

Monthly Newsletter

The Healthtech Industry



MORE DATA = MORE OPPORTUNITY, PROBLEMS AND INNOVATION. What the healthcare industry can learn from the rise of big data in an AI world.

The expression “less is more” has had its time, especially when you consider the influence of big data in the health of patients, companies, investors, and the future of our planet. The synergies of big data and influence have never been at a higher crescendo, and we look forward to seeing how we can meld this for the healthtech industry.

Privacy, AI, security, personalization, nimbleness. All things we have been hearing in the recent future may have been standalone just a few years ago, but now must be examined on a holistic level in order to understand the impact that they all have, and what we need to take note of for future implications.

Big data may have implications in terms of fear, but also allow for rapid transformation of information (the rise of GLP-1 agonists as a tangible weight loss option for many) to expansion (Gilead’s projections of quadrupling their CAR-T therapy growth by 2026), and even the rise of companies such as GE HealthCare’s innovation in therapeutics, software and diagnostics, to name a few.

They say that by 2025, the amount of data that exists will double every 12 hours. Just think, in 2019, they projected it could be every 3.5-4 years. The future is expanding, and the magnitude of what is possible is unfathomable for the healthtech industry, and beyond.

Thank you for reading!

BIG DATA IN HEALTHCARE HAS DELIVERED STRONG GAINS IN EFFICIENCY, SPEED, AND INNOVATION. THIS IS JUST THE BEGINNING...

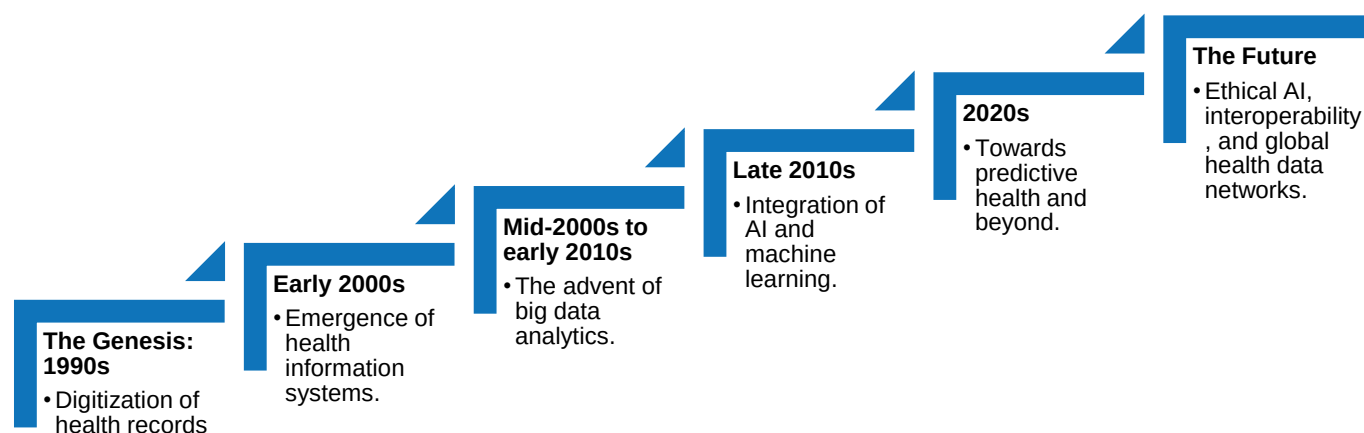
Key takeaway: *The integration of big data analytics into health management heralds a transformative era in healthcare, offering unparalleled opportunities for enhancing patient care, optimizing resource allocation, and facilitating personalized medicine. However, alongside these significant wins, the healthcare sector must navigate an array of risks, particularly concerning data security, privacy, and the accuracy of health insights generated. Companies such as GE HealthCare (GEHC) that have strong technology and healthcare expertise to navigate this fast-evolving landscape are well positioned to emerge as winners in this sector.*

The healthcare sector's evolution has been markedly influenced by the integration and application of big data analytics, marking a transformative journey from rudimentary digitization to sophisticated, data-driven precision medicine. The utilization of big data in health management has seen an exponential increase in recent years, driven by technological advancements, digitization of healthcare records, and a growing recognition of the value of data-driven decision-making in healthcare. This progression reflects not only technological advancements but also a paradigm shifts in how healthcare professionals approach patient care, research, and health management. Below, we look at the evolution in the use of data analytics in the healthcare sector.

- **The Genesis: Digitization of health records:** The journey begins in the late 20th and early 21st centuries, with the digitization of health records. This foundational step, moving from paper-based to electronic health records (EHRs), set the stage for subsequent data-driven advancements. Although initially focused on improving access to patient information and streamlining administrative processes, the digitization of health records laid the groundwork for more comprehensive data collection and analysis.
- **Early 2000s: Emergence of health information systems:** The early 2000s saw the emergence of health information systems (HIS) and the initial integration of EHRs. These systems were pivotal in collecting, storing, and managing patient data electronically. The primary aim was to enhance the efficiency of healthcare delivery and facilitate easier access to patient information for healthcare providers. During this period, data analytics was in its nascent stage, focusing mainly on administrative and billing processes rather than clinical decision-making or predictive analytics.
- **Mid-2000s to early 2010s: The advent of big data analytics:** As technology advanced, the mid-2000s to early 2010s marked the advent of big data analytics in healthcare. This era introduced the capacity to analyze vast datasets beyond the scope of traditional data processing applications. The healthcare sector began to leverage these capabilities to gain insights into patient care, disease patterns, and health outcomes. During this period, pioneering applications included population health management, clinical decision support systems, and the initial forays into predictive analytics, such as predicting patient readmission rates and identifying at-risk populations.
- **Late 2010s: Integration of AI and machine learning:** The late 2010s heralded a significant leap forward with the integration of artificial intelligence (AI) and machine learning (ML) with big data analytics. These technologies offered unprecedented capabilities to analyze complex, unstructured data sets, including medical images, genetic information, and electronic health records. AI and ML applications facilitated advancements in precision medicine, enabling personalized treatment plans based on individual patient data. Furthermore, AI-driven predictive models began to significantly improve disease diagnosis, treatment outcomes, and healthcare resource allocation.
- **2020s: Towards predictive health and beyond:** Entering the 2020s, the healthcare sector witnesses the maturation of big data analytics, characterized by the widespread adoption of predictive health models and the integration of real-time health monitoring data from wearable and IoT devices. This era is defined by a holistic approach to health management, where predictive analytics not only forecasts disease outbreaks but also guides preventive healthcare measures, lifestyle adjustments, and chronic disease management. The integration of social determinants of health (SDOH) into big data analytics further underscores the move towards a more comprehensive understanding of health influences.

- **The Future: Ethical AI, interoperability, and global health data networks:** Looking forward, the evolution of big data analytics in healthcare is poised to embrace ethical AI, enhanced interoperability among disparate health systems, and the creation of global health data networks. These advancements aim to address the challenges of data privacy, bias in AI algorithms, and the digital divide in healthcare access. The goal is to foster a healthcare ecosystem that is not only technologically advanced but also equitable, inclusive, and patient-centered.

Chart 1: Evolving Usage of Big Data Analytics in Healthcare

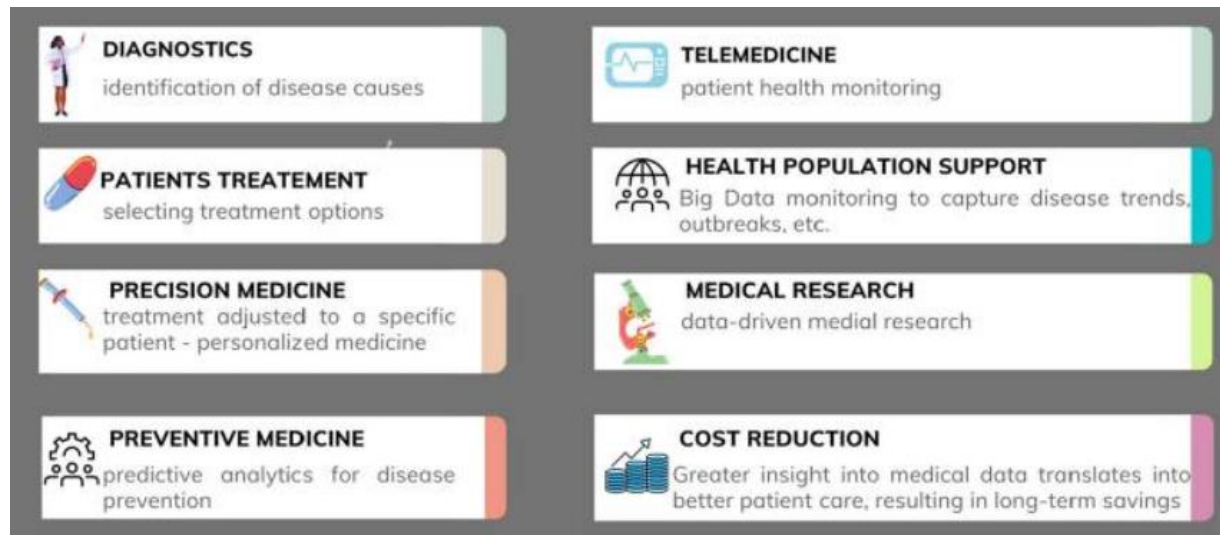


Source: Intro-act

Today there are a variety of use cases for data analytics in the Healthcare sector, and this is reflected in the strong growth of this market, is expected to be worth more than \$100 billion market by 2031. The global big data in healthcare market was valued at \$32.9 billion in 2021 and is projected to reach \$105.73 billion by 2030, growing at a CAGR of 13.9% between 2022 and 2030, according to Straits Research. This growth is driven by the increasing demand for big data solutions to improve healthcare management and business intelligence for optimizing health administration and strategy. The rapid advancement of technology over the past two decades has led many healthcare organizations to adopt big data for product development, patient outcome enhancement, and innovation. The digitization of healthcare systems globally has enhanced care quality and cost, contributing to the rise of complex heterogeneous data, especially unstructured data. This surge in unstructured medical data, driven by developments in various scientific fields, has increased the significance of data analytics and big data in developing predictive models, thereby expanding the global big data healthcare market.

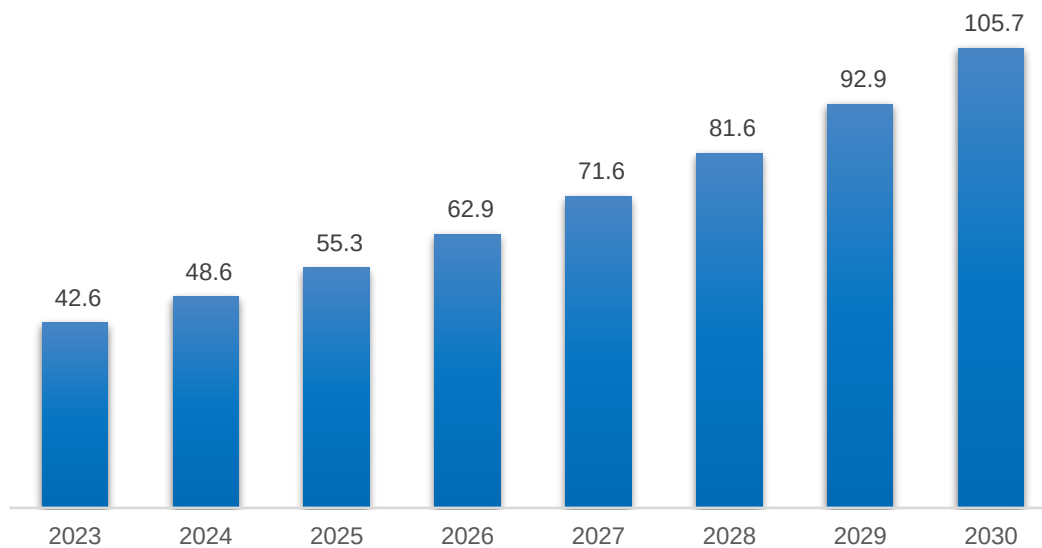
- Regionally, North America leads the market due to IoT developments and analytical model demands on patient data, followed by Europe, driven by strong government support for R&D. Asia-Pacific emerges as the fastest-growing market, spurred by mobile healthcare analytics and the use of smart devices and digital health applications.

Chart 2: Healthcare Big Data Analytics Applications



Source: Intro-act, NIH

Chart 3: Global Big Data in Healthcare Market (\$ billion, CAGR: 13.9%)



Source: Intro-act, Straits Research

Despite its potential, the big data healthcare market faces challenges such as data privacy and security concerns, including risks of data breaches and cyberattacks. However, the increasing potential of cloud-based big data techniques, offering advantages in customer management, planning, and predictive modeling, presents lucrative opportunities for analytics providers. Preserving consumer data against cyber-attacks and data breaches is extremely important for technology providers. In 2023, Managed Care of North America (MCNA) experienced a significant data breach affecting approximately 8.9 million individuals. This breach occurred between February 26 and March 7, 2023, when malicious code was introduced into MCNA's systems, leading to unauthorized access and data exfiltration.

MCNA, a dental benefits administrator for Medicaid and CHIP programs across eight states, saw a wide range of protected health information (PHI) compromised, including names, addresses, social security numbers, and details of dental care provided. The LockBit ransomware group claimed responsibility for this breach, leaking some of the stolen data online and demanding ransom. MCNA has since taken steps to strengthen its cybersecurity measures.

We believe that healthcare companies that are able to identify the right use cases of Big Data and successfully deploy them to address new markets, create new solutions and drive efficiency; and technology companies that are able to innovate and create new and scalable use cases of this technology for the healthcare sector will emerge as big winners from this trend. Software companies such as Oracle (ORCL), Cognizant (CTSH), and IBM (IBM) have strong healthcare practices and work with many blue-chip healthcare companies, but we believe that GE HealthCare (NASDAQ: GEHC) should be a company to watch out for, given its strong presence in medical device industry. We spotlight this company below.

Company Spotlight: GE HealthCare (GEHC)

GE HealthCare, recognized as a leading global innovator in medical technology, pharmaceutical diagnostics, and digital solutions, has continually evolved to address the complex needs of the healthcare sector. With a comprehensive portfolio that spans imaging, ultrasound, patient care solutions, and pharmaceutical diagnostics, GE HealthCare has been advancing healthcare through integrated solutions, services, and data analytics aimed at enhancing the efficiency of hospitals, the effectiveness of clinicians, and the precision of therapies. A pivotal aspect of GE HealthCare's strategy involves leveraging big data analytics and artificial intelligence (AI) to revolutionize patient care and clinical workflows. The company's substantial footprint in AI-enabled medical devices, evidenced by its prominent listing on the U.S. Food and Drug Administration (FDA) for AI-enabled medical devices clearances, underscores its focus to innovation. GE HealthCare's offerings, such as the App Orchestrator and CardioVisio, integrate seamlessly into existing clinical workflows, providing clinicians with advanced tools for decision support and disease management.

Recent initiatives by GE HealthCare further highlight its focus on enhancing care through digital innovation. The acquisition of **MIM Software**, for example, is set to bolster GE HealthCare's advanced visualization offerings, facilitating AI-based segmentation, contouring, and dosimetry analysis across various care areas, including radiology, molecular imaging, and radiation oncology. This strategic move highlights GE HealthCare's focus on providing comprehensive, connected, and digital solutions that enable providers to improve patient care across multiple specialties.

GE HealthCare's focus to advancing AI and deep learning in healthcare is evident through its development of solutions like the Theranostics Pathway Manager Tile and AIR Recon DL, which aim to streamline the oncology care pathway and enhance diagnostic imaging quality, respectively. These efforts are part of GE HealthCare's broader mission to leverage imaging data, analytics, and AI to provide a holistic view of a patient's journey, thereby addressing diagnostic challenges and personalizing patient care.

Chart 4: GEHC is Investing in Digital Technologies Across its Segments

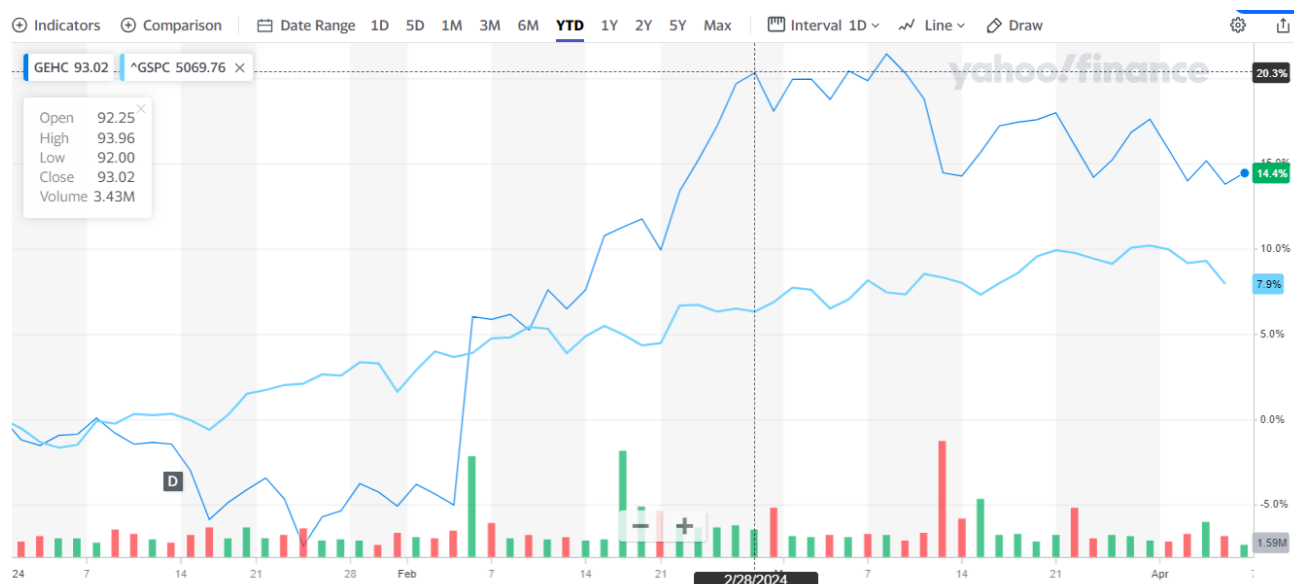


Source: Intro-act, Company Investor Presentation. (1) Subject to customary closing conditions, including regulatory approvals; integration planned post close. (2) As of October 2023. Note: Not all products and features are available in all markets.

GE HealthCare's recent collaborations and grants, including partnerships with prestigious institutions and funding from organizations like the Bill & Melinda Gates Foundation and BARDA, also reflect its commitment to pushing the boundaries of medical technology and AI to improve healthcare outcomes. Through these initiatives, GE HealthCare has solidified its position as a leader in the healthcare sector and is set to gain market share.

GE HealthCare Technologies reported a positive Q4 2023 performance, with earnings of **\$1.18 per share**, surpassing the consensus Street estimate of **\$1.07**. This represents a decline from last year's \$1.31 per share but still indicates a significant earnings surprise of 10.28%. Revenue also exceeded expectations, reaching \$5.21 billion, a growth from the previous year's \$4.94 billion, and beating estimates by 2.21%. This consistent outperformance in both earnings and revenue over the past four quarters highlights GE HealthCare's strong financial health and operational efficiency. On a full year basis, the company reported revenue of \$19.6 billion, driven by 8% organic growth. Strong fundamentals are reflected in the GEHC's stock performance – stock has responded positively to its earnings print and is up >14% YTD as of 4/8, beating the S&P 500 and making GEHC a name that should be on investors' radar.

