfizer Inc.	PFE-US	26.6	150,148	169,812	59%	-4%	-8%	58,496	60,004	2.8 x	11,519	19,222	8.8 x	15.77	1.7 x
321	Sanofi	SAN-FR	94.6	119,656	129,458	23%	-10%	-4%	46,641	51,614	2.5 x	15,754	15,350	8.4 x	64.03	1.5 x
322	Vertex Pharmaceuticals	VRTX-US	432.8	111,785	100,330	4%	-34%	6%	9,869	10,711	9.4 x	4,551	5,169	19.4 x	68.22	6.3 x
323	Regeneron Pharmaceuticals	REGN-US	982.8	106,089	100,310	2%	-30%	12%	13,117	13,923	7.2 x	5,360	5,516	18.2 x	237.41	4.1 x
324	Bristol-Myers Squibb	BMY-US	50.9	102,909	134,441	40%	-7%	-1%	45,006	46,000	2.9 x	20,371	19,100	7.0 x	14.56	3.5 x
325	Gilead Sciences,	GILD-US	72.3	90,082	107,034	22%	-1%	-11%	27,116	27,494	3.9 x	12,160	13,118	8.2 x	18.33	3.9 x
326	CSL Limited	CSL-AU	184.5	89,111	101,780	14%	-21%	-6%	13,310	14,706	6.9 x	4,116	4,883	20.8 x	33.93	5.4 x

327	GSK Plc	GSK-GB	21.0	86,571	100,953	2%	-21%	15%	38,621	40,121	2.5 x	12,867	13,403	7.5 x	4.16	5.1 x
328	Chugai Pharmaceutical	4519-JP	40.7	68,325	62,824	5%	-41%	10%	7,496	7,341	8.6 x	3,177	3,313	19.0 x	6.60	6.2 x
329	Daiichi Sankyo	4568-JP	33.3	64,808	60,517	11%	-29%	23%	9,532	10,574	5.7 x	1,401	1,683	36.0 x	5.53	6.0 x
330	Takeda Pharmaceutical	4502-JP	29.2	46,262	75,373	18%	-10%	3%	29,766	27,369	2.8 x	9,108	7,257	10.4 x	28.71	1.0 x
331	Moderna, Inc.	MRNA-US	95.1	36,320	30,195	72%	-34%	-4%	6,848	4,223	7.2 x	(3,637)	(2,825)	-	36.27	2.6 x
332	Sun Pharmaceutical	524715-IN	18.8	45,105	43,963	3%	-41%	24%	5,294	5,867	7.5 x	1,415	1,584	27.8 x	3.01	6.3 x
333	Haleon plc.	HLN-GB	4.2	38,578	49,458	6%	-11%	2%	14,296	14,540	3.4 x	3,537	3,660	13.5 x	2.25	1.9 x
334	Jiangsu Hengrui	600276-CN	5.9	37,679	35,212	24%	-16%	-7%	3,088	3,265	10.8 x	557	692	50.9 x	0.87	6.8 x
335	Bayer Aktiengesellschaft	BAYN-DE	30.7	30,157	68,100	121%	-9%	-17%	51,789	51,696	1.3 x	12,726	11,524	5.9 x	36.27	0.8 x
336	Celltrion, Inc.	068270-KR	135.0	29,426	19,546	37%	-28%	-14%	1,650	2,380	8.2 x	676	804	24.3 x	23.05	5.9 x
337	Alnylam Pharmaceuticals	ALNY-US	152.6	19,221	19,455	43%	-6%	-20%	1,828	1,844	10.5 x	(230)	(346)	-	(1.75)	-87.0 x
338	argenx SE	ARGX-BE	389.3	23,088	18,625	41%	-24%	3%	1,269	1,816	10.3 x	(355)	(43)	-	50.66	7.7 x
339	Otsuka Holdings	4578-JP	40.3	22,495	19,916	2%	-28%	10%	13,401	14,222	1.4 x	2,327	2,946	6.8 x	29.47	1.4 x
340	Astellas Pharma	4503-JP	11.2	20,185	24,439	52%	-5%	-6%	11,153	10,579	2.3 x	2,226	1,744	14.0 x	5.60	2.0 x
341	Genmab A/S	GMAB-DK	293.2	19,373	15,099	48%	-10%	-7%	2,378	2,878	5.2 x	814	966	15.6 x	70.24	4.2 x