Chart 5: GEHC has Outperformed the S&P 500 on a YTD basis



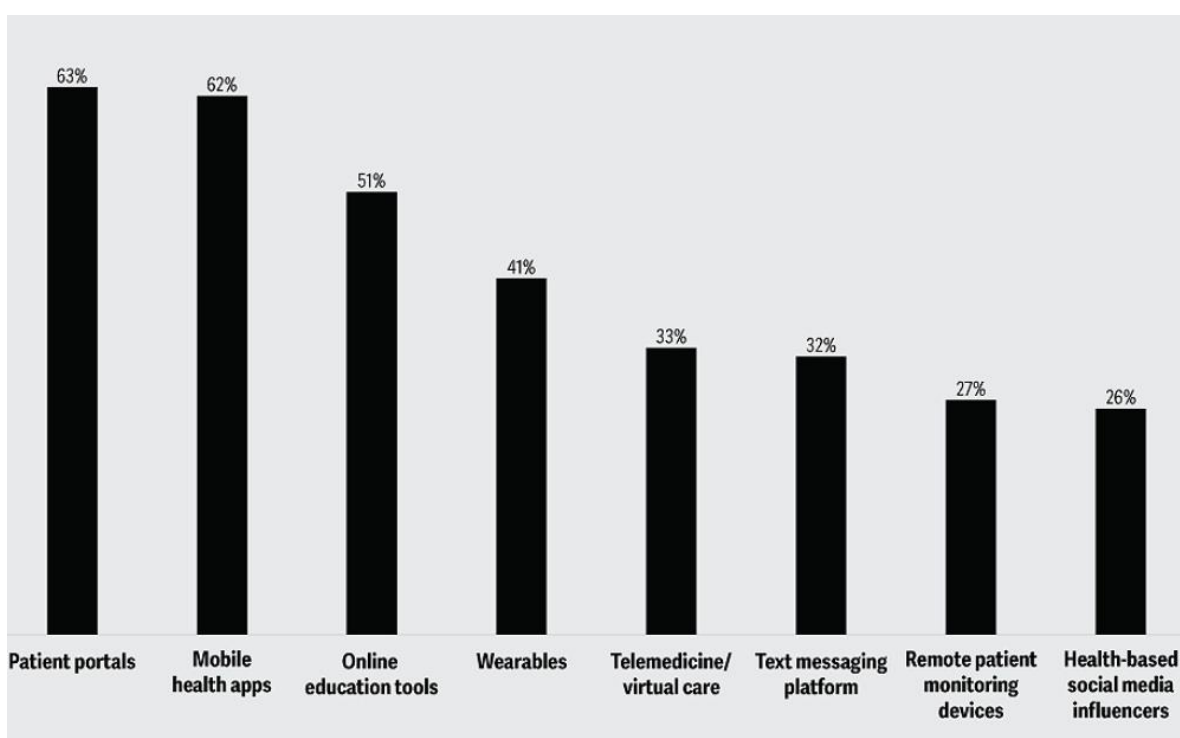
Source: Intro-act, Yahoo Finance

HEALTHTECH NEWS

INDUSTRY TRENDS

Deloitte: Digital tools can address maternal health inequities, but gaps in design remain. Despite the potential of digital tools to enhance maternal care accessibility, a Deloitte report reveals persisting gaps in cultural understanding and affordability. Based on a 2023 survey and executive focus groups, disparities were evident, with minority groups feeling underserved. The report stresses the importance of involving diverse voices in tool development. While digital tools empower patients and hold providers accountable, improvements in cost reduction, cultural competency, accessibility, and trust are essential for equitable maternal healthcare. [Read More](#) (Fierce Healthcare)

Chart 6: Digital Tools Used During Pregnancy Journey (Preconception, Prenatal, Postpartum)



Source: Intro-act, [Deloitte Maternal Health and Digital Survey 2023](#). Note: N=2,000.

UnitedHealth hack clouds outlook for insurers' medical costs. UnitedHealth's tech unit hack sparks concerns over prolonged high medical costs due to delayed insurance claim processing, impacting cash flow and medical utilization estimates. The attack disrupted Change Healthcare, vital for processing claims across major insurers, including UnitedHealth, CVS Health's Aetna, and others. Analysts anticipate a financial impact but haven't estimated its size. Despite expectations of limited earnings hit, prolonged disruption may affect customer trust and business reputation, potentially leading to customer switching. [Read More](#) (The Print)

Vision Pro helps surgeons plan and visualize operations carried out with a surgical robot. Apple's Vision Pro is revolutionizing healthcare by aiding surgeons in planning and executing operations using surgical robots, resulting in improved patient outcomes. It also assists in familiarizing nurses with new medical equipment, reducing anxiety and improving confidence. Through apps like myMako and CyranoHealth, developed for Vision Pro, users gain immersive learning experiences. Vision Pro facilitates various medical applications, including viewing holograms of the human body and streamlining charting tasks for doctors. [Read More](#) (9to5 Mac)

Wearable activity tracker data enhance patient assessment in Lung Cancer. Objective wearable activity tracker data can complement subjective ECOG PS assessments in advanced lung cancer patients, enhancing patient status evaluation. A study analyzed 119 patients, finding mean distance walked (MDW) as the best indicator for ECOG PS of 2 or higher, with MDW also correlating with survival. While physical activity contributes significantly to prognosis, it should complement rather than replace ECOG PS due to varying activity levels within ECOG PS categories. [Read More](#) (AJMC News)

Nursing home company Petersen Health likely to break up in bankruptcy sale. Elder care company Petersen Health Care plans to sell its nursing homes in bankruptcy to multiple buyers, aiming to maintain operations and repay debts. Estimated to be worth \$215-305 million, the sale aims to sustain care for its 5,340 residents. Petersen secured a \$45 million bankruptcy loan to support operations, emphasizing the importance of maintaining care standards. Bankruptcy was prompted by cyberattacks, loan defaults, and declining demand for nursing home care. [Read More](#) (Trading View)

New report finds that digital diabetes management tools fail to deliver meaningful health benefits to patients while increasing spending. The Peterson Health Technology Institute (PHTI) released an evaluation criticizing digital diabetes management tools for their minimal clinical benefits and increased healthcare spending. Despite a \$58 billion investment, these tools fail to significantly reduce hemoglobin A1c (HbA1c) levels or improve other health factors. PHTI recommends innovations focusing on meaningful glycemic control improvements and increased transparency for providers and payers. The evaluation involved clinical advisors and industry experts, suggesting the need for more impactful solutions. [Read More](#) (Peterson Health Technologies)

Chart 7: PHTI Category-Level Ratings for Digital Diabetes Management Solutions

	Clinical Effectiveness	Economic Impact ^a	Summary Rating ^b
Remote Patient Monitoring Glooko	 Results: Small but not clinically meaningful reduction in HbA1c Evidence Certainty: Higher	 Net increase in spending — current provider reimbursement exceeds cost savings from avoided care	 Current evidence does not support broader adoption
Behavior and Lifestyle Modification DarioHealth, Omada, Perry Health, Teladoc (Livongo), Verily (Onduo), Vida ^c	 Results: Small but not clinically meaningful reduction in HbA1c ^d Evidence Certainty: Higher	 Net increase in spending — current solution pricing exceeds cost savings from avoided care	 Current evidence does not support broader adoption
Nutritional Ketosis Virta	 Results: Clinically meaningful reduction in HbA1c sufficient to achieve remission in some patients ^e Evidence Certainty: Lower	 Initial net increase in spending with potential for long-term savings	 Evidence supports broader adoption with ongoing evidence generation

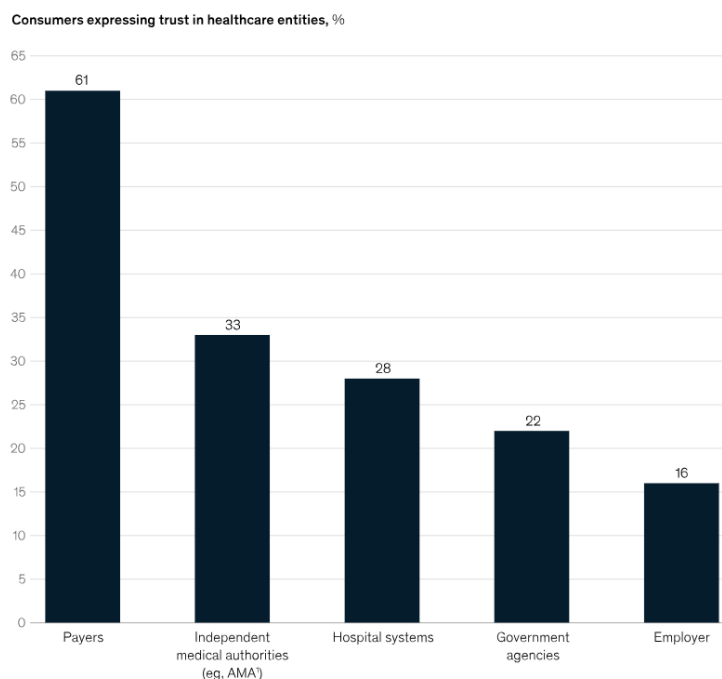
Source: Intro-act, PHTI Digital Diabetes Management Solutions Assessment, March 2024.

Genomics, transcriptomics, and epigenomics utilized to better understand chemoimmunotherapy resistance in CLL. A review in Cancer Drug Resistance highlights the importance of genomic, transcriptomic, and epigenomic data in understanding chronic lymphocytic leukemia (CLL). It reveals molecular subtypes aiding therapy response prediction. Studies show heterogeneity in CLL, uncovering genetic alterations causing resistance to chemoimmunotherapy (CIT). TP53 mutations, crucial for treatment decisions, lead to unfavorable outcomes. [Read More](#) (AJMC News)

UnitedHealth offers over \$3.3b in loans to providers hit by cyberattack on unit. UnitedHealth Group extended over \$3.3 billion in loans to healthcare providers affected by a cyberattack on its tech unit, which delayed insurance claims processing. These loans aim to alleviate financial strains caused by the attack. Over 40% of the funds target safety net hospitals and health centers aiding vulnerable communities. The U.S. government is also intervening to assist impacted providers. UnitedHealth is slowly resolving the \$14 billion medical claims backlog caused by the breach. [Read More](#) (Insurance Journal)

How price transparency could affect US healthcare markets. Federal price transparency rules, in effect for over a year and a half, require payers and hospitals to disclose negotiated rates. Progress has been made despite a slow start, with regulators imposing fines for noncompliance. Recent legislation expands transparency requirements. While transparency addresses some inefficiencies, challenges remain, including service standardization and information asymmetry. Transparency data could reshape negotiations and empower consumers to shop for care, potentially transforming healthcare markets. [Read More](#) (McKinsey)

Chart 8: US Respondents Trust Payers More than Anyone Else to Provide Accurate Cost Information



Source: Intro-act, McKinsey Consumer Survey May 2023. Note: Questions: who would you trust to provide accurate information for your out-of-pocket costs for your appointments with healthcare providers?

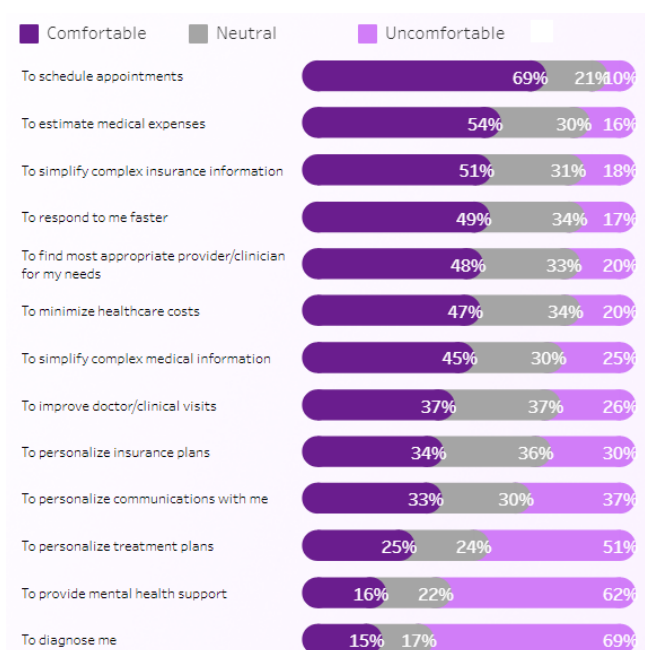
Many hospitals in China stop newborn delivery services as birth rate drops. Many hospitals in China are ceasing newborn delivery services due to a decline in births, leading to closures in provinces like Zhejiang and Jiangxi. Policies aim to increase birth rates amid a demographic crisis caused by an ageing population and falling birth rates, exacerbated by COVID-19. High childcare costs and societal pressures contribute to couples opting out of parenthood. [Read More](#) (The Print)

CDC issues health alert amid rising measles cases, urges vaccination. The CDC issued a health alert on March 18, urging measles vaccination before travel. With outbreaks in several countries, including travel destinations, families are advised to vaccinate infants as young as 6 months. The American Medical Association supports this, stressing the importance of vaccination to prevent severe illness and death. Rising measles cases, fueled by low vaccination rates, threaten public health. Maintaining vaccination coverage is crucial to prevent further outbreaks and protect vulnerable populations. [Read More](#) (Healthline)

Study: Telehealth has significant potential to manage, deliver care for rheumatic diseases. A study in ACR Open Rheumatology highlights telehealth's potential for managing rheumatic diseases, especially amid the COVID-19 pandemic. Telehealth usage surged during the pandemic, with a significant increase in telehealth visits. Researchers analyzed literature on home-based telehealth for routine rheumatology care, finding it effective for follow-up visits but less suitable for new patients with certain conditions. [Read More](#) (AJMC News)

Surveys show Americans don't trust AI to give medical advice. Here's why that matters. The burgeoning role of AI in healthcare faces a complex dilemma. While widely adopted for administrative tasks, there's resistance to AI replacing doctors for diagnosis. Yet, with a shortage of medical professionals, especially in underserved regions, reliance on AI seems inevitable. Generational differences shape perceptions, with younger generations more open to AI. Despite its potential to aid an aging population, public trust in healthcare AI remains a significant hurdle, highlighting the need for reconciliation between technology and societal concerns. [Read More](#) (Fast Company)

Chart 9: 69% of US Adults Uncomfortable Being Diagnosed by AI



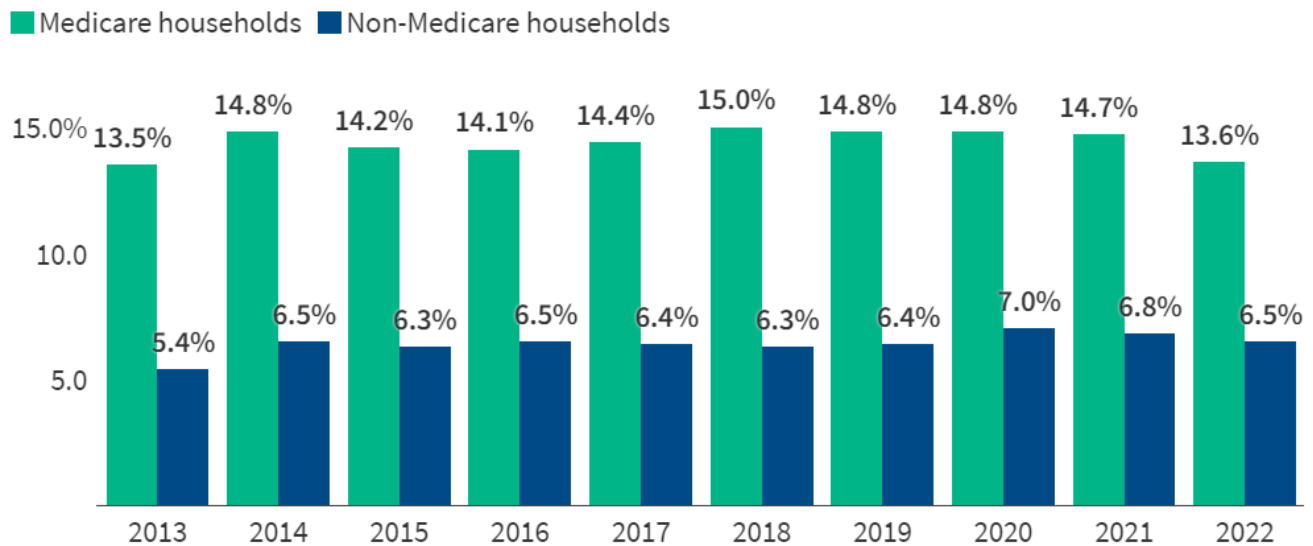
Source: Intro-act, Fast company, [Salesforce](#)

Comprehensive study reveals global total fertility rate more than halved since 1950. A recent study in The Lancet analyzed global fertility trends from 1950 to 2021, forecasting until 2100, crucial for addressing geopolitical, environmental, and social challenges. Utilizing various data sources and models, researchers projected declining fertility rates globally. By 2021, over half of countries had rates below replacement levels. Despite some minor rebounds, overall fertility rates are expected to decrease further, shifting live births towards lower-income regions, with profound economic and societal implications. [Read More](#) (Medical Life Sciences News)

Consumers more discerning about health data sharing: survey. Consumers are increasingly selective about sharing health data, favoring healthcare providers over tech companies, a survey by Rock Health reveals. While 90% are willing to share with at least one healthcare entity, only 7% would share with a tech firm. This reluctance to share has grown since 2020, possibly due to concerns about data security. Additionally, the survey highlights the growing popularity of virtual care and at-home diagnostics, accelerated by the COVID-19 pandemic. [Read More](#) (Healthcare Dive)

Medicare households spend more on health care than other households. In 2022, Medicare households spent significantly more on healthcare, with an average of \$7,000, accounting for 13.6% of their total spending, compared to non-Medicare households' \$4,900 (6.5%). The burden of healthcare spending for Medicare households was twice as large as non-Medicare households, with nearly 3 in 10 Medicare households spending over 20% of their total household spending on healthcare. Over a 10-year period, healthcare spending increased for both groups, indicating significant financial strain, particularly among Medicare households. [Read More](#) (KFF)

Chart 10: Medicare Households Spent \$2,400 More on Health Care in 2022 Than in 2013



Source: Intro-act, KFF analysis of the Bureau of Labor Statistics Consumer Expenditure Survey Interview and Expense Files, 2013-2022.