342	UCB S.A.	UCB-BE	117.6	22,878	24,607	1%	-41%	38%	5,690	6,128	4.0 x	1,462	1,481	16.6 x	51.18	2.3 x
343	BeiGene, Ltd.	6160-HK	12.4	15,390	14,240	72%	-15%	-12%	2,459	3,009	4.7 x	(1,098)	(803)	-	2.60	4.8 x
344	Shionogi &	4507-JP	50.7	15,584	13,073	6%	-20%	12%	3,174	2,971	4.4 x	1,249	1,180	11.1 x	27.73	1.8 x
345	Viatris Inc.	VTRS-US	12.6	14,951	32,359	8%	-31%	16%	15,427	15,362	2.1 x	5,124	4,957	6.5 x	17.05	0.7 x

346	Eisai Co.,	4523-JP	41.4	12,270	11,029	95%	-2%	-15%	5,468	4,926	2.2 x	608	599	18.4 x	19.06	2.2 x
347	Neurocrine Biosciences	NBIX-US	131.3	13,065	12,138	9%	-32%	0%	1,887	2,214	5.5 x	271	668	18.2 x	22.61	5.8 x
348	Incyte Corporation	INCY-US	59.1	13,258	9,766	29%	-15%	-6%	3,696	4,135	2.4 x	783	1,064	9.2 x	23.14	2.6 x
349	Teva Pharmaceutical	TEVA-IL	13.2	14,748	33,795	5%	-46%	23%	15,846	16,120	2.1 x	4,818	4,827	7.0 x	6.75	1.9 x
350	Royalty Pharma	RPRX-US	29.9	13,369	22,005	28%	-13%	7%	2,895	2,671	8.2 x	2,472	2,493	8.8 x	14.61	2.0 x
351	Cipla Limited	500087-IN	17.7	14,320	13,881	2%	-42%	18%	2,822	3,113	4.5 x	612	761	18.2 x	3.71	4.8 x
352	Karuna Therapeutics	KRTX-US	316.2	12,064	10,716	2%	-50%	0%	1	55	194.2 x	(456)	(488)	-	32.94	9.6 x
353	Dr. Reddy's	500124-IN	74.7	12,468	11,791	5%	-30%	8%	2,995	3,340	3.5 x	775	950	12.4 x	19.40	3.9 x
354	Recordati Industria	REC-IT	56.3	11,774	13,270	3%	-29%	6%	2,251	2,502	5.3 x	832	922	14.4 x	9.06	6.2 x
355	Sarepta Therapeutics,	SRPT-US	128.7	12,076	11,698	24%	-57%	33%	1,243	1,866	6.3 x	(90)	355	32.9 x	9.17	14.0 x
356	United Therapeutics	UTHR-US	231.9	10,914	8,834	13%	-12%	5%	2,328	2,686	3.3 x	1,257	1,422	6.2 x	127.23	1.8 x
357	Mankind Pharma	543904-IN	25.9	10,377	10,144	7%	-42%	9%	1,058	1,245	8.2 x	232	301	33.7 x	2.54	10.2 x
358	Swedish Orphan	SOBI-SE	25.3	8,959	10,605	14%	-31%	0%	2,107	2,345	4.5 x	707	866	12.2 x	9.80	2.6 x
359	Ipsen SA	IPN-FR	110.0	9,218	9,015	27%	-2%	-6%	3,366	3,730	2.4 x	1,234	1,319	6.8 x	50.09	2.2 x
360	Beijing Wantai	603392-CN	10.4	13,177	12,475	30%	-47%	-2%	1,627	853	14.6 x	800	453	27.5 x	1.46	7.1 x
361	Hansoh Pharmaceutical	3692-HK	1.7	10,322	7,696	20%	-31%	-14%	1,363	1,403	5.5 x	460	490	15.7 x	0.56	3.1 x
362	Ono Pharmaceutical	4528-JP	16.6	8,573	7,013	30%	-4%	1%	3,327	3,398	2.1 x	1,215	1,275	5.5 x	11.04	1.5 x
363	CSPC Pharmaceutical	1093-HK	0.8	9,274	7,853	45%	-15%	-16%	4,490	4,423	1.8 x	1,180	1,183	6.6 x	0.37	2.1 x