Private payers deny 15% of claims, survey finds. A recent national survey reveals that nearly 15% of claims submitted to private payers are initially denied, despite prior approval via the prior authorization process. Denials incur significant costs, with providers spending about \$19.7 billion annually on appeals, impacting hospitals' financial stability. Delays in payments lead to cash flow issues and affect patient care. Medicare Advantage faces similar challenges, prompting calls for stricter monitoring and data collection by CMS to address payment delays and denials. [Read More](#) (Healthcare Finance)

Smarter wearables highlight demand for real-time fitness data. The wearables market, led by tech giants like Google, Apple, and Samsung, is witnessing both accelerated innovation and increased competition from niche players. Recent events like CES and MWC have spurred high-profile introductions. While some focus on creating unified health data sources, others maintain proprietary systems. Samsung's new Galaxy series, emphasizing data aggregation, highlights the industry's shift towards connected care. Interoperability challenges persist, but initiatives like Google's Fitbit integration and Oura's partnerships signify a trend towards data unification. [Read More](#) (PYMNTS)

Paper-based sensor paves way for wearable sensors in health monitoring. Flexible, disposable AI sensors with sensing and cognitive abilities are crucial for health monitoring, requiring low energy consumption akin to the human brain. Physical reservoir computing (PRC) offers energy-efficient architecture by mimicking brain functions using physical phenomena. Tokyo University of Science researchers developed paper-based optoelectronic devices using nanocellulose and zinc oxide (ZnO) nanoparticles, mimicking synapse behavior for efficient health signal processing. [Read More](#) (Hospi Medica)

Skin-like wearable with LED screen to track health, diagnose diseases. Doctors and scientists utilize implantable electronics or wearables for health monitoring and disease diagnosis, despite risks like infection and tissue damage. Stanford University researchers have developed stretchable electronic circuits, smaller and faster than previous models. These circuits, akin to rubber bands, remain functional even when stretched or squeezed. With high sensitivity, they can detect tactile information and power LED screens efficiently. Challenges remain, but potential applications span from healthcare to soft robotics. Commercialization is imminent pending solutions to technical hurdles. [Read More](#) (Interesting Engineering)

AI IN HEALTHCARE

AI accurately predicts skin cancer risk based on 2D facial images. A recent study in eClinicalMedicine presents a novel approach using neural networks to predict skin cancer from facial images more effectively than traditional risk factors. With skin cancer rates rising, early detection is crucial. The study highlights the limitations of current screening methods and proposes personalized AI-based screening using facial images. Data from the Rotterdam Study supported the effectiveness of this approach, showing superior accuracy compared to conventional risk assessment methods. The findings underscore the potential of AI in skin cancer detection, advocating for its integration into screening programs for improved efficiency. [Read More](#) (AJMC News)

Can artificial intelligence extend healthcare to all? In Europe, one in five people faces unmet healthcare needs, highlighting significant barriers such as geographical, financial, and racial biases. Artificial Intelligence (AI) holds promise to bridge this gap, but its effectiveness depends on unbiased, diverse data. Startups like Bloomer Tech and Osana pioneer AI-driven solutions for healthcare disparities. However, challenges like cultural biases in AI algorithms must be addressed to ensure equitable healthcare access. Success lies in prioritizing diversity, inclusion, transparency, and failsafes in AI models. [Read More](#) (Reuters)

Oncologists find ethical challenges with artificial intelligence in cancer care. A study surveyed oncologists from 37 states, mostly male and non-Hispanic White, with many from academic practices. Majority supported AI-based clinical decision models, believing they should be explainable to both oncologists and patients. Most would involve patients in treatment decisions, especially those from academic settings. Participants believed AI developers should address legal issues, while oncologists should protect patients from biased AI tools. [Read More](#) (AJMC News)

GenAI needs guardrails to flourish in healthcare. Generative AI (GenAI) presents transformative potential in healthcare, offering improved diagnostics, personalized treatments, and operational efficiencies. However, leaders express cautious optimism due to concerns about data security and information overload. Despite reservations, GenAI is already demonstrating positive outcomes, such as reducing administrative burdens and burnout among healthcare professionals. Guardrails and education on AI's promises and risks are deemed essential for responsible and effective integration into healthcare systems, aiming to prioritize human compassion and care. [Read More](#) (Healthcare Finance)

AI dermatology mobile apps have critical efficacy, safety gaps, review says. A study in JAMA Dermatology warns of potential harm from current AI dermatology mobile apps due to inconsistent performance, lack of FDA approval, and limited transparency. Out of 909 apps initially identified, only 41 were included in the analysis. Most apps targeted patients, with common purposes including skin cancer detection and diagnosis. Concerns arise from insufficient evidence, lack of regulatory approval, and inadequate clinician involvement, highlighting the need for better regulation and transparency. [Read More](#) (AJMC News)

DRUG & DEVICE APPROVALS

Abbott's heart valve repair device gains US FDA approval. Abbott Laboratories announced FDA approval for its TriClip heart valve repair device, offering an alternative to open-heart surgery for tricuspid regurgitation (TR). Unlike Edwards Lifesciences' replacement device, TriClip aims to repair the valve by clipping its flaps, reducing blood backflow. This provides options for patients, particularly older individuals at high risk, who may suffer from multiple co-morbidities. TriClip boasts a high success rate with minimal adverse events, positioning it as a significant contributor to Abbott's sales growth. [Read More](#) (Yahoo Finance)

FDA clears Intuitive Surgical's new robot. Intuitive Surgical's latest innovation, da Vinci 5, heralds a significant advancement in robotic surgery, cleared by the FDA. The system, boasting over 150 enhancements, will initially be accessible to select U.S. customers with established robotic surgery programs. These enhancements promise improved precision, 3D imaging, force-sensing technology, and streamlined workflow. Analysts foresee its potential to drive demand, reduce procedure times, and enhance hospital efficiency, indicating substantial room for growth in utilization. [Read More](#) (Medical Device and Diagnostic Industry)

Chart 11: Snapshot of Intuitive Surgical da Vinci 5



Source: Intro-act, Medical Device and Diagnostic Industry, Intuitive Surgical

FDA approves Iloperidone for adults with bipolar 1 disorder. Iloperidone (Fanapt), approved by the FDA for treating manic or mixed episodes in adults with bipolar 1 disorder, offers a new option for managing bipolar mania. A phase 3 trial demonstrated its efficacy over a 4-week period, with significant improvement in patients compared to placebo across multiple measures. Common adverse events were identified, but overall, the safety profile aligns with previous findings. This approval marks a crucial advancement in addressing the complexities of bipolar disorder treatment. [Read More](#) (AJMC News)

FDA approves first gene therapy for children with metachromatic leukodystrophy. The FDA approved Lenmeldy, the first gene therapy for metachromatic leukodystrophy (MLD), a rare genetic disease affecting the brain and nervous system. It involves a deficiency of the ARSA enzyme, leading to fatty substance buildup, causing neurological damage. Lenmeldy uses the patient's own stem cells modified with functional ARSA genes. Clinical trials showed significant improvement in motor function and survival rates. Common side effects include fever and infections. Lifelong monitoring is necessary due to potential risks. [Read More](#) (FDA)

Baird Medical granted new class III certificate by China's NMPA for ceramic thyroid ablation needle. Baird Medical Devices received a new Class III certificate from China's NMPA for its Ceramic Thyroid Ablation Needle, designed for treating thyroid nodules. The needle, made of rare earth ceramics, offers exceptional heat resistance and precise thermal control during surgeries, reducing complications. With a 30% increase in mechanical strength, it enhances operational accuracy. The technology signifies Baird Medical's commitment to innovation in microwave ablation, aiming to improve patient treatment experiences and save lives. [Read More](#) (Kxan News)

COMPANY NEWS

Pfizer's drug succeeds in late-stage blood cancer trial. Pfizer announced successful results from a study on a combination treatment utilizing Adcetris for extending survival in patients with a common type of lymphoma, diffuse large B-cell lymphoma. The combination therapy, including Adcetris and two other drugs, showed statistical significance compared to a placebo. Acquired through the purchase of Seagen, Pfizer plans to seek regulatory approval for this new indication, potentially marking the eighth approval for Adcetris. [Read More](#) (Nasdaq)

Bristol Myers' Opdivo-Yervoy combo meets main goal in liver cancer trial. Bristol Myers Squibb reported successful results from a study combining Opdivo and Yervoy as an initial treatment for liver cancer. This strengthens their plans to broaden the drugs' applications ahead of their market exclusivity loss. The trial, involving advanced hepatocellular carcinoma patients, showed improved survival compared to existing treatments. Bristol Myers will present detailed findings soon. Liver cancer is a significant global health issue. [Read More](#) (Trading View)

Merck to start trials investigating single dosing regimen of HPV vaccine. Merck & Co (MSD) plans two clinical trials for its single-dose Gardasil 9 HPV vaccine in 16-26-year-olds, comparing efficacy to the approved three-dose regimen. These trials aim to enroll participants in Q4 of this year. Gardasil 9, FDA-approved in 2014, targets cancers caused by nine HPV types. Despite low global HPV vaccine coverage, the WHO updated its recommendations in 2022, stating one dose can protect 9-14-year-old females against cervical cancer caused by specific HPV strains. [Read More](#) (Clinical Trials Arena)

Weight-loss drug Zepbound new prescriptions surpass Wegovy for first time. Eli Lilly's weight-loss drug Zepbound surpassed Novo Nordisk's Wegovy in new U.S. prescriptions, with 77,590 filled by March 8, though Novo maintained a lead in total weekly prescriptions. GLP-1 agonists like Zepbound and Wegovy, initially for type 2 diabetes, show promise for weight loss. GlobalData predicts GLP-1 drugs may surpass cancer immunotherapies in sales. Novo aims to launch an oral weight-loss pill. Lilly partners with Amazon for prescription delivery. [Read More](#) (News Nation)

Eli Lilly and Amazon Pharmacy partner on drugs delivery. LillyDirect, a digital pharmacy service by Eli Lilly, partners with Amazon Pharmacy to provide home delivery of medications like Zepbound for diabetes, migraine, and obesity. It aims to meet the rising demand for convenient access to medicines. Prescriptions sent to LillyDirect will be delivered by Amazon Pharmacy or Truepill. The partnership aligns with Lilly's goal to expand its services and offerings. Amazon Pharmacy offers free two-day delivery and access to clinical pharmacists, enhancing patient support and medication management. [Read More](#) (Healthcare Digital)

Amazon Pharmacy now offers same-day delivery in New York City and the L.A. area. Amazon Pharmacy introduces Same-Day Delivery of prescription medications in New York City and greater Los Angeles, aiming to expand to more cities. Leveraging AI and drones, they offer swift delivery, reducing wait times from weeks to hours. Small-format facilities enhance accessibility, while AI streamlines prescription processing. [Read More](#) (Amazon)

Gilead CAR-T cancer therapy capacity to quadruple by 2026. Gilead Sciences anticipates a significant increase in production of its cell therapy cancer treatments by 2026, with a fourfold rise to 24,000 treatments annually, attributed to manufacturing enhancements. Cindy Perettie, of Gilead's Kite cell therapy unit, mentioned their current capacity improvement to 10,000 treatments annually. Gilead focuses on expanding its oncology presence and reducing turnaround time for its CAR-T therapies Yescarta and Tecartus. [Read More](#) (Reuters)

Google Cloud announces new generative AI advancements for healthcare and life science organizations. Google Cloud unveiled new solutions at HIMSS24 to aid healthcare and life sciences organizations. Highlighting rising administrative costs and workforce challenges in healthcare, the announcement emphasized the need for AI-driven solutions. Key among these is Vertex AI Search for Healthcare, enhancing search capabilities in medical data. Additionally, Google Cloud introduced Healthcare Data Engine, simplifying data management, and MedLM, all aimed at improving healthcare outcomes. [Read More](#) (PR Newswire)

Nvidia inks tie-ups with Abridge, GE HealthCare and Microsoft as it expands its footprint in healthcare AI. Nvidia unveiled over two dozen healthcare AI microservices, enhancing drug discovery, medical technology, and digital health. Collaborations with Abridge, Microsoft, GE HealthCare, and Hippocratic AI expand generative AI into healthcare. Abridge utilizes Nvidia's resources for clinical documentation. GE HealthCare develops AI-powered ultrasound models with Nvidia's tech. Microsoft and Nvidia team up to accelerate clinical research and drug discovery. [Read More](#) (Fierce Healthcare)

Oracle Health builds out generative AI tools in its quest to 'eliminate clicks' for clinicians. Oracle advances its healthcare solutions with generative AI tools, introducing a care management service and planning a gen AI-based clinical assistant. At HIMSS 2024, Oracle revealed enhancements in its healthcare data platform, offering generative AI for care management, clinical quality analytics, and automated alerts. The company's Health Data Intelligence platform, acquired from Cerner, aims to simplify regulatory compliance, patient engagement, and cost reduction. [Read More](#) (Fierce Healthcare)

Nvidia-powered AI nurses are scrubbing in. Nvidia and Hippocratic AI's collaboration introduces AI-driven "nurses" at \$9/hour, aimed at virtual patient care. These AI bots are undergoing tests by over 40 healthcare providers. Tasks include non-diagnostic patient interaction, potentially alleviating US nursing shortages while reducing costs. However, concerns arise regarding staff shortages due to cost-cutting. The rise of such AI initiatives, like Hippocratic, reflects Big Tech's dominance in AI investment, with startups like Hippocratic valued at \$500 million post-funding. [Read More](#) (Morning Brew)

Confluence Health celebrates 2,000 robotic surgeries. Confluence Health Hospital Central Campus celebrated its 2,000th robotic surgery by showcasing a traveling surgical robot, mirroring the one used by hospital surgeons. It stands at eight feet tall with four arms, highlighting its versatility in surgical procedures. Wenatchee High School students studying medicine visited the hospital to learn about the device and medical technology. They engaged in a Q&A session with Dr. Catherine Straub, emphasizing the diverse roles within healthcare beyond surgery. [Read More](#) (Washington State Hospital Association)

Salesforce announces new AI tools for doctors. Salesforce unveiled new AI solutions tailored for healthcare professionals to alleviate burdensome administrative tasks, addressing a leading cause of physician burnout. Einstein Copilot: Health Actions enables doctors to streamline tasks like appointment booking and patient referrals using conversational AI. Assessment Generation digitizes health assessments, saving time and effort. Leveraging Salesforce's Einstein AI platform, these tools aim to consolidate medical data from various sources, simplifying workflows. Expected release dates are this summer and year-end, with compliance to HIPAA regulations emphasized. [Read More](#) (CNBC News)

NVIDIA, Johnson & Johnson Medtech partner to integrate AI into surgery. Johnson & Johnson MedTech and NVIDIA collaborate to integrate AI into surgical procedures, aiming to enhance real-time analysis and surgical decision-making. Utilizing NVIDIA's AI platform, J&J will deploy AI-powered applications in operating rooms, improving surgical outcomes. Surgeons' desire for data-driven insights and AI's potential to enhance efficiency and patient outcomes underscore the significance of this partnership. Overcoming technological barriers, such as closed surgical systems, paves the way for AI's widespread adoption in surgery, promising improved clinical experiences and outcomes. [Read More](#) (Mobi Health)

EARNINGS

J&J's Q2 2024 earnings to drop. Johnson & Johnson is expected to announce earnings of \$2.64 per share for the current quarter, down by 1.5% compared to last year. Earnings report is due on April 16, 2024. For the fiscal year, a 7.4% increase in earnings is anticipated. Revenue forecast for the quarter stands at \$21.38 billion, indicating a 13.59% decrease year-over-year. Full-year projections suggest earnings of \$10.65 per share and revenue of \$88.38 billion, with changes of +7.36% and -4.99%, respectively. Despite this, the company's valuation metrics suggest it's trading at a discount compared to industry peers. [Read More](#) (Trading View)

Legend Biotech reports fourth quarter and full year 2023 results. Legend Biotech reported net trade sales of \$159 million and \$500 million for Q4 and full-year 2023 respectively for CARVYKTI®. CHMP recommended label expansion for earlier lines of treatment for multiple myeloma. FDA ODAC scheduled to review CARTITUDE-4 study data. Legend received \$100 million upfront for global license with Novartis. Financially, Legend holds \$1.3 billion, expecting stability till 2025. Legend CEO Ying Huang highlighted strong CARVYKTI® sales growth and strategic partnerships. [Read More](#) (Business Wire)

Aveanna Healthcare Holdings Inc (AVAH) reports Q4 and full year 2023 earnings. Aveanna Healthcare Holdings Inc (AVAH) posted a 6.1% year-over-year revenue increase in Q4 2023, reaching \$478.8 million. Despite a narrowed net loss to \$25.7 million, gross margin improved by 15.3%, and Adjusted EBITDA grew 30.4% to \$38.7 million. For fiscal year 2023, revenue rose 6.0% to \$1,895.2 million, with a net loss of \$134.5 million. With a focus on expanding as a leading homecare provider, AVAH projects revenue of \$1,960–1,980 million for 2024 with an Adjusted EBITDA of \$146–150 million. [Read More](#) (Yahoo Finance)

Chart 12: Quarterly Performance – Aveanna Healthcare Holding Inc



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

BiomX reports fourth quarter and full year 2023 financial results. In March 2024, the company finalized a \$50 million private placement financing alongside the closure of the APT acquisition and repaid a \$10.4 million loan. Despite a decrease in cash reserves from \$34.3 million to \$15.9 million, research and development expenses increased to \$16.7 million, primarily due to clinical trials for BX004. Administrative expenses decreased to \$8.7 million, contributing to a net loss of \$26.2 million for 2023, lower than the previous year's \$28.3 million loss. [Read More](#) (BioSpace)

CAPITAL MARKETS

Moderna secures up to \$750m in funding from Blackstone to advance flu program. During its Vaccines Day event, Moderna secured \$750 million from Blackstone Life Sciences for its mRNA-based flu program, retaining all rights to flu assets. Blackstone will receive royalties and commercial milestones. CEO Stéphane Bancel stated the support will aid late-stage flu asset studies, aiming for multiple vaccine launches. mRNA-1010, in Phase III, met primary endpoints. Updates were also provided on Moderna's COVID-19 and RSV vaccine candidates. [Read More](#) (BioSpace)

Flush with new \$150m investment, avenzo pursues licensing strategy. Avenzo Therapeutics, after securing a \$150 million Series A-1 funding, aims to acquire new cancer-focused assets rather than conducting in-house drug discovery. Learning from Turning Point Therapeutics' experience, they prioritize licensing clinical or near-clinical compounds. The startup's approach, unusual for its strategy, has attracted attention and significant investment. [Read More](#) (BioSpace)

Alterome Therapeutics raises \$132 million in series B financing led by Goldman Sachs alternatives. Alterome Therapeutics, Inc. secured a \$132 million Series B financing led by Goldman Sachs Alternatives, with participation from several investors. The funding will propel the development of multiple cancer treatment programs, notably a highly specific AKT1 E17K inhibitor and a KRAS selective inhibitor. Leveraging its Kraken platform, the company employs structure-guided machine learning for drug discovery, focusing on precision therapies targeting validated oncogenic drivers. These programs aim to address previously undruggable mutations, with clinical testing anticipated within the next year. [Read More](#) (BioSpace)

Auna raises US\$360 million in gross proceeds via NYSE IPO. Auna S.A. (NYSE: AUNA) has initiated its Initial Public Offering (IPO) on the New York Stock Exchange, trading under "AUNA," raising US\$360 million. Suso Zamora, Executive Chairman, highlighted the significance, aiming to revolutionize healthcare in Spanish-speaking Latin America. With 31 healthcare facilities and over 1.3 million members, Auna focuses on underserved markets, achieving substantial revenue growth. The IPO's success reflects Auna's commitment to quality care amidst expansion plans to address complex diseases. [Read More](#) (Business Wire)