364	Roivant Sciences	ROIV-US	11.8	9,485	8,935	12%	-44%	5%	61	589	15.2 x	(1,202)	311	28.7 x	7.57	1.6 x

365	ImmunoGen, Inc.	IMGN-US	31.2	4,675	7,807	0%	-88%	-44%	109	384	20.3 x	(219)	6	1,301.2 x	2.11	14.8 x
366	Jazz Pharmaceuticals	JAZZ-US	118.9	7,410	11,607	25%	-6%	-3%	3,834	4,100	2.8 x	1,685	1,784	6.5 x	60.03	2.0 x
367	Apellis Pharmaceuticals	APLS-US	63.9	7,704	7,635	48%	-69%	7%	397	782	9.8 x	(495)	(127)	-	1.63	39.3 x
368	Cerevel Therapeutics	CERE-US	41.1	7,454	7,241	6%	-52%	-3%	0	0	-	(354)	(417)	-	3.71	11.1 x
369	Exelixis, Inc.	EXEL-US	22.2	6,743	5,822	9%	-27%	-7%	1,830	1,914	3.0 x	228	486	12.0 x	7.48	3.0 x
370	Intra-Cellular Therapies	ITCI-US	71.5	6,921	6,413	6%	-41%	0%	464	659	9.7 x	(159)	(88)	-	6.14	11.7 x
371	Innovent Biologics	1801-HK	5.1	8,228	7,112	26%	-31%	-7%	662	818	8.7 x	(348)	(143)	-	0.96	5.3 x
372	BridgeBio Pharma	BBIO-US	35.6	6,265	7,427	24%	-67%	-12%	9	25	299.4 x	(539)	(513)	-	(7.73)	-4.6 x
373	Immunovant, Inc.	IMVT-US	35.3	5,129	4,853	29%	-60%	-16%	0	0	-	(218)	(270)	-	4.68	7.5 x
374	SK Biopharmaceuticals	326030-KR	72.8	5,699	5,656	10%	-40%	-7%	266	364	15.6 x	(17)	45	124.3 x	2.74	26.6 x
375	Bausch + Lomb	BLCO-US	16.5	5,779	9,951	33%	-17%	-3%	4,146	4,649	2.1 x	738	862	11.5 x	19.52	0.8 x
376	Revolution Medicines	RVMD-US	29.8	4,908	4,157	19%	-48%	4%	12	6	713.2 x	(483)	(587)	-	11.09	2.7 x
377	Alkermes Public	ALKS-US	30.2	5,052	4,545	11%	-27%	9%	1,663	1,530	3.0 x	324	512	8.9 x	7.20	4.2 x
378	Halozyme Therapeutics	HALO-US	41.1	5,214	6,258	13%	-27%	11%	829	956	6.5 x	426	555	11.3 x	0.66	62.2 x
379	Madrigal Pharmaceuticals	MDGL-US	251.6	5,007	4,885	28%	-52%	9%	0	90	54.2 x	(380)	(541)	-	20.39	12.3 x
380	Nuvalent, Inc.	NUVL-US	87.2	5,111	5,171	3%	-74%	18%	0	0	-	(149)	(207)	-	10.94	8.0 x
381	Akeso Inc.	9926-HK	6.0	5,017	4,596	10%	-35%	1%	121	658	7.0 x	(185)	315	14.6 x	0.85	7.0 x
382	ALVOTECH	ALVO	15.8	4,212	5,159	14%	-57%	37%	85	86	60.0 x	(244)	(205)	-	(2.47)	-6.4 x
383	Insmed Incorporated	INSM-US	28.1	4,167	4,720	14%	-43%	-9%	305	357	13.2 x	(697)	(667)	-	(2.24)	-12.5 x

384	Walvax Biotechnology	300142-CN	2.6	4,033	3,908	122%	-22%	-22%	739	568	6.9 x	207	185	21.1 x	0.83	3.1 x
385	MoonLake Immunotherapeutics	MLTX	50.9	3,052	2,648	28%	-65%	-16%	0	0	-	(53)	(82)	-	8.20	6.2 x
386	Arcellx, Inc.	ACLX-US	66.8	3,528	3,162	10%	-61%	22%	110	80	39.3 x	(85)	(115)	-	9.28	7.2 x
387	Shenzhen Kangtai	300601-CN	3.4	2,948	3,970	49%	-24%	-12%	458	518	7.7 x	75	215	18.4 x	1.19	2.8 x
388	Betta Pharmaceuticals	300558-CN	6.1	2,534	2,788	80%	-24%	-17%	345	389	7.2 x	95	111	25.1 x	1.74	3.5 x
389	Zai Lab	9688-HK	2.1	2,045	1,198	103%	-12%	-25%	267	390	3.1 x	(328)	(311)	-	0.82	2.5 x
390	NewAmsterdam Pharma	NAMS	23.5	2,101	1,523	12%	-76%	111%	14	14	107.0 x	-	(116)	-	3.50	6.7 x
391	Tango Therapeutics	TNGX	11.4	1,167	844	14%	-78%	16%	25	39	21.8 x	(109)	(106)	-	2.72	4.2 x
392	IMMATICS NV	IMTX	12.9	1,302	751	2%	-54%	23%	186	55	13.6 x	37	(109)	-	3.10	4.2 x
393	OmniAb, Inc.	OABI	5.9	687	616	14%	-47%	-4%	59	38	16.3 x	(4)	(39)	-	2.79	2.1 x
394	OCULIS HOLDING AG	OCS	12.0	439	323	21%	-48%	7%	1	10	32.0 x	(87)	(67)	-	3.15	3.8 x
395	PROCAPS GROUP SA	PROC	3.0	336	607	81%	-35%	-27%	425	460	1.3 x	112	98	6.2 x	0.35	8.5 x
396	Nuvation Bio Inc.	NUVB	2.2	488	(126)	7%	-57%	48%	0	0	-	-	-	-	2.76	0.8 x
397	AEON Biopharma, Inc.	AEON	12.9	478	462	14%	-74%	78%	-	-	-	-	-	-	(1.64)	-7.8 x
398	TriSalus Life Sciences, Inc.	TLSI	9.3	246	61	74%	-64%	10%	18	31	2.0 x	-	-	-	(0.49)	-18.9 x
399	Conduit Pharmaceuticals	CDT	2.6	191	17	865%	-63%	-43%	-	-	-	-	-	-	2.73	0.9 x
400	Reviva Pharmaceuticals, Inc.	RVPH	3.8	106	74	143%	-8%	-26%	0	0	-	-	-	-	(0.41)	-9.2 x
401	ProKidney	PROK	1.6	108	1,226	781%	-30%	-10%	0	0	-	(113)	(147)	-	(17.74)	-0.1 x
402	Carmell Therapeutics Corp.	CTCX	3.3	76	65	302%	-49%	-13%	-	-	-	-	-	-	7.90	0.4 x

403	Apollomics Inc.	APLM	0.8	68	(47)	6347%	-29%	-21%	-	-	-	-	-	-	8.69	0.1 x
404	Celularity Inc.	CELU	3.7	80	132	143%	-57%	48%	-	-	-	-	-	-	1.56	2.3 x
405	Clene Nanomedicine, Inc.	CLNN	0.4	50	40	270%	-36%	31%	0	1	71.4 x	(48)	(41)	-	0.17	2.3 x
406	The American Oncology	AONC	6.0	57	61	560%	-20%	2%	-	-	-	-	-	-	0.83	7.2 x
407	SAB Biotherapeutics	SABS	4.4	41	25	229%	-17%	-36%	24	1	19.5 x	-	-	-	2.92	1.5 x
408	NKGen Biotech, Inc.	NKGN	0.8	19	30	1417%	-8%	-69%	-	-	-	-	-	-	(0.35)	-2.4 x
409	Estrella Biopharma, Inc.	ESLA	1.1	39	16	2999%	-19%	-4%	-	-	-	-	-	-	0.26	4.1 x
410	YS Biopharma	YS	0.4	81	81	4198%	-18%	-16%	97	80	1.0 x	(14)	-	-	0.83	0.5 x
411	Dyadic International	DYAI	1.4	40	32	71%	-15%	-13%	3	3	10.6 x	-	-	-	0.27	5.3 x
412	NeuroRx, Inc.	NRXP	0.4	40	38	174%	-50%	-5%	0	0	-	-	-	-	(0.07)	-5.9 x
413	FSD Pharma	HUGE	0.9	35	31	133%	-20%	101%	-	-	-	-	-	-	0.38	2.4 x
414	Calidi Biotherapeutics	CLDI	0.6	22	22	2098%	-23%	-59%	-	-	-	-	-	-	(0.03)	-20.3 x
415	EFFECTOR THERAPEUTICS	EFTR	16.2	42	42	128%	-48%	39%	4	0	-	(32)	-	-	(1.59)	-10.2 x