Chart 13: Auna at Glance



Source: Intro-act, Auna

Flush with new \$150m investment, avenzo pursues licensing strategy. Avenzo Therapeutics, after securing a \$150 million Series A-1 funding, aims to acquire new cancer-focused assets rather than conducting in-house drug discovery. Learning from Turning Point Therapeutics' experience, they prioritize licensing clinical or near-clinical compounds. The startup's approach, unusual for its strategy, has attracted attention and significant investment. Avenzo's current asset, AVZO-021, acquired from Allorion Therapeutics, is undergoing Phase I/II trials for metastatic breast cancer. Future plans include further licensing deals, doubling headcount, and going public within two years, focusing solely on oncology. [Read More](#) (BioSpace)

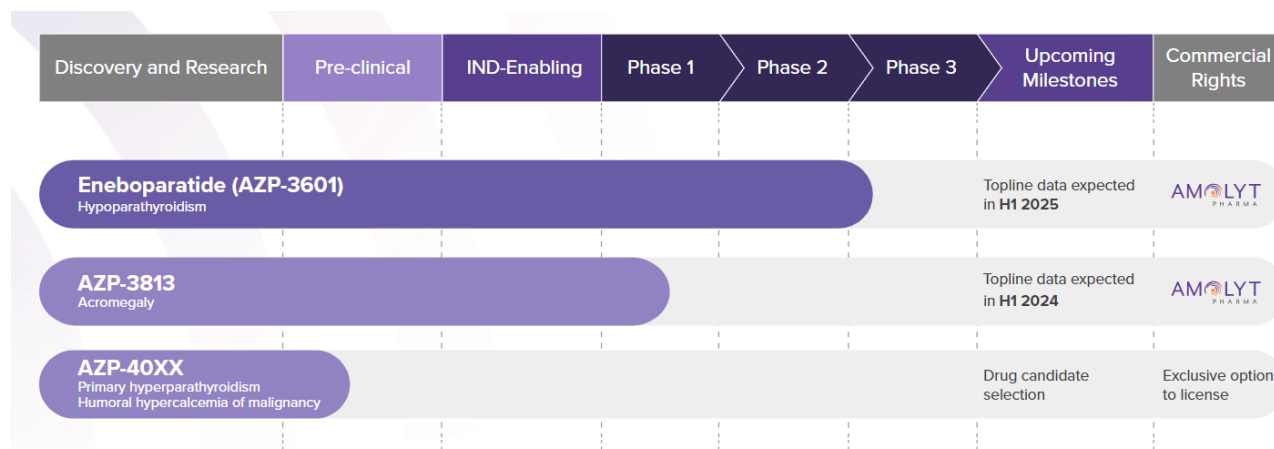
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M&A

AbbVie acquires Landos in potential \$212M deal, bolsters anti-inflammatory pipeline. AbbVie, under pressure from biosimilars against its blockbuster drug Humira, is expanding through acquisitions. It's acquiring Landos Biopharma for up to \$212 million, gaining NX-13, a promising treatment for ulcerative colitis and Crohn's disease. This adds to AbbVie's strategy, including recent deals with OSE Immunotherapeutics and Tentarix, aiming to mitigate the loss of exclusivity for Humira. The company seeks to bolster its portfolio and address challenges posed by biosimilar competition. [Read More](#) (BioSpace)

AstraZeneca to buy Amolyt Pharma for \$1.05b to expand rare disease pipeline. AstraZeneca PLC announced its \$1.05 billion acquisition of biotech company Amolyt Pharma, bolstering its rare disease drug pipeline. Amolyt Pharma is developing a treatment for hypoparathyroidism, a condition affecting 115,000 people in the U.S. and 107,000 in the EU. This move strengthens AstraZeneca's rare disease arm, Alexion. The deal includes an \$800 million upfront payment and is expected to close by Q3 2024. AstraZeneca's recent acquisitions include Pfizer's gene therapy portfolio and CinCor Pharma, reflecting its expansion strategy. [Read More](#) (Investopedia)

Chart 14: Amolyt Pharma Product Pipeline



Source: Intro-act, Amolyt Pharma

AstraZeneca buys \$2bn Fusion in next-gen cancer drugs move. AstraZeneca plans to acquire Fusion Pharmaceuticals for \$2bn to enhance its presence in the radiopharmaceutical cancer medicines market. Fusion specializes in 'radioconjugates', delivering radioactive isotopes directly to cancer cells. AstraZeneca's focus on innovative cancer treatments aligns with Fusion's developments, including therapies for metastatic castration-resistant prostate cancer. The acquisition reflects AstraZeneca's commitment to transforming cancer care, complementing its existing oncology sales, which accounted for over a third of its revenue in 2023. [Read More](#) (Healthcare Digital)

Kintara Therapeutics and TuHURA Biosciences enter into definitive merger agreement. TuHURA plans to conduct a Phase 3 trial for IFx-2.0 personalized cancer vaccine alongside Keytruda® for advanced Merkel cell carcinoma. A \$31 million financing will support operations until late 2025. TuHURA's ADCs present partnership opportunities. The merger between Kintara and TuHURA aims to advance late-stage oncology treatments. IFx-2.0 targets innate immune response, while bi-functional ADCs target immunosuppressive cells. [Read More](#) (BioSpace)

Avail Medsystems tech sold to robotics startup founded by former Auris leaders. Medical robotics startup Mendaera acquires technology and assets from Avail Medsystems, aiming to enhance intervention consistency and broaden access to procedures. CEO Josh DeFonzo reveals plans to combine robotics, AI, imaging, and telepresence. Notable advisors include former Avail CEO Daniel Hawkins. Backed by investors like Dr. Fred Moll and Lux Capital, Mendaera plans a Series B funding round. Technology development is underway, targeting FDA approval for clinical use by 2025. [Read More](#) (Mass Device)

Johnson & Johnson is reportedly eyeing its second big heart device company acquisition. Johnson & Johnson is reportedly set to acquire Shockwave Medical, a heart device maker, marking its second consecutive purchase in the sector within two years. Sources suggest the deal may be finalized soon, boosting Shockwave's stock by 10%. With Shockwave's revenue projected to rise substantially, this acquisition could rival J&J's previous \$16.6 billion deal for Abiomed. Such acquisitions reflect a broader trend among pharmaceutical giants expanding into heart disease treatments amid growing global mortality rates. [Read More](#) (Quartz)

Genmab leans into hot ADC space with \$1.8b ProfoundBio acquisition. Genmab announced its acquisition of ProfoundBio for \$1.8 billion in cash, aimed at enhancing its cancer pipeline with next-gen antibody-drug conjugate therapies. The deal includes access to ProfoundBio's ADC portfolio, notably Rina-S targeting ovarian cancer and other solid tumors expressing FRα. The acquisition aligns with industry trends highlighted by Evaluate's report projecting a burgeoning ADC market. Genmab plans to expand Rina-S development and access ProfoundBio's other assets, anticipating growth in the oncology sector. [Read More](#) (BioSpace)

Chart 15: Profound Bio Product Pipeline

Program	Target	Indication	Preclinical Development	Phase 1 Clinical	Phase 2 Clinical
Rinatabart Sesutecan (Rina-S, PRO1184)	FRα	Solid tumors			
PRO1160	CD70	RCC, NPC, NHL			
PRO1107	PTK7	Solid tumors			
Multiple Preclinical Programs	Undisclosed	Solid tumors			

Source: Intro-act, Profound Bio

REGULATORY UPDATES

Eli Lilly says FDA delays approval of Alzheimer's drug in surprise move. The FDA delayed its decision on Eli Lilly's Alzheimer's drug, Donanemab, surprising many. A late-stage trial review led to plans for an advisory meeting, postponing approval expected by the first quarter. The drug, like others targeting amyloid plaque, faces safety concerns. Alzheimer's treatments are crucial due to its impact, yet few options exist. Eli Lilly faces competition from Biogen and Eisai. Despite setbacks, Eli Lilly remains confident in Donanemab's potential, awaiting FDA guidance. [Read More](#) (CNBC News)

US FDA staff raises concerns over data from J&J, Bristol's CAR-T therapies. FDA staff raised concerns over unclear benefits of Johnson & Johnson and Bristol Myers Squibb's early use cancer cell therapies in blood cancer patients. Early deaths in late-stage trials raised doubts about treatment effectiveness. Companies seek expanded approval for Carvykti and Abecma, but FDA staff highlight higher early death rates. FDA's advisory panel to assess overall survival data, crucial for cancer treatments. Despite potential benefits, risks of early deaths remain significant. [Read More](#) (Saltwire)

President Biden announces new landmark rule to protect Americans from junk health insurance. The Biden-Harris Administration is combatting low-quality health insurance, issuing a rule to protect consumers from deceptive practices that leave them with massive medical bills or denied care. Republican actions, including the previous administration, enabled loopholes allowing "junk insurance" plans to thrive, leaving families burdened with unexpected costs. The new rule restricts "short-term" plans to 3-4 months, requires clear disclosure of coverage limits, and counters a House Republican budget proposing to reverse consumer protections and slash Affordable Care Act funding, endangering millions' coverage. [Read More](#) (The White House)

UK to introduce bill to phase out smoking among young people. The British government aims to fulfill its promise to end smoking among youth by introducing the Tobacco and Vapes Bill, prohibiting tobacco sales to those under 15. Prime Minister Rishi Sunak highlights smoking's health risks. Critics, including former PM Liz Truss, oppose the move, but it's expected to pass with Labour Party support. The bill addresses rising youth vaping, proposing stricter regulations on vape display, flavors, and packaging targeted at children. [Read More](#) (Reuters)

Biden's new executive order directs federal agencies to prioritize women's health. President Biden will sign an executive order prioritizing women's health research, directing federal agencies to integrate it into their portfolios. This includes focusing on midlife conditions like rheumatoid arthritis and osteoporosis post-menopause. The order also emphasizes leveraging AI for research. Accompanying directives allocate \$200 million for interdisciplinary research, strengthen Medicare review processes, expand CDC fellowship training, and enhance data collection. These actions, within a proposed \$12 billion budget, aim to address historic underfunding and disparities in women's health research. [Read More](#) (Fierce Healthcare)

Biden administration finalizes modest cut to 2025 Medicare Advantage rates. Health insurers typically find relief in federal Medicare Advantage payment rate announcements, but this year, rates for 2025 remained largely unchanged despite industry pushback. Though regulators emphasized insurers would still see increased funding, major players' shares fell. Insurer lobbies criticized the decision, arguing it doesn't address rising care costs. Despite concerns, researchers suggest the rate adjustment won't significantly impact profits, aiming to correct overpayments in Medicare Advantage. [Read More](#) (Healthcare Dive)

New federal health IT strategy increases focus on public health, AI. The HHS' Office of the National Coordinator for Health Information Technology released a draft plan outlining its strategy for health IT, emphasizing areas like artificial intelligence, public health, and equity. Developed with over 25 federal agencies, the plan aims to prioritize resources, coordinate efforts, engage the private sector, and monitor progress. It aligns with recent cybersecurity efforts and addresses challenges such as AI expansion and cyber threats. The plan's goals focus on improving health outcomes, care delivery, research, innovation, data sharing, and infrastructure. It builds upon previous progress and aims to modernize public health post-COVID-19, tackle disparities, and manage AI's evolving role in healthcare. [Read More](#) (Healthcare Dive)

US lawmaker seeks answers on FDA inspection of Musk's Neuralink. Democratic U.S. Representative Earl Blumenauer questioned the FDA's failure to inspect Elon Musk's Neuralink before allowing human testing of its brain implant. He cited concerns over animal testing violations dating back to 2019 and reports of rushed experiments causing suffering. Blumenauer urged the FDA to clarify its decision to authorize Neuralink's trial. The FDA promised a direct response to Blumenauer's inquiry and noted routine inspections post-approval. Neuralink hasn't responded yet. Other companies, like Synchron and Blackrock Neurotech, have also tested brain implants in humans, showcasing patients controlling actions via thoughts. [Read More](#) (Reuters)

Lawsuit seeks to force ban on menthol cigarettes after months of delays by Biden administration. Anti-smoking groups have sued the U.S. government over the prolonged delay in banning menthol cigarettes, arguing they disproportionately harm Black smokers and youth. Despite plans dating back to August, the White House has delayed action, raising concerns of political interference. Advocates stress the public health benefits of banning menthol, which could prevent hundreds of thousands of smoking-related deaths. Opposition to the ban, often funded by tobacco companies, raises concerns about its impact on elections. [Read More](#) (ABC News)

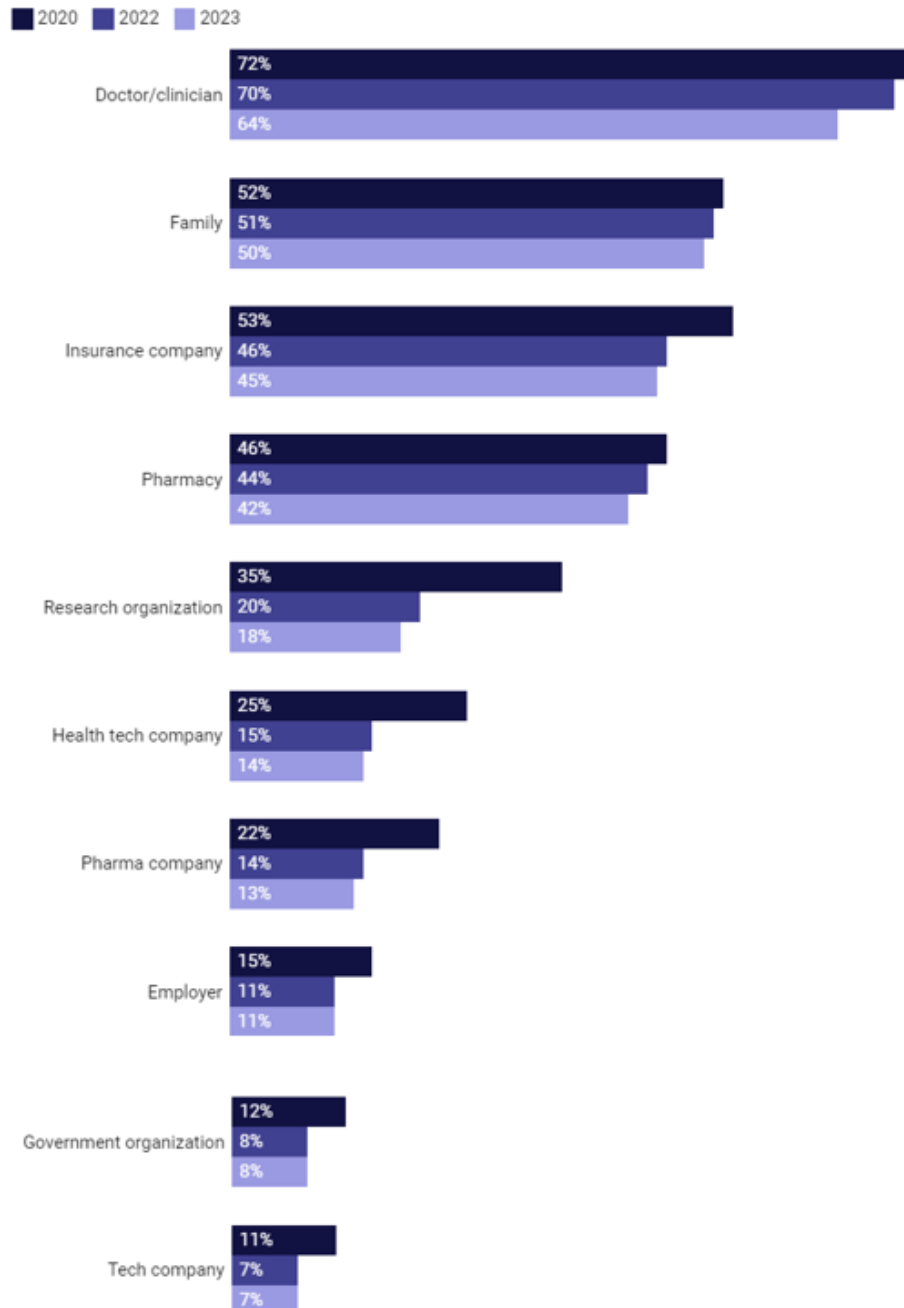
Court upholds Texas law that requires teens to get parental consent for birth control. A federal appeals court upheld a Texas law requiring minors to have parental consent for contraception through Title X. Biden administration's appeal was rejected. Texas state law now applies to Title X clinics, limiting minors' access to prescription birth control without parental consent. Over-the-counter options remain available, but concerns arise over restricting teenagers' reproductive rights. Texas contrasts with other states regarding contraceptive access policies. Future legal actions could have broad implications for nationwide birth control access. [Read More](#) (Yahoo Finance)

New Zealand announces ban on disposable e-cigarettes. New Zealand's government plans to ban disposable e-cigarettes to curb minors' access to vaping. The decision follows recent legislation repeal aimed at reducing tobacco smoking. Associate Health Minister Casey Costello emphasizes e-cigarettes' role in smoking cessation but expresses concerns about youth vaping. New regulations include hefty fines for retailers selling to minors and restrictions on marketing targeting young people. This move aligns with global efforts to regulate disposable e-cigarettes. [Read More](#) (Euronews)

HEALTHTECH CHART OF THE MONTH

Chart 16: U.S. Consumers are Pickier About Health Data Sharing

Respondents willing to share health data by entity type, 2020, 2022 and 2023



Source: Intro-act, [Healthcare Dive](#), [Rock Health](#)

HEALTHTECH CAPITAL MARKET ACTION (MARCH 2024)

IPO Activity

Company	Stock Exchange	Offer Date	Gross Proceeds (\$m)
Auna S.A.	NYSE	22-Mar-24	360

Source: Intro-act, FactSet

M&A Activity (March 2024)

Target	Target Industry	Target Country	Acquirer	Deal Size (\$m)	Announcement Date
Invicro	Biotechnology Research	United States	Calyx	-	7-Mar-2024
Timberland Medical Centre	-	-	IHH Healthcare	-	8-Mar-2024
NanoString	Biotechnology Research	Washington DC	Patient Square Capital	220	10-Mar-2024
RevSpring	Information Technology & Services	United States	Frazier Healthcare	-	12-Mar-2024
Healers Hospital	Hospitals and Health Care	India	Shalby	-	13-Mar-2024
Covenant Health and Community Services	Hospitals and Health Care	United States	VITAS Healthcare Corporation	85	13-Mar-2024
Amolyt Pharm	Biotechnology Research	France	AstraZeneca	1,050	14-Mar-2024
Kroger Specialty Pharmacy	Pharmaceutical Manufacturing	United States	Elevance Health	-	19-Mar-2024
Fusion	Advertising Services	United States	AstraZeneca	2,000	19-Mar-2024
Avail Medsystems	Medical Equipment Manufacturing	United States	Mendaera	-	19-Mar-2024
GalaxE Solutions	IT Services and IT Consulting	United States	Endava	-	21-Mar-2024
Landos	Pharmaceutical Manufacturing	United States	AbbVie	212	25-Mar-2024
Health+Commerce	Marketing Services	United States	Supreme Group	-	27-Mar-2024
Geisinger Health	Hospitals and Health Care	United States	Kaiser	-	2-Apr-2024
IFM Therapeutics	Biotechnology Research	United States	Novartis	-	3-Apr-2024
Manta HealthTech	IT Services and IT Consulting	United States	Anatomy IT	-	3-Apr-2024
MIM Software Inc	Software Development	United States	GE HealthCare	-	3-Apr-2024
Asensus Surgical	Medical Equipment Manufacturing	United States	Karl Storz	-	3-Apr-2024
ProfoundBio	Biotechnology Research	United States	Genmab	1,800	3-Apr-2024