416	Vincera Pharma Inc.	VINC	4.3	93	74	81%	-86%	267%	0	0	-	-	-	-	0.74	5.9 x
417	Ocean Biomedical	AEHA	2.0	68	78	504%	-74%	203%	-	-	-	-	-	-	(0.25)	-8.1 x
418	Coeptis Therapeutics	COEP	0.5	18	17	305%	-40%	-31%	-	-	-	-	-	-	0.15	3.6 x
419	Alto Neuroscience	ANRO	14.9	360	414	61%	-14%	-	0	0	-	-	-	-	(1.50)	-9.9 x
420	Fractyl Health	GUTS	10.1	479	777	44%	-31%	-	0	0	-	(51)	(74)	-	(6.45)	-1.6 x
421	ArriVent BioPharma	AVBP	20.9	669	807	24%	-12%	-	(2)	(2)	-403.7 x	(73)	(113)	-	(4.15)	-5.1 x

422	Kyverna Therapeutics	KYTX	27.8	1,196	1,213	26%	-6%	-	0	4	323.4 x	(64)	(135)	-	(1.81)	-15.3 x
423	CG Oncology	CGON	44.0	2,924	2,868	14%	-35%	-	0	1	3,823.5 x	(63)	(97)	-	(1.22)	-35.9 x
424	Telomir Pharmaceuticals	TELO	9.1	268	269	129%	-47%	-	-	-	-	-	-	-	0.07	123.0 x
425	Surrozen, Inc.	SRZN	13.3	27	(12)	30%	-66%	41%	13	0	-	(42)	-	-	22.34	0.6 x

						Price Performance			Sales			EBITDA			Book Value	
			Price	Mkt Cap ($ Mns)	Ent Val ($ Mns)	% to High	% to Low	% YTD	FY0	FY1	EV/Sales	FY0	FY1	EV/ EBITDA	Book/ Share	P/ Book
Peer Set																
Healthcare Services		Ticker		2,339,385	2,701,312			2%	2,230,145	2,416,116	1.1 x	181,111	190,827	14.2 x		5.3 x
426	**UnitedHealth Group**	**UNH-US**	489.5	451,314	486,266	13%	-9%	-7%	371,622	400,997	1.2 x	36,796	40,297	12.1 x	96.06	5.1 x
427	**Thermo Fisher**	**TMO-US**	576.3	219,762	252,095	4%	-28%	9%	42,857	42,859	5.9 x	10,851	10,771	23.4 x	120.87	4.8 x
428	**Danaher Corporation**	**DHR-US**	255.9	189,267	200,030	5%	-29%	11%	23,890	24,059	8.3 x	7,504	7,630	26.2 x	72.36	3.5 x
429	**Elevance Health**	**ELV-US**	499.1	116,127	131,236	4%	-17%	6%	170,209	172,582	0.8 x	11,129	12,595	10.4 x	168.64	3.0 x
430	**Zoetis Inc.**	**ZTS-US**	190.8	87,370	92,453	6%	-21%	-3%	8,544	9,177	10.1 x	3,513	4,009	23.1 x	10.90	17.5 x
431	**Cigna Group**	**CI-US**	333.0	97,343	120,110	4%	-28%	11%	195,322	233,880	0.5 x	11,875	12,818	9.4 x	158.03	2.1 x
432	**HCA Healthcare,**	**HCA-US**	312.0	82,518	125,804	4%	-31%	15%	64,968	69,007	1.8 x	12,726	13,240	9.5 x	(6.68)	-46.7 x
433	**McKesson Corporation**	**MCK-US**	525.9	69,105	74,046	2%	-37%	14%	276,711	311,073	0.2 x	5,217	5,322	13.9 x	(15.67)	-33.6 x
434	**Humana Inc.**	**HUM-US**	352.0	42,474	39,662	54%	-4%	-23%	106,374	111,052	0.4 x	5,457	4,023	9.9 x	133.05	2.6 x
435	**IDEXX Laboratories**	**IDXX-US**	576.9	47,932	48,707	1%	-35%	4%	3,661	4,000	12.2 x	1,220	1,368	35.6 x	17.88	32.3 x