Source: Intro-act, FactSet

PE/ VC Funding Activity (March 2024)

Company	Funding Round	Fund raised (\$m)	Investors	Date
Fijoya	Seed	8.3	-	7-Mar-2024
Sionna Therapeutics	Series C	182.0	Viking Global Investors, Perceptive Advisors, RA Capital, OrbiMed, TPG's The Rise Fund, Atlas Venture, Cystic Fibrosis Foundation, Q Healthcare Holdings	7-Mar-2024
MDaaS Global	Pre-series A	3.0	Aruwa Capital Management, Newtown Partners, Ventures Platform	8-Mar-2024
Tava Health	Series B	20.0	Catalyst Investors, Peterson Partners, Toba Capital, SpringTide, Blue Heron Capital	8-Mar-2024
CodaMetrix	Series B	40.0	Transformation Capital, SignalFire, Frist Cressey Ventures	12-Mar-2024
Milu Health	Seed	4.8	Andreessen Horowitz (a16z) Bio + Health, BoxGroup, PagsGroup, 81 Collection	12-Mar-2024
Foundation Health	Seed	6.0	Garry Tan, Transpose Platform, Tuesday VC, Alt Capital, Box Group, Liquid Ventures, Exceptional Capital, Calm/Storm Ventures, PageOne Ventures, Paul Johnson, Meghan Fitzgerald	12-Mar-2024
Sooma	-	4.6	Voima Ventures, Verge HealthTech Fund, Stephen Industries	12-Mar-2024
Nest Health	-	4.0	SpringTide, Alumni Ventures, Ochsner Ventures	13-Mar-2024
Zephyr AI	Series A	111.0	Revolution Growth, Eli Lilly & Company, Jeff Skoll, EPIQ Capital Group	13-Mar-2024
BrainCheck	-	15.0	Next Coast Ventures, S3 Ventures, UPMC Enterprises	13-Mar-2024
HiLabs	Series B	39.0	Eight Roads Ventures, Denali Growth Partners, F-Prime Capital	14-Mar-2024
Pi Health	Series A	30.0	AlleyCorp, Obvious Ventures, Invus Capital	14-Mar-2024
Assort Health	-	3.5	Matt Humphrey, Four Acres, Tau Ventures, Aditya Khosla, Flatiron Health, Presto AI, Athena Health.	14-Mar-2024
BeiGene	Series A	30.0	AlleyCorp, Obvious Venture	15-Mar-2024
Bone Health	-	5.0	Esplanade Ventures, Berkeley Catalyst Fund, Terumo Medical	15-Mar-2024
UpHill	Series A	6.4	Explorer, Redstone, EnjoyVenture, Brighteye Ventures, Maze, Caixa Capital, Grupo Luz Saúde	18-Mar-2024
Hippocratic AI	Series A	53.0	Premji Invest, General Catalyst, SV Angel, Memorial Hermann Health System, Andreessen Horowitz, WellSpan Health, Universal Health Services	19-Mar-2024
Hola Health	Pre-series A	4.9	M8 Ventures, FundWA	19-Mar-2024
Anima	Series A	12.0	Molten Ventures, Hummingbird Ventures, Amino Collective, Y Combinator, Sidar Sahin	20-Mar-2024
PocketHealth	Series B	33.0	Deloitte Ventures, Samsung Next, Questa Capital, Radical Ventures	20-Mar-2024
Ultrahuman	Series B	35.0	Blume Ventures, Steadview Capital, Nexus Venture Partners, Alpha Wave, Deepinder Goyal	21-Mar-2024
Conduce Health	Seed	3.0	Connecticut Innovations, AlleyCorp, CityLight	22-Mar-2024
Goalsetter	Series A	9.6	Edward Jones, MassMutual, Fiserv, Webster Bank	25-Mar-2024
Tonic App	Series A	9.9	BlueCrow Capital, Iberis Capital, Luxembourgish Vesalius Biocapital III, Armilar Venture Partners, Portugal Ventures	26-Mar-2024
Tennr	Series A	18.0	a16z	26-Mar-2024
Goodbill	-	2.0	-	26-Mar-2024
Brightside Health	Series C	33.0	S32, Kennedy Lewis, Time BioVentures, Redwood Pacific, ACME, Mousse Partners, Triventures	26-Mar-2024

InStride Health	-	30.0	406 Ventures, Valtruis, Mass General Brigham Ventures, Hopelab Foundation	27-Mar-2024
Pelago	Series C	58.0	Eight Roads, GreyMatter Capital, Atomico, Kinnevik AB, Octopus Ventures, Y Combinator	28-Mar-2024
Wellola	-	2.0	Elkstone Partners	28-Mar-2024
Cherish Health	-	26.0	-	28-Mar-2024
Praia Health	Series A	20.0	Frist Cressey Ventures, SignalFire, Epsilon Health Investors, Providence Ventures	2-Apr-2024
Limbic	-	14.0	Khosla Ventures, Gaingels, Illusian	2-Apr-2024
HD	Series A	5.6	SBI Ven Capital, M Venture Partners, FEBE Ventures, Partech Partners, Ratio Ventures, Orvel Ventures, TA Ventures	3-Apr-2024
Nabla	Series B	24.0	Cathay Innovation, ZEBOX Ventures	-

Source: Intro-act, FactSet

FDA CLINICAL TRIALS TRACKER

S. No	Symbol	Company	NCT ID	Completion Date	Title
1	RIGL	Rigel Pharmaceuticals, Inc.	NCT04138927	04-01-2024	A Phase 3 Open Label Extension Study of Fostamatinib Disodium in the Treatment of Warm Antibody Autoimmune Hemolytic Anemia
2	VNDA	Vanda Pharmaceuticals Inc.	NCT05903924	04-01-2024	Motion Serifos: A Study to Investigate the Efficacy of Tradipitant in Participants Affected by Motion Sickness
3	CERS	Cerus Corporation	NCT03459287	03-31-2024	Study to Evaluate the Efficacy & Safety of the INTERCEPT Blood System for RBCs in Complex Cardiac Surgery Patients
4	NVAX	Novavax, Inc.	NCT05973006	03-22-2024	Phase 3 Adolescent Study for SARS-CoV-2 rS Variant Vaccines
5	BFRI	Biofrontera Inc.	NCT03573401	03-19-2024	Study to Evaluate the Safety and Efficacy of BF-200 ALA (Ameluz®) and BF-RhodoLED® in the Treatment of Superficial Basal Cell Carcinoma (sBCC) With Photodynamic Therapy (PDT).
6	LYRA	Lyra Therapeutics, Inc.	NCT05219968	03-15-2024	Efficacy and Safety of LYR-210 for the Treatment of Chronic Rhinosinusitis in Adults
7	ACHFF	Arch Biopartners Inc.	NCT04330690	03-10-2024	Treatments for COVID-19: Canadian Arm of the SOLIDARITY Trial
8	AVEFF	Avecho Biotechnology Limited	NCT05840822	03-01-2024	Evaluating Efficacy and Safety of CBD TPM Capsules for Use in Insomnia
9	AVIR	Atea Pharmaceuticals, Inc.	NCT05629962	03-01-2024	SUNRISE-3: Efficacy and Safety of Bemnifosbuvir in High-Risk Outpatients With COVID-19

10	BFRI	Biofrontera Inc.	NCT03573401	03-01-2024	Study to Evaluate the Safety and Efficacy of BF-200 ALA (Ameluz®) and BF-RhodoLED® in the Treatment of Superficial Basal Cell Carcinoma (sBCC) With Photodynamic Therapy (PDT).
11	DCTH	Delcath Systems, Inc.	NCT05022901	03-01-2024	An Open-Label Expanded Access Study of the Melphalan/Hepatic Delivery System (HDS) in Patients with Hepatic Dominant Ocular Melanoma
12	ONPH	Oncology Pharma Inc.	NCT02194842	03-01-2024	Phase III Radium 223 mCRPC-PEACE III
13	OTLK	Outlook Therapeutics, Inc.	NCT05112861	03-01-2024	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
14	EIGR	Eiger BioPharmaceuticals, Inc.	NCT04727424	02-01-2024	Repurposed Approved and Under Development Therapies for Patients with Early-Onset COVID-19 and Mild Symptoms
15	ARQT	Arcutis Biotherapeutics, Inc.	NCT04286607	26-01-2024	Open-Label Extension Trial of PDE4 Inhibition with Roflumilast for the Management of Plaque Psoriasis
16	NVAX	Novavax, Inc.	NCT05875701	12-01-2024	Phase 3 Study of Novavax Vaccine(s) as Booster Dose After mRNA Vaccines
17	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
18	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
19	CING	Cingulate Inc.	NCT05286762	01-01-2024	Phase 3 Efficacy and Safety Fixed-Dose Study in Pediatrics (6-17) With ADHD Using CTx-1301

20	CING	Cingulate Inc.	NCT05924594	01-01-2024	Phase 3 Efficacy and Safety Laboratory Classroom Study in Pediatrics (6-12) With ADHD Using CTx-1301
21	MRNS	Marinus Pharmaceuticals, Inc.	NCT05323734	01-01-2024	Adjunctive GNX Treatment Compared with Placebo in Children and Adults With TSC-related Epilepsy
22	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
23	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
24	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
25	PHASQ	PhaseBio Pharmaceuticals, Inc.	NCT04286438	31-12-2023	Bentricimab (PB2452) in Ticagrelor-treated Patients with Uncontrolled Major or Life-Threatening Bleeding or Requiring Urgent Surgery or Invasive Procedure
26	SYRS	Syros Pharmaceuticals, Inc.	NCT04797780	31-12-2023	Tamibarotene Plus Azacitidine in Participants with Newly Diagnosed RARA-positive Higher-Risk Myelodysplastic Syndrome
27	PRFX	PainReform Ltd.	NCT05773846	30-12-2023	A Study to Evaluate Analgesic Efficacy and Safety of PRF-110 for Post-surgical Pain
28	RVPH	Reviva Pharmaceuticals Holdings, Inc.	NCT05184335	20-12-2023	Safety and Efficacy of Brilaroxazine (RP5063) in Schizophrenia

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	1545	976	99.90%	335
2	GlaxoSmithKline	1197	725	100.00%	370
3	Pfizer	909	573	99.50%	228
4	Merck Sharp & Dohme (MSD)	869	507	100.00%	209
5	Astrazeneca	748	415	97.80%	135
6	Roche	806	414	98.80%	187
7	Sanofi S.A.	765	393	100.00%	292
8	Johnson & Johnson	589	334	99.70%	140
9	Eli Lilly	490	319	99.40%	77
10	Boehringer Ingelheim	400	311	100.00%	52
11	Medical University of Vienna	458	280	93.90%	35
12	Bayer	345	248	100.00%	60
13	Bristol-Myers Squibb	411	219	100.00%	105
14	Amgen Inc	308	201	100.00%	64

15	KU Leuven	274	192	95.30%	7
16	Novo Nordisk	283	183	100.00%	50
17	Gilead Sciences Inc	269	172	100.00%	66
18	Charité-Universitätsmedizin Berlin	214	163	100.00%	8
19	Rigshospitalet	268	152	52.00%	26
20	Takeda	260	152	100.00%	65
21	Abbvie	271	133	99.20%	64
22	Aarhus University	224	130	66.20%	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	Voydeya	danicopan	3/29/2024	To treat extravascular hemolysis with paroxysmal nocturnal hemoglobinuria
2	Vafseo	vadadustat	3/27/2024	To treat anemia due to chronic kidney disease
3	Winrevair	sotatercept-csrk	3/26/2024	To treat pulmonary arterial hypertension
4	Duvyzat	givinostat	3/21/2024	To treat Duchenne muscular dystrophy in individuals aged 6 years and older
5	Tryvio	aprocitentan	3/19/2024	To treat hypertension
6	Rezdiffra	resmetirom	3/14/2024	To treat noncirrhotic non-alcoholic steatohepatitis with moderate to advanced liver scarring
7	Tevimbra	tislelizumab-jsgr	3/13/2024	To treat unresectable or metastatic esophageal squamous cell carcinoma
8	Letybo	letibotulinumtoxinA-wlbq	2/29/2024	To temporarily improve the appearance of moderate-to-severe glabellar lines
9	Exblifep	cefepime, enmetazobactam	2/22/2024	To treat complicated urinary tract infections
10	Zelsuvmi	berdazimer	1/5/2024	To treat molluscum contagiosum
11	Wainua	eplontersen	12/21/2023	To treat polyneuropathy of hereditary transthyretin-mediated amyloidosis
12	Filsuvez	birch triterpenes	12/18/2023	To treat wounds associated with dystrophic and junctional epidermolysis bullosa
13	Fabhalta	iptacopan	12/5/2023	To treat paroxysmal nocturnal hemoglobinuria
14	Ogsiveo	nirogacestat	11/27/2023	To treat adults with progressing desmoid tumors who require systemic treatment
15	Truqap	capivasertib	11/16/2023	To treat breast cancer that meets certain disease criteria
16	Ryzneuta	efbemalenograstim alfa-vuxw	11/16/2023	To treat neutropenia
17	Augtyro	repotrectinib	11/15/2023	To treat ROS1-positive non-small cell lung cancer

18	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
19	Fruzaqla	fruquintinib	11/8/2023	To treat refractory, metastatic colorectal cancer
20	Loqtorzi	toripalimab-tpzi	10/27/2023	To treat recurrent or metastatic nasopharyngeal carcinoma when used together with or following other therapies
21	Omvoth	mirikizumab-mrkz	10/26/2023	To treat ulcerative colitis
22	Agamree	vamorolone	10/26/2023	To treat Duchenne muscular dystrophy
23	Bimzelx	bimekizumab	10/17/2023	To treat moderate to severe plaque psoriasis in adults who are candidates for systemic therapy or phototherapy
24	Zilbrysq	zilucoplan	10/17/2023	To treat generalized myasthenia gravis in adults who are anti-acetylcholine receptor (AChR) antibody positive
25	Velsipity	etrasimod	10/12/2023	To treat moderately to severely active ulcerative colitis in adults

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	Oncomine™ Dx Target Test - P160045/S025	Lab Test	09/29/2023
4	CRCdx(R) RAS Mutation Detection Kit - P220005	Lab Test	09/29/2023
5	LimFlow™ System	Stent	09/11/2023

Source: Intro-act, FDA

HEALTHTECH INSTITUTIONAL INVESTOR LEAGUE

Chart 17: 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 18: 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 19: 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
28.76	00214Q302	0.75	10/31/2014
AUM (\$ million)	Shares Outstanding (#)	Fund Flows (1M, \$)	Fund Flows (YTD, \$)
1,710,697,827	55800000	(96,412,050.00)	(362,755,800.00)

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 02/29/2024)

1 Year	3 Year	5 Year	Since Inception
3.56%	-30.28%	1.44%	5.88%

ETF Returns Cumulative (As of 02/29/2024)

1 Month	3 Month	YTD	Since Inception
10.70%	13.76%	-3.84%	70.46%

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

Holdings	% Allocation	Market Value
CRISPR THERAPEUTICS AG	7.28%	\$109,794,806.00
TWIST BIOSCIENCE CORP	6.16%	\$92,880,305.68
EXACT SCIENCES CORP	5.74%	\$86,486,056.58
RECURSION PHARMACEUTICALS-A	5.24%	\$78,995,967.69
BEAM THERAPEUTICS INC	4.19%	\$63,147,138.32
SCHRODINGER INC	4.12%	\$62,043,601.68
IONIS PHARMACEUTICALS INC	4.02%	\$60,647,033.04
CAREDX INC	3.87%	\$58,283,444.96
INTELLIA THERAPEUTICS INC	3.85%	\$58,042,953.46
GINKGO BIOWORKS HOLDINGS INC	3.79%	\$57,140,559.88

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
93.15	464287325	0.42	11/13/2001
AUM (\$ million)	Shares Outstanding (#)	Fund Flows (1M, \$)	Fund Flows (YTD, \$)
4,130,862,487.63	44150000	(41,451,880.00)	(214,126,675.00)

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 02/29/2024)

1 Year	3 Year	5 Year	Since Inception
14.42%	8.13%	9.91%	7.65%

ETF Returns Cumulative (As of 02/29/2024)

YTD	1 Month	3 Months	Since Inception
4.83%	2.35%	9.32%	417.51%

Top 10 Holdings (updated as of 04/02/24)

Holdings	% Allocation	Market Value
ELI LILLY	8.21%	\$329,631,932.88
UNITEDHEALTH GROUP INC	5.71%	\$229,286,242.08
NOVO NORDISK CLASS B	5.45%	\$218,665,159.09
JOHNSON & JOHNSON	4.83%	\$193,790,863.52
MERCK & CO INC	4.50%	\$180,590,800.50
ABBVIE INC	4.31%	\$173,274,843.78
THERMO FISHER SCIENTIFIC INC	2.98%	\$119,492,619.84
ASTRAZENECA PLC	2.78%	\$111,783,061.34
NOVARTIS AG	2.65%	\$106,579,971.64
ABBOTT LABORATORIES	2.62%	\$105,228,451.44

Source: Intro-act, FactSet

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

ETF COMPARISON

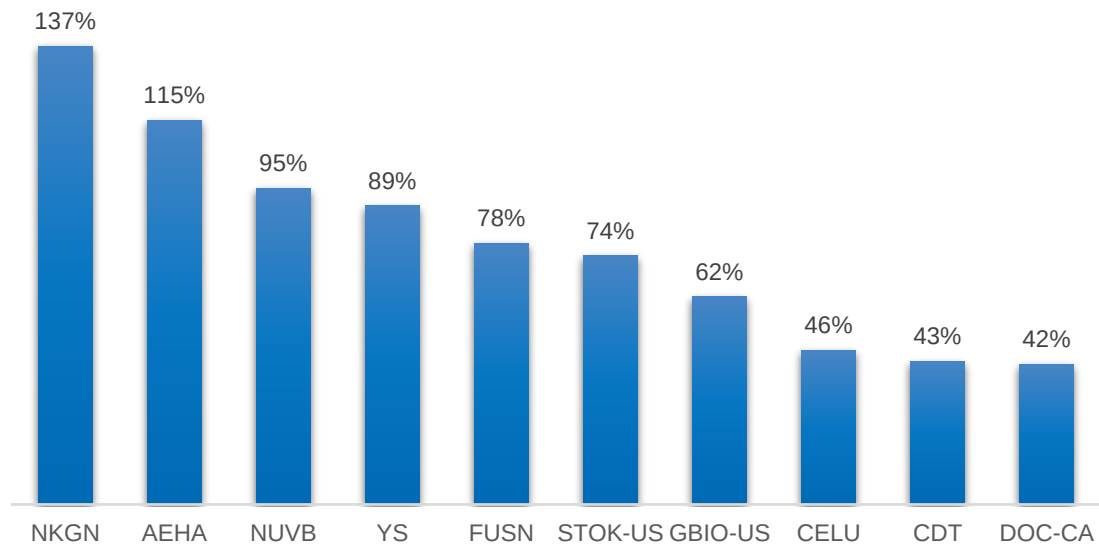
Chart 20: 12-month Indexed Returns of ARKG and IXJ vs. S&P 500



Source: Intro-act, FactSet. Data as of March 31, 2024.