436	**SAMSUNG BIOLOGICS**	**207940-KR**	581.3	41,370	41,693	14%	-16%	-2%	2,765	3,203	13.0 x	1,146	1,246	33.5 x	103.72	5.6 x
437	**Cencora, Inc.**	**COR-US**	237.0	47,283	50,627	1%	-38%	15%	262,173	291,824	0.2 x	4,296	4,230	12.0 x	4.57	51.9 x
438	**IQVIA Holdings**	**IQV-US**	252.5	45,820	58,336	2%	-34%	9%	14,984	15,523	3.8 x	3,569	3,747	15.6 x	33.67	7.5 x
439	**Centene Corporation**	**CNC-US**	78.0	41,709	42,717	4%	-22%	5%	153,999	146,094	0.3 x	4,908	4,588	9.3 x	48.35	1.6 x
440	**Agilent Technologies**	**A-US**	139.1	40,750	42,059	6%	-30%	0%	6,826	6,763	6.2 x	2,025	2,009	20.9 x	21.12	6.6 x

441	Lonza Group	LONN-CH	526.1	39,176	40,027	26%	-35%	25%	7,782	7,456	5.4 x	2,271	2,073	19.3 x	157.56	3.3 x
442	Dr. Sulaiman	4013-SA	87.8	30,742	31,483	5%	-32%	16%	2,589	3,167	9.9 x	667	752	41.9 x	4.94	17.8 x
443	Mettler-Toledo International	MTD-US	1,268.0	27,235	29,334	27%	-27%	5%	3,788	3,827	7.7 x	1,206	1,241	23.6 x	(6.97)	-182.0 x
444	Cardinal Health	CAH-US	113.4	27,575	28,487	2%	-40%	12%	205,012	226,823	0.1 x	2,313	2,857	10.0 x	(14.14)	-8.0 x
445	ICON plc	ICLR-US	325.5	26,798	30,701	6%	-44%	15%	8,120	8,640	3.6 x	1,694	1,843	16.7 x	112.02	2.9 x
446	STERIS plc	STE-US	232.8	23,001	26,430	9%	-26%	6%	4,958	5,464	4.8 x	1,437	1,488	17.8 x	64.93	3.6 x
447	Molina Healthcare	MOH-US	387.2	22,613	19,271	6%	-34%	7%	34,072	39,302	0.5 x	1,826	2,081	9.3 x	72.67	5.3 x
448	Laboratory Corp.	LH	218.0	18,334	23,912	12%	-11%	-4%	12,162	12,765	1.9 x	2,106	2,221	10.8 x	93.86	2.3 x
449	Laboratory Corporation	LH-US	218.0	18,334	23,912	12%	-11%	-4%	12,162	12,765	1.9 x	2,106	2,221	10.8 x	93.86	2.3 x
450	Waters Corporation	WAT-US	346.0	20,486	22,732	2%	-33%	5%	2,956	2,981	7.6 x	1,062	1,076	21.1 x	19.44	17.8 x
451	Zhangzhou Pientzehuang	600436-CN	31.0	18,720	18,574	49%	-19%	-9%	1,269	1,406	13.2 x	431	485	38.3 x	3.00	10.4 x
452	AIER Eye Hospital	300015-CN	2.0	18,725	18,284	82%	-15%	-9%	2,328	2,876	6.4 x	693	808	22.6 x	0.28	7.1 x
453	Fresenius SE	FRE-DE	28.0	15,746	42,395	20%	-12%	-9%	24,095	25,059	1.7 x	3,917	4,068	10.4 x	38.88	0.7 x
454	Avantor, Inc.	AVTR-US	25.0	16,957	22,304	3%	-33%	10%	6,967	6,976	3.2 x	1,308	1,232	18.1 x	7.76	3.2 x
455	Quest Diagnostics	DGX-US	124.7	13,803	18,722	19%	-4%	-10%	9,252	9,401	2.0 x	1,816	1,909	9.8 x	56.82	2.2 x
456	Sartorius AG	SRT3-DE	381.1	14,268	32,283	18%	-40%	13%	3,687	3,970	8.1 x	1,025	1,196	27.0 x	32.70	11.7 x
457	Rede D'Or	RDOR3-BR	5.1	11,763	13,138	55%	-27%	-12%	4,385	9,765	1.3 x	1,017	1,379	9.5 x	2.03	2.5 x