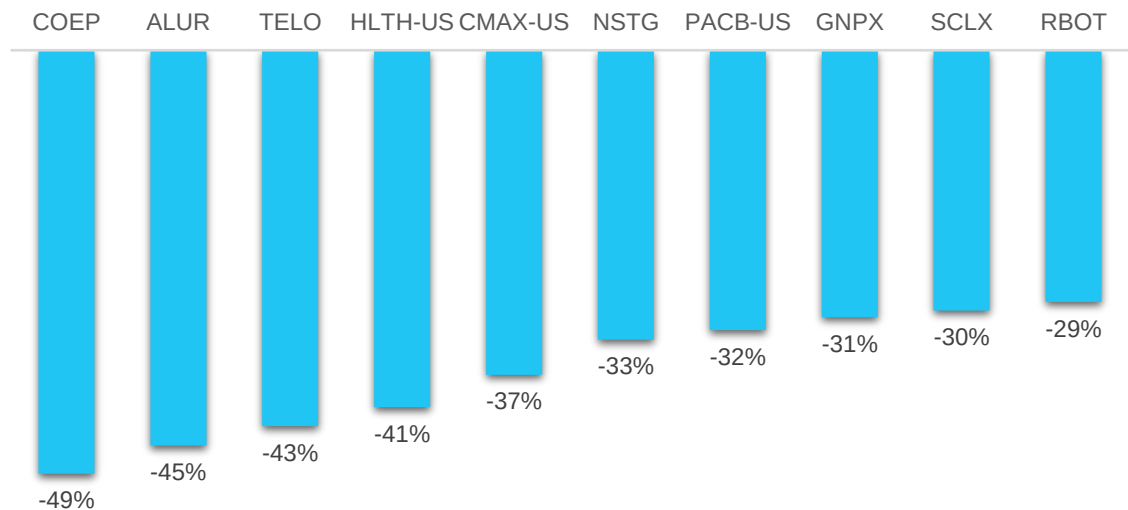
GAINERS AND LOSERS – HEALTHTECH STOCKS

Chart 21: Top 10 M/M Healthtech Gainers (March 2024)



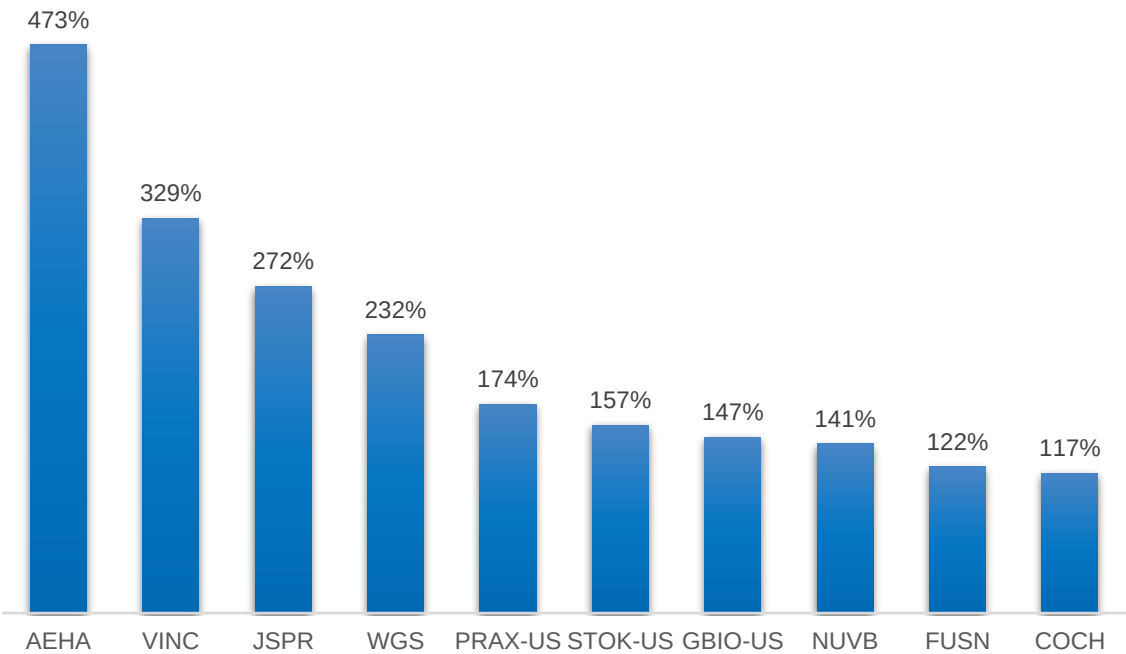
Source: Intro-act, FactSet. Data as of March 31, 2024.

Chart 22: Top 10 M/M Healthtech Losers (March 2024)



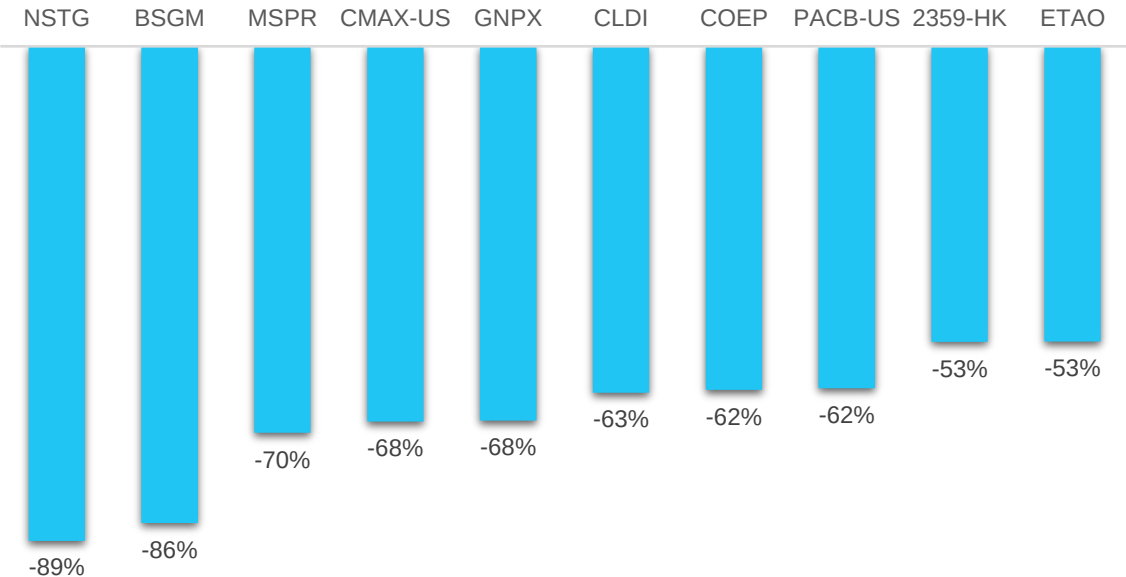
Source: Intro-act, FactSet. Data as of March 31, 2024.

Chart 23: Top 10 YTD Healthtech Gainers



Source: Intro-act, FactSet. YTD Data as of March 31, 2024.

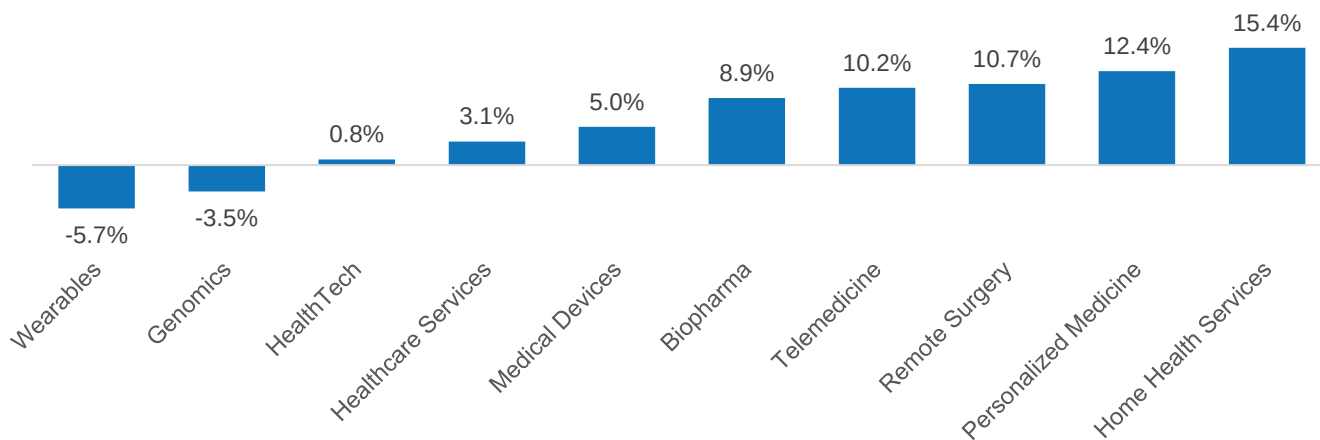
Chart 24: Top 10 YTD Healthtech Losers



Source: Intro-act, FactSet. YTD Data as of March 31, 2024.

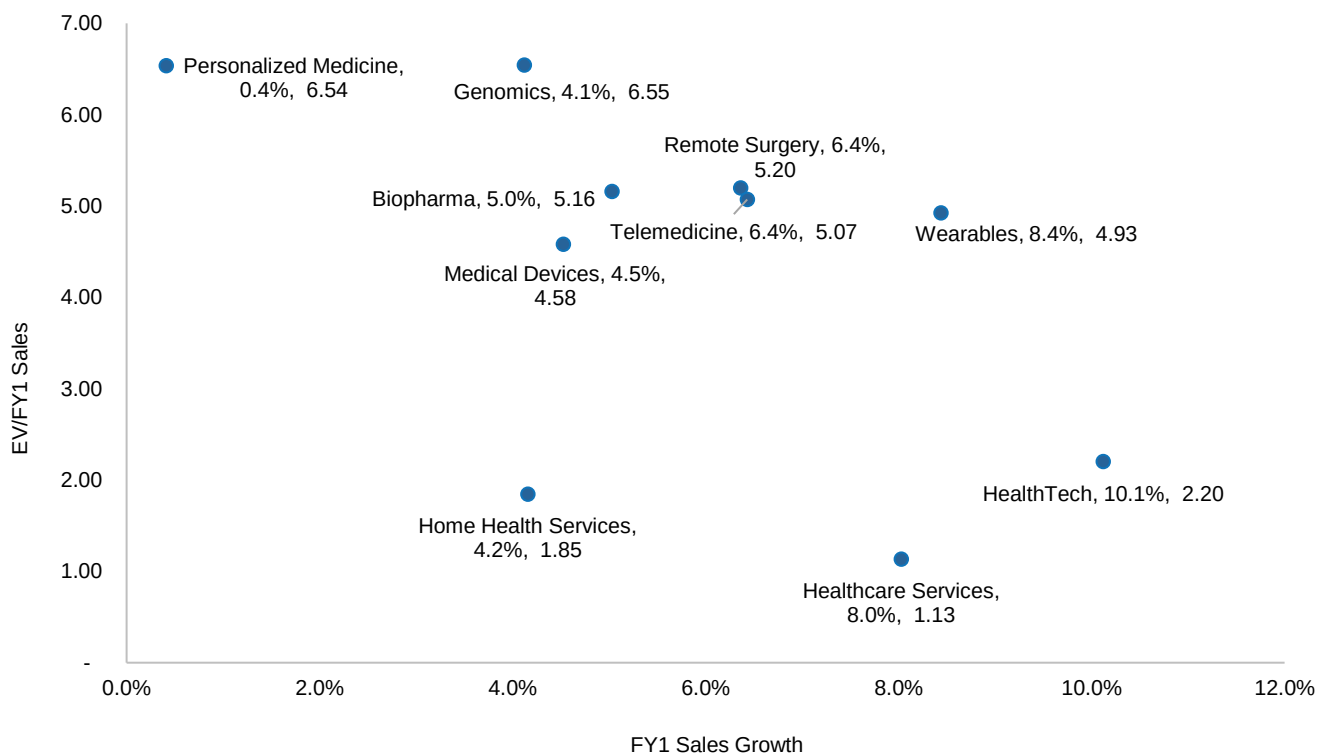
SEGMENT RETURN AND VALUATION

Chart 25: YTD Stock Price Returns by Segment



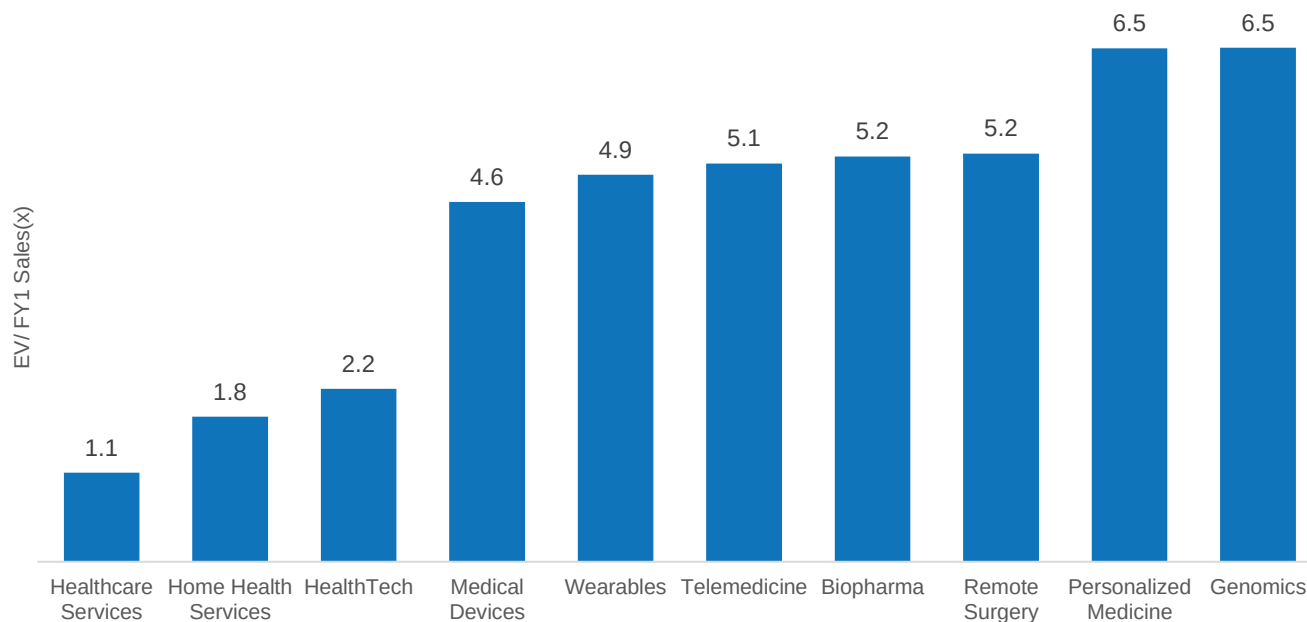
Source: Intro-act, FactSet. YTD Data as of March 31, 2024.

Chart 26: Healthtech Industry Growth and Valuation by Segment



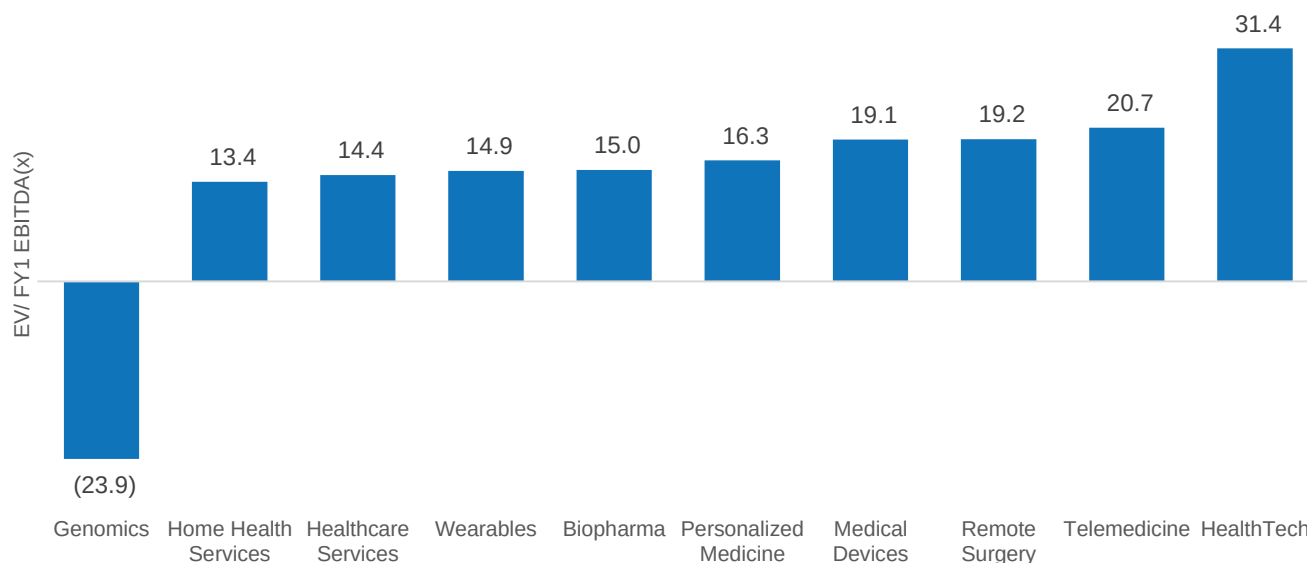
Source: Intro-act, FactSet. Data Through end of March 2024. FY0 = last reported year. FY1 = first unreported year.

Chart 27: EV/ FY1 Sales Multiple by Segment



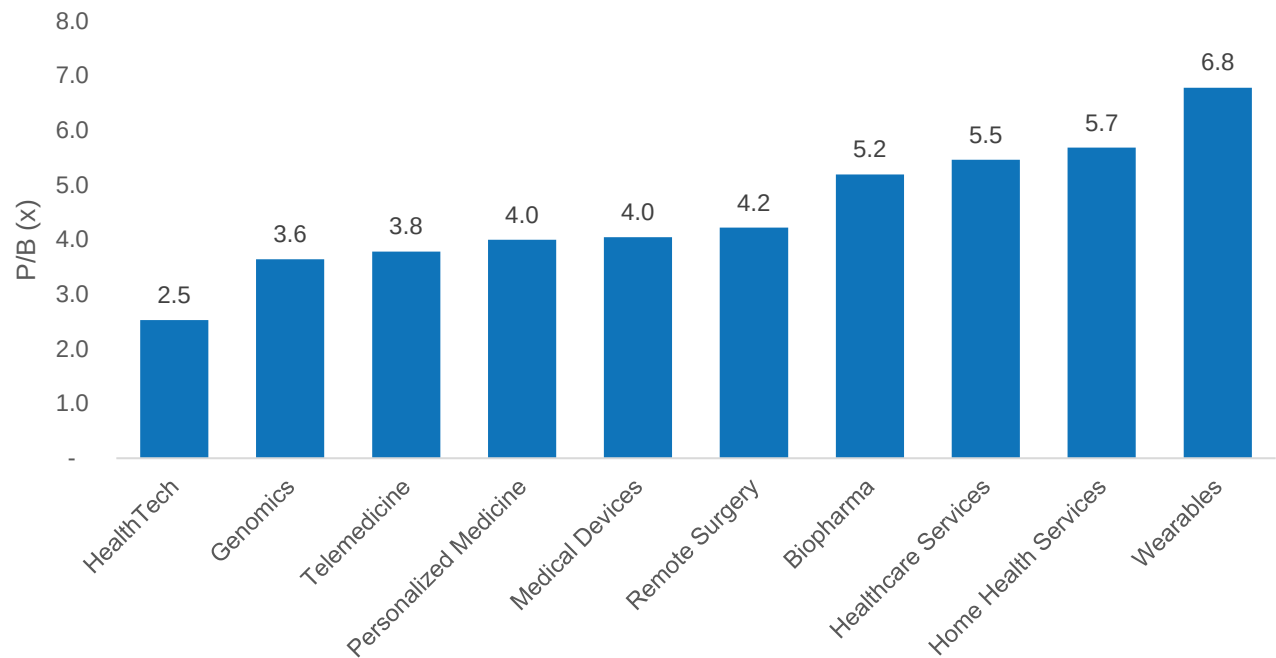
Source: Intro-act, FactSet. Data as of March 31, 2024.

Chart 28: EV/ FY1 EBITDA Multiple by Segment



Source: Intro-act, FactSet. Data as of March 31, 2024.

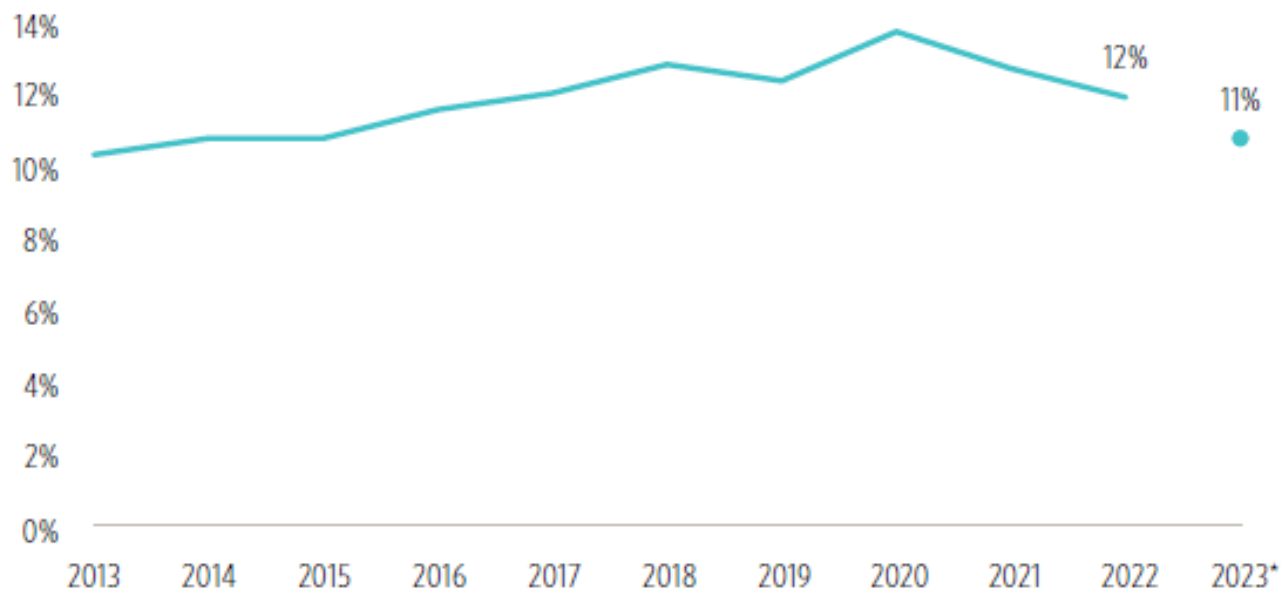
Chart 29: Price-to-Book Multiple by Segment



Source: Intro-act, FactSet. Data as of March 31, 2024.

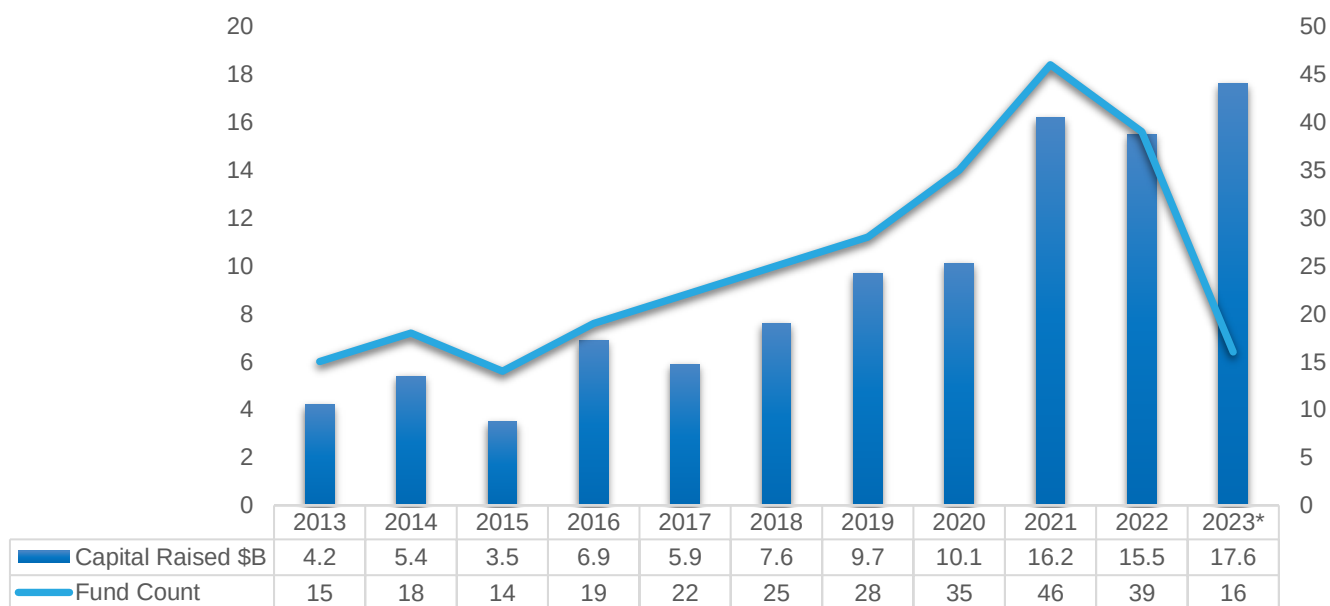
HEALTHTECH CAPITAL MARKET TRENDS

Chart 30: Healthcare PE Deals as a Share of All PE Deal Count



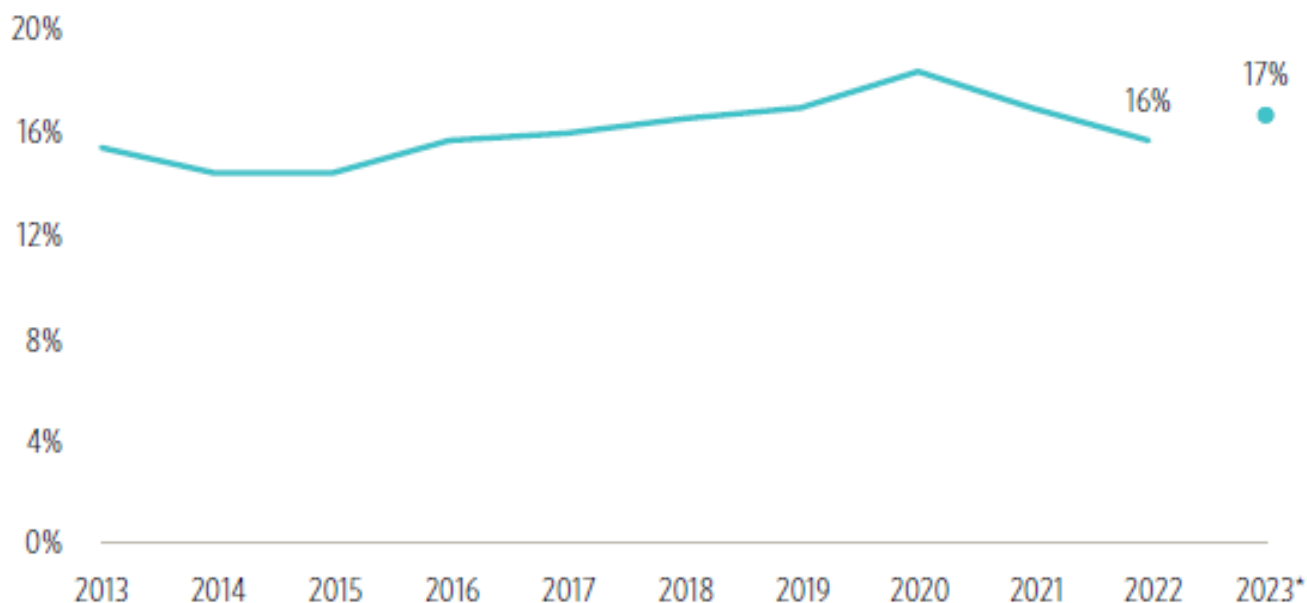
Source: Intro-act, PitchBook, *As of September 30, 2023.

Chart 31: Healthcare Specialist PE Fundraising Activity



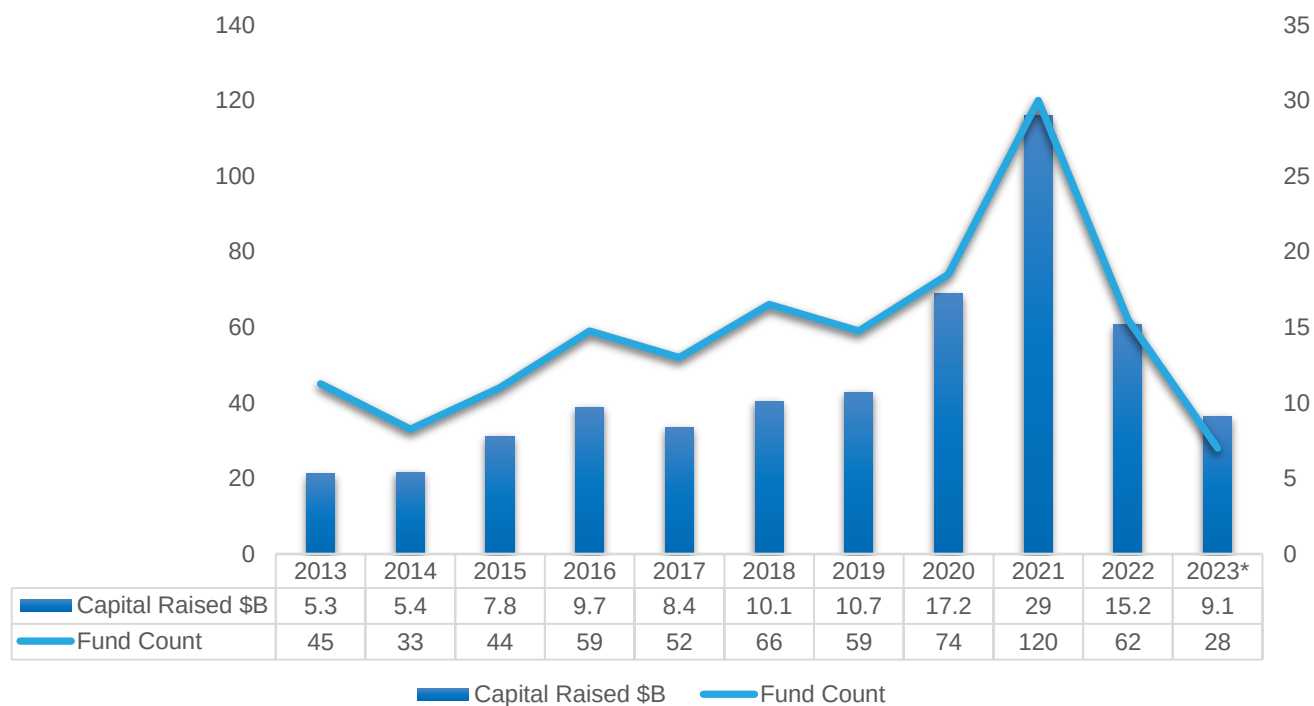
Source: Intro-act, PitchBook, *As of September 30, 2023.

Chart 32: Healthcare VC Deals as a Share of All VC Deal Count



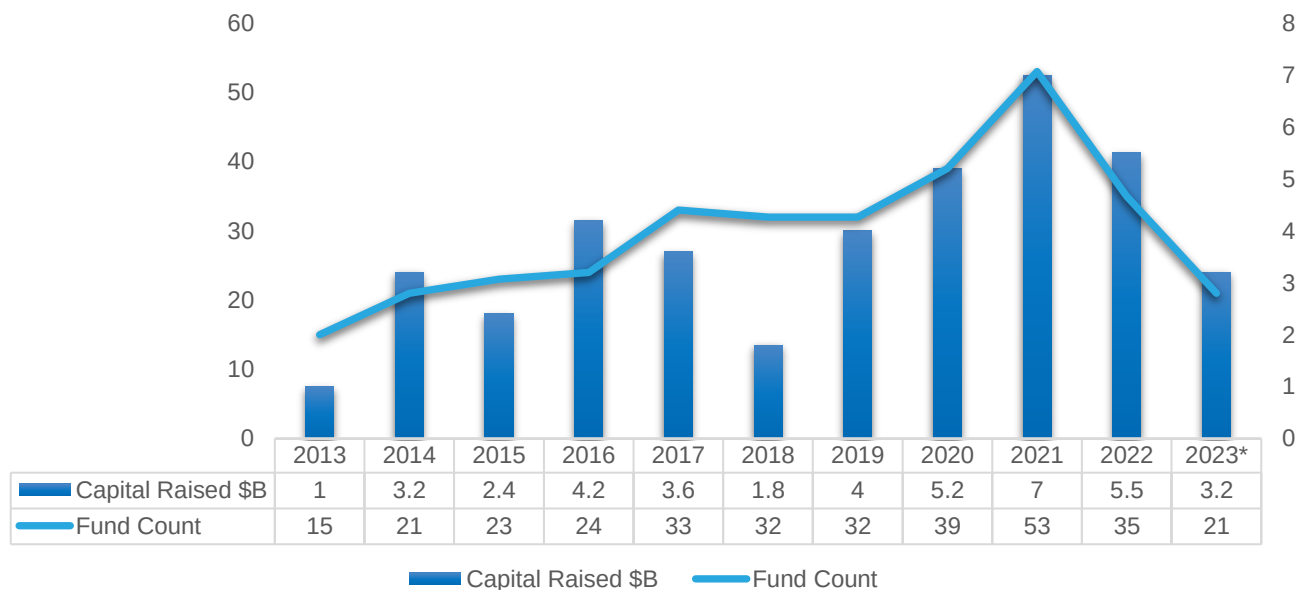
Source: Intro-act, PitchBook, *As of September 30, 2023.

Chart 33: Life Sciences Specialist VC Fundraising Activity



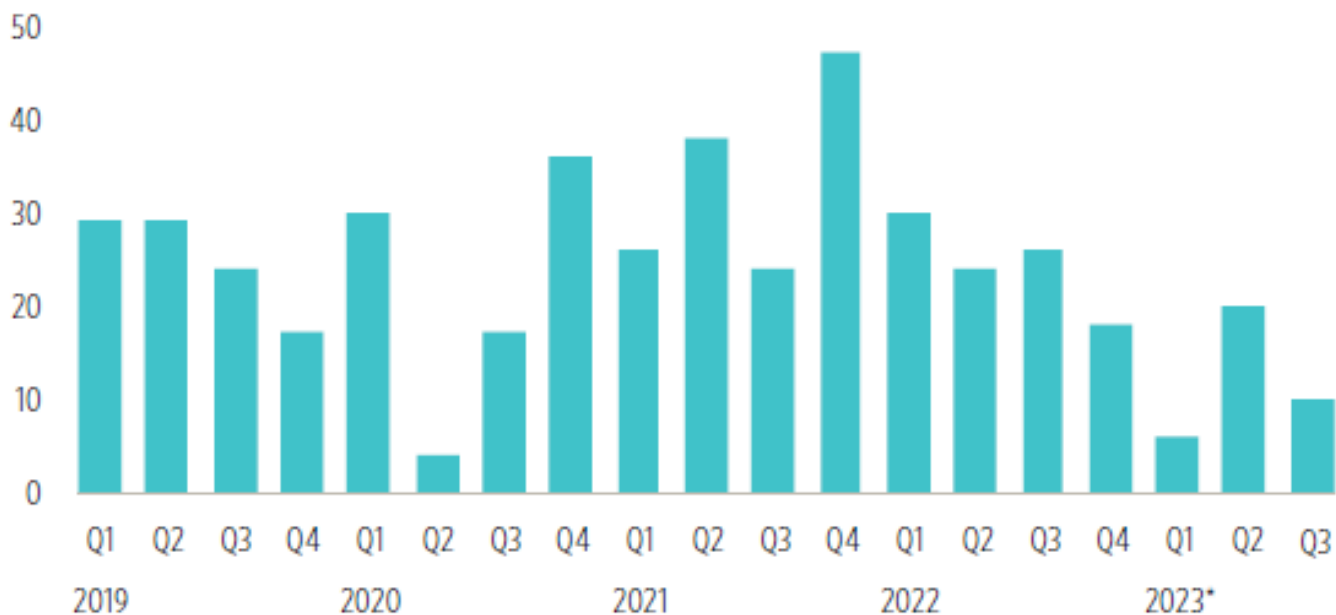
Source: Intro-act, PitchBook, *As of September 30, 2023.

Chart 34: Other Healthcare Specialist VC Fundraising Activity



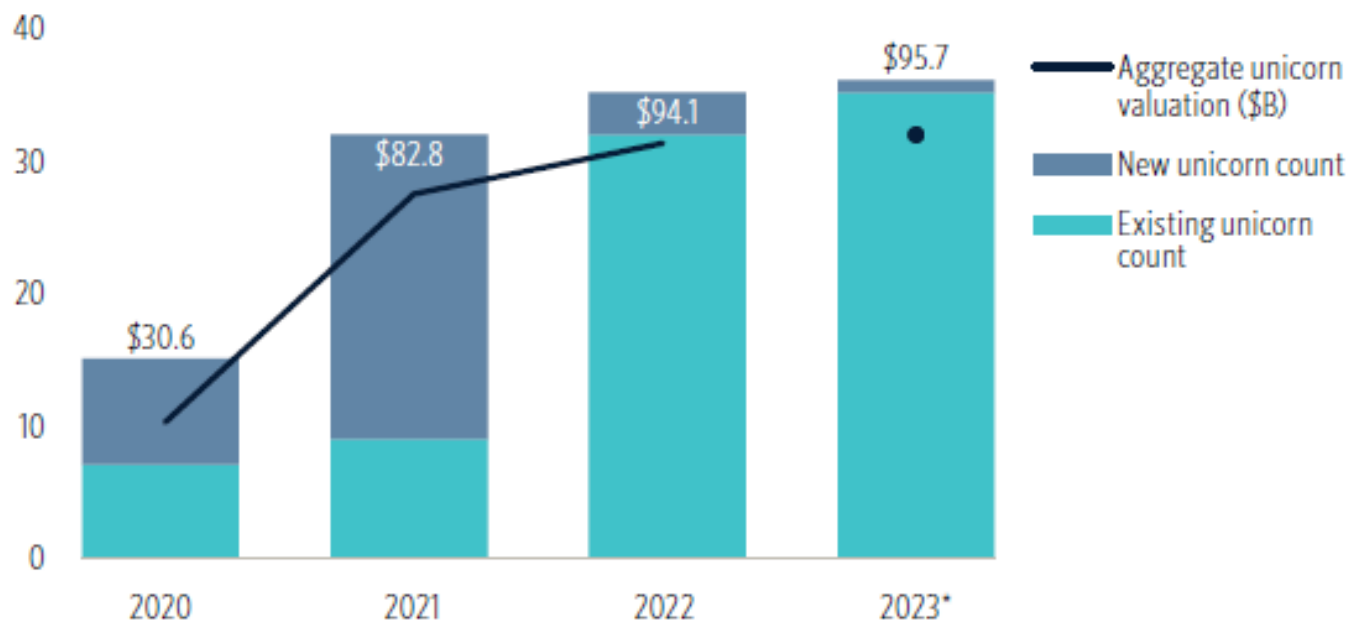
Source: Intro-act, PitchBook, *As of September 30, 2023.