458	Wuxi Biologics	2269-HK	2.4	10,226	9,889	209%	-22%	-37%	2,236	2,339	4.2 x	863	806	12.3 x	1.22	2.0 x
459	Bangkok Dusit	BDMS-TH	0.8	12,378	12,763	17%	-11%	-4%	2,802	3,035	4.2 x	678	726	17.6 x	0.17	4.7 x

460	Eurofins Scientific	ERF-FR	60.2	11,614	15,716	19%	-21%	-7%	7,067	7,667	2.0 x	1,480	1,608	9.8 x	22.98	2.6 x
461	Charles River	CRL-US	264.4	13,576	16,361	2%	-39%	12%	4,129	4,225	3.9 x	1,009	1,091	15.0 x	70.06	3.8 x
462	Fresenius Medical	FME-DE	38.6	11,328	24,270	43%	-17%	-8%	21,056	21,485	1.1 x	3,581	3,740	6.5 x	50.23	0.8 x
463	Divi's Laboratories	532488-IN	42.0	11,139	10,706	17%	-21%	-11%	940	926	11.6 x	288	258	41.4 x	5.76	7.3 x
464	Yunnan Baiyao	000538-CN	7.0	11,816	11,134	23%	-11%	2%	5,310	5,557	2.0 x	558	750	14.9 x	3.11	2.3 x
465	IHH Healthcare	5225-MY	1.3	11,396	13,606	5%	-6%	-1%	4,412	4,660	2.9 x	1,098	1,020	13.3 x	0.70	1.9 x
466	Apollo Hospitals	508869-IN	73.4	10,549	11,008	13%	-31%	7%	2,007	2,308	4.8 x	248	294	37.4 x	5.46	13.4 x
467	Repligen Corporation	RGEN-US	195.5	10,904	10,692	8%	-44%	9%	599	640	16.7 x	128	125	85.6 x	35.35	5.5 x
468	Bruker Corporation	BRKR-US	88.3	12,160	13,714	3%	-39%	20%	2,965	3,250	4.2 x	615	658	20.8 x	9.49	9.3 x
469	Sonic Healthcare	SHL-AU	19.0	9,101	10,724	30%	-6%	-13%	5,246	5,766	1.9 x	1,097	1,098	9.8 x	10.54	1.8 x
470	Henry Schein	HSIC-US	76.9	9,880	13,508	12%	-22%	2%	12,339	13,380	1.0 x	984	1,154	11.7 x	28.28	2.7 x
471	Universal Health	UHS-US	171.1	10,262	16,846	4%	-34%	12%	14,282	15,411	1.1 x	1,742	1,955	8.6 x	91.53	1.9 x
472	Catalent, Inc	CTLT-US	57.2	10,336	15,080	30%	-45%	27%	4,276	4,379	3.4 x	714	713	21.2 x	20.41	2.8 x
473	Medpace Holdings	MEDP-US	404.2	12,434	12,471	4%	-59%	32%	1,886	2,190	5.7 x	362	418	29.8 x	18.22	22.2 x
474	Chongqing Zhifei	300122-CN	7.4	10,463	17,878	33%	-23%	-15%	5,568	6,892	2.6 x	1,355	1,518	11.8 x	1.74	4.2 x
475	Chemed Corporation	CHE-US	613.8	9,279	9,208	6%	-20%	5%	2,264	2,423	3.8 x	452	515	17.9 x	73.69	8.3 x
476	Max Healthcare	543220-IN	8.9	8,632	8,496	23%	-43%	7%	716	828	10.3 x	190	222	38.3 x	0.97	9.1 x
477	Tenet Healthcare	THC-US	94.3	9,429	27,129	4%	-47%	25%	20,548	20,275	1.3 x	3,541	3,395	8.0 x	16.09	5.9 x
478	Shimadzu Corporation	7701-JP	27.5	8,155	7,103	20%	-16%	-1%	3,587	3,423	2.1 x	637	612	11.6 x	10.30	2.7 x

479	Acadia Healthcare	ACHC-US	84.0	7,751	9,172	5%	-21%	8%	2,929	3,221	2.8 x	678	742	12.4 x	30.48	2.8 x
480	Ramsay Health	RHC-AU	35.6	8,163	16,184	31%	-16%	0%	9,892	11,019	1.5 x	1,291	1,400	11.6 x	13.06	2.7 x
481	Elanco Animal	ELAN-US	16.0	7,902	13,440	5%	-51%	8%	4,417	4,500	3.0 x	979	986	13.6 x	12.63	1.3 x
482	China Resources	000999-CN	7.5	7,447	7,574	32%	-27%	9%	2,625	3,598	2.1 x	496	582	13.0 x	2.63	2.9 x
483	Amplifon SpA	AMP-IT	34.0	7,700	9,202	16%	-24%	-1%	2,261	2,482	3.7 x	561	593	15.5 x	5.13	6.6 x
484	Huadong Medicine	000963-CN	4.6	8,118	8,202	56%	-17%	-21%	5,483	5,740	1.4 x	570	608	13.5 x	1.61	2.9 x
485	Ensign Group,	ENSG-US	121.9	6,908	8,310	5%	-30%	9%	3,730	4,147	2.0 x	420	479	17.4 x	26.36	4.6 x
486	Mouwasat Medical	4002-SA	32.9	6,581	6,798	12%	-25%	10%	621	709	9.6 x	227	271	25.0 x	4.13	8.0 x
487	Hapvida Participacoes	HAPV3-BR	0.8	5,667	7,424	49%	-50%	-18%	4,592	5,570	1.3 x	417	574	12.9 x	1.32	0.6 x
488	Dechra Pharmaceuticals	DPH-GB	48.9	5,572	6,120	9%	-39%	-1%	930	1,082	5.7 x	249	-	-	8.39	5.8 x
489	Bumrungrad Hospital	BH-TH	6.3	4,996	4,754	20%	-6%	-3%	714	760	6.3 x	267	284	16.8 x	0.82	7.6 x
490	Bachem Holding	BANB-CH	79.3	5,945	5,611	50%	-22%	3%	565	629	8.9 x	171	180	31.2 x	18.95	4.2 x
491	Tecan Group	TECN-CH	395.5	5,055	5,037	17%	-30%	-3%	1,253	1,218	4.1 x	245	237	21.2 x	119.37	3.3 x
492	Shijiazhuang Yiling	002603-CN	3.0	5,001	5,103	61%	-17%	-8%	1,811	1,474	3.5 x	452	322	15.8 x	0.99	3.0 x
493	Ypsomed Holding	YPSN-CH	412.4	5,629	5,813	3%	-53%	15%	562	629	9.2 x	163	198	29.4 x	47.80	8.6 x
494	Dong-E-E-Jiao Co.	000423-CN	8.1	5,242	4,160	6%	-25%	17%	594	659	6.3 x	149	181	23.0 x	2.24	3.6 x
495	Siegfried Holding	SFZN-CH	1,022.5	4,569	4,940	3%	-33%	5%	1,445	1,483	3.3 x	302	327	15.1 x	193.96	5.3 x
496	Sotera Health	SHC-US	14.6	4,118	6,192	33%	-15%	-14%	1,049	1,098	5.6 x	528	556	11.1 x	1.57	9.3 x
497	Hubei Jumpcan	600566-CN	5.2	4,748	3,474	6%	-36%	17%	1,309	1,319	2.6 x	397	438	7.9 x	1.89	2.7 x

498	**Gland Pharma**	**543245-IN**	21.5	3,549	3,334	23%	-52%	-7%	438	684	4.9 x	126	165	20.3 x	6.08	3.5 x
499	**SK bioscience**	**302440-KR**	46.1	3,543	2,609	48%	-8%	-18%	264	175	14.9 x	16	(15)	-	16.85	2.7 x
500	**WuXi AppTec**	**2359-HK**	6.4	2,584	18,128	106%	-27%	-33%	5,725	5,586	3.2 x	1,703	1,946	9.3 x	2.39	2.7 x
501	**Chongqing Taiji**	**600129-CN**	5.3	2,925	3,370	83%	-21%	-20%	2,045	2,353	1.4 x	159	220	15.3 x	0.95	5.5 x
502	**biote Corp.**	**BTMD-US**	5.8	198	227	41%	-37%	18%	165	185	1.2 x	50	55	4.2 x	(1.14)	-5.1 x

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