Chart 35: Healthcare Services PE Platform Buyout Count by Quarter



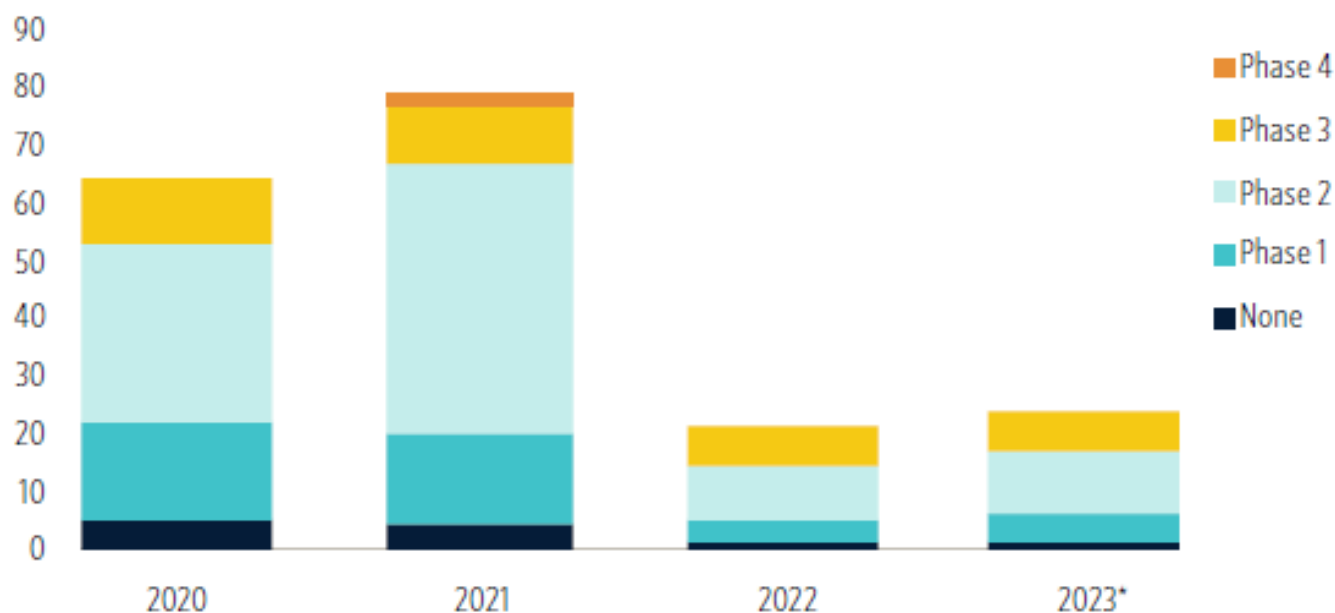
Source: Intro-act, PitchBook, *As of September 30, 2023.

Chart 36: Digital Health VC Unicorn Activity



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

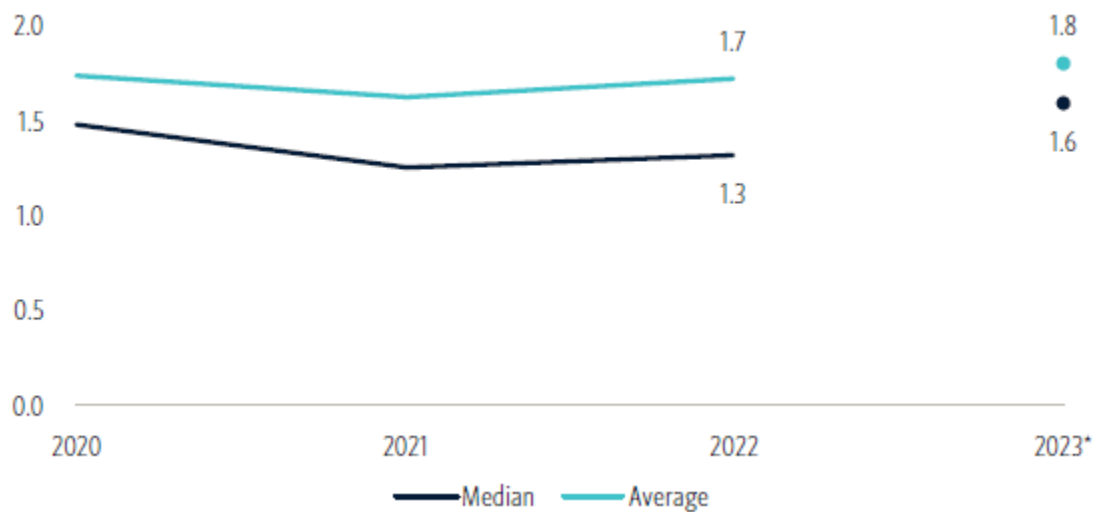
Chart 37: Biopharma VC IPO Count by Highest Clinical Trial Phase Reached



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.

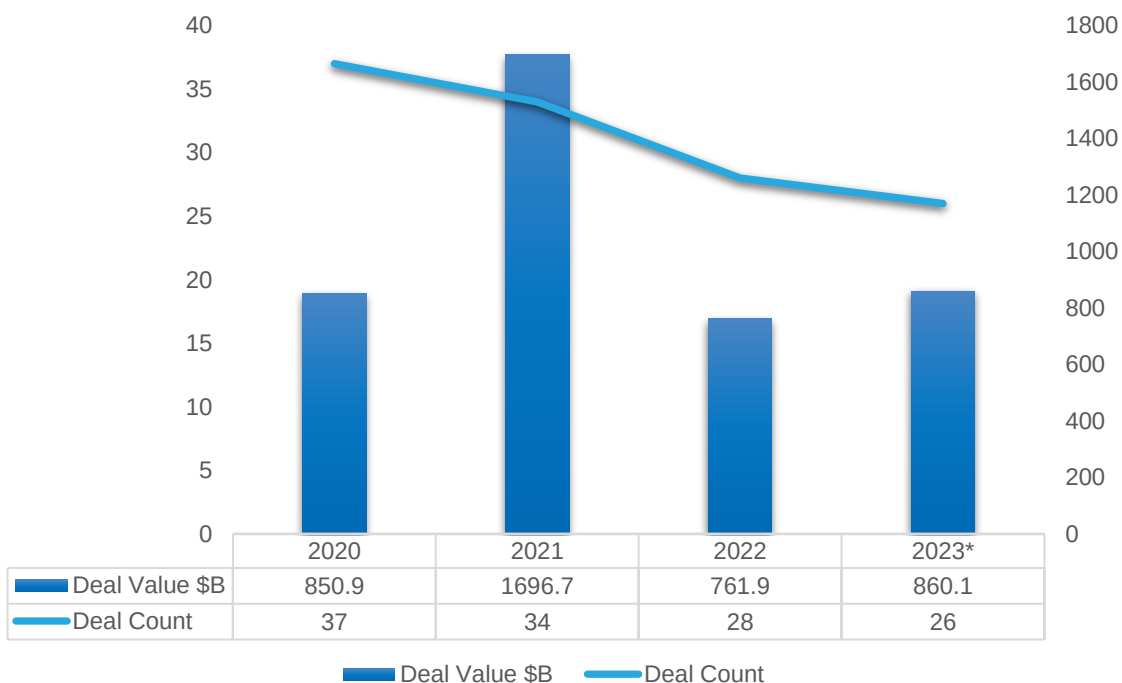
Source: Intro-act, PitchBook, *As of September 30, 2023

Chart 38: Median and Average Time (Years) Since Last Biopharma VC Round



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

Chart 39: Surgical Robotics VC Deal Activity



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

Chart 40: 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 41: 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

Source: Intro-act, Boardroom Alpha

Chart 42: 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	Pono Capital Two, Inc.	PTWO	SBC Medical Group	1,200	3Q24
7	Viveon Health Acquisition Corp.	VHAQ	Clearday Inc	370	1Q24

Source: Intro-act, Boardroom Alpha

Chart 43: 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
40	GigCapital5, Inc.	GIA	QT IMAGING, INC.	QTI	4-Mar-24

Source: Intro-act, Boardroom Alpha

HEALTHTECH EVENTS CALENDAR

S. No.	Event	Place	Dates
1	American Organization for Nursing Leadership Inspiring Leaders Conference	New Orleans, United States	08- Apr to 11-Apr-2024
2	HCSRN 2024	Milwaukee, Wisconsin	09- Apr to 11-Apr-2024
3	Business Group on Health 2024 Annual Conference	Tucson, United States	09- Apr to 12-Apr-2024
4	National Association of ACOs Spring Conference	Baltimore, United States	10- Apr to 12-Apr-2024
5	American Hospital Association Annual Meeting	Washington, D.C.	14- Apr to 16-Apr-2024
6	RBMA 2024 PaRaDigm	Las Vegas, United States	14- Apr to 17-Apr-2024
7	24th Annual Employee Health Care Conference	New York	16- Apr to 17-Apr-2024
8	National Association of Healthcare Access Management Annual Conference	Dallas, United States	23- Apr to 26-Apr-2024
9	MGMA Focus Financial Conference	San Diego	25- Apr to 27-Apr-2024
10	AAOE Annual Conference	Chicago, United States	26- Apr to 29-Apr-2024
11	American Telemedicine Association ATA Nexus 2024	Phoenix, United States	05-May to 07-May-2024
12	Milken Institute Global Conference	California, United States	05-May to 08-May-2024
	IHI Patient Safety Congress 2024	Orlando, United States	14-May to 16-May-2024
13	thlNc360 – The Healthcare Innovation Congress	Washington, D.C.	29-May to 31-May-2024
14	American Society of Clinical Oncology Annual Meeting	Chicago, United States	31-May to 04-Jun-2024
15	Healthcare Financial Management Association (HFMA) Annual Conference	Las Vegas, United States	23-Jun to 27-Jun-2024
16	Digital Healthcare Innovation Summit	East Coast, Boston	05-Jun to 06-Jun-2024
17	Bits & Pretzels HealthTech Conference	Munich, Germany	05-Jun to 06-Jun-2024
18	American Medical Association Annual Meeting of the House of Delegates	Chicago, United States	08-Jun to 12-Jun-2024
19	America's Health Insurance Plans AHIP 2024	Las Vegas, United States	11-Jun to 13-Jun-2024
20	Healthcare Financial Management Association Annual Conference	Las Vegas, United States	24-Jun to 27-Jun-2024

Source: Intro-act, Multiple Web Sources

HEALTHTECH COMP TABLE

			Price	Mkt Cap (\$ Mns)	Ent Val (\$ Mns)	Price Performance			Sales			EBITDA			Book Value	
						% to High	% to Low	% YTD	FY0	FY1	EV/Sales	FY0	FY1	EV/ EBITDA	Book/ Share	P/ Book
Peer Set																
Genomics		Ticker		141,791	131,678			-3%	19,321	20,117	6.5 x	(5,687)	(5,508)	-23.9 x		3.6 x
1	Illumina, Inc.	ILMN-US	137.3	21,820	23,042	70%	-35%	-1%	4,504	4,495	5.1 x	496	482	47.8 x	36.13	3.8 x
2	BioMarin Pharmaceutical	BMRN-US	87.3	16,479	16,532	15%	-13%	-9%	2,419	2,753	6.0 x	271	483	34.2 x	26.25	3.3 x
3	Bio-Techne Corporation	TECH-US	70.4	11,065	11,481	28%	-26%	-9%	1,137	1,148	10.0 x	442	403	28.5 x	12.50	5.6 x
4	Legend Biotech	LEGN	56.1	10,203	9,223	38%	-21%	-7%	285	608	15.2 x	(447)	(311)	-	7.37	7.6 x
5	Natera, Inc.	NTRA-US	91.5	11,045	10,500	5%	-60%	46%	1,083	1,340	7.8 x	(421)	(260)	-	6.40	14.3 x
6	Ionis Pharmaceuticals	IONS-US	43.4	6,318	5,887	26%	-21%	-14%	788	630	9.3 x	(338)	(550)	-	2.68	16.2 x
7	CRISPR Therapeutics	CRSP-US	68.2	5,739	4,001	34%	-45%	9%	371	90	44.6 x	(174)	(467)	-	23.52	2.9 x
8	Blueprint Medicines	BPMC-US	94.9	5,808	5,864	6%	-56%	3%	249	391	15.0 x	(449)	(322)	-	2.14	44.4 x
9	10x Genomics	TXG	37.5	3,945	4,176	69%	-10%	-33%	619	678	6.2 x	(223)	(157)	-	6.22	6.0 x
10	Ultragenyx Pharmaceutical	RARE	46.7	3,844	4,199	18%	-32%	-2%	434	513	8.2 x	(568)	(470)	-	3.35	14.0 x
11	Arrowhead Pharmaceuticals	ARWR-US	28.6	3,543	3,260	49%	-28%	-7%	241	126	25.9 x	(173)	(327)	-	1.49	19.2 x
12	Genscript	1548-HK	1.9	3,935	2,864	72%	-13%	-27%	840	1,267	2.3 x	(331)	(164)	-	0.65	2.8 x
13	Krystal Biotech	KRYS-US	177.9	5,034	4,500	7%	-57%	43%	51	251	18.0 x	(108)	50	89.8 x	27.58	6.5 x
14	Xiamen Amoytop	688278-CN	8.6	3,487	3,394	13%	-51%	16%	291	377	9.0 x	104	134	25.3 x	0.64	13.4 x

Monthly Newsletter – The Healthtech Industry

15	Rocket Pharmaceuticals	RCKT-US	26.9	2,438	2,084	21%	-45%	-10%	0	23	90.2 x	(243)	(277)	-	5.46	4.9 x
16	Intellia Therapeutics	NTLA-US	27.5	2,644	1,761	73%	-18%	-10%	36	52	33.8 x	(481)	(510)	-	11.29	2.4 x
17	Beam Therapeutics	BEAM-US	33.0	2,698	1,680	50%	-49%	21%	378	65	25.9 x	(163)	(445)	-	12.02	2.7 x
18	Ginkgo Bioworks	DNA-US	1.2	1,915	1,475	119%	-11%	-31%	251	224	6.6 x	(444)	(387)	-	0.58	2.0 x
19	NeoGenomics, Inc.	NEO-US	15.7	2,006	2,199	35%	-30%	-3%	592	655	3.4 x	3	23	95.7 x	7.39	2.1 x
20	Pacific Biosciences	PACB-US	3.8	1,005	1,306	288%	-8%	-62%	201	240	5.4 x	(308)	(266)	-	2.62	1.4 x
21	Genus	GNS-GB	22.3	1,472	1,778	65%	-17%	-19%	861	847	2.1 x	139	129	13.8 x	11.08	2.0 x
22	Myriad Genetics	MYGN-US	21.3	1,916	1,927	14%	-35%	11%	753	826	2.3 x	(1)	33	57.7 x	8.71	2.4 x
23	Takara Bio	4974-JP	6.4	772	531	108%	-2%	-28%	578	321	1.7 x	184	51	10.3 x	6.16	1.0 x
24	Verve Therapeutics	VERV-US	13.3	1,043	540	61%	-38%	-5%	12	16	34.6 x	(220)	(264)	-	7.31	1.8 x
25	Novogene Co.	688315-CN	2.0	814	660	212%	-14%	-41%	280	300	2.2 x	49	54	12.2 x	0.72	2.7 x
26	Fulgent Genetics	FLGT-US	21.7	646	231	103%	-2%	-25%	289	286	0.8 x	1	(26)	-	38.31	0.6 x
27	Prime Medicine	PRME-US	7.0	840	574	146%	-21%	-21%	0	13	44.6 x	(196)	(227)	-	1.37	5.1 x
28	Silence Therapeutics	SLN	21.6	1,004	787	28%	-79%	46%	32	28	28.3 x	(63)	(68)	-	0.55	39.4 x
29	Castle Biosciences	CSTL-US	22.2	608	379	21%	-58%	3%	220	237	1.6 x	(5)	3	145.6 x	14.27	1.6 x
30	Editas Medicine	EDIT-US	7.4	607	320	61%	-18%	-27%	78	34	9.5 x	(165)	(229)	-	4.27	1.7 x
31	Allogene Therapeutics	ALLO-US	4.5	756	400	54%	-50%	39%	0	0	9,350.3 x	(322)	(288)	-	3.47	1.3 x
32	OraSure Technologies	OSUR-US	6.2	454	175	37%	-29%	-25%	405	191	0.9 x	87	(2)	-	5.86	1.0 x
33	REGENXBIO Inc.	RGNX-US	21.1	1,032	742	37%	-44%	17%	90	134	5.5 x	(243)	(108)	-	7.08	3.0 x

Monthly Newsletter – The Healthtech Industry

34	Anavex Life Sciences	AVXL-US	5.1	418	274	105%	-12%	-45%	0	0	-	-	-	-	1.65	3.1 x
35	Voyager Therapeutics	VYGR	9.3	506	199	54%	-35%	10%	250	39	5.1 x	126	(97)	-	5.37	1.7 x
36	SOPHiA GENETICS	SOPH-US	4.9	322	217	49%	-57%	5%	62	80	2.7 x	(62)	(57)	-	2.32	2.1 x
37	uniQure N.V.	QURE-US	5.2	249	163	332%	-8%	-23%	16	60	2.7 x	(272)	(179)	-	4.34	1.2 x
38	Stoke Therapeutics	STOK-US	13.5	625	425	21%	-75%	157%	9	12	34.5 x	(104)	(120)	-	3.47	3.9 x
39	bluebird bio	BLUE-US	1.3	247	258	332%	-31%	-7%	30	128	2.0 x	(274)	(238)	-	2.08	0.6 x
40	Biosesix, Inc.	BDSX-US	1.4	139	172	55%	-28%	-22%	49	65	2.6 x	-	-	-	0.05	30.0 x
41	ProQR Therapeutics	PRQR-US	2.3	185	70	44%	-52%	16%	10	16	4.5 x	-	-	-	0.58	3.9 x
42	Devysr Diagnostics	DVYSR-SE	9.5	153	134	9%	-44%	22%	16	22	6.0 x	(5)	1	137.4 x	2.21	4.3 x
43	Generation Bio	GBIO-US	4.1	271	103	71%	-79%	147%	6	6	18.4 x	(139)	(81)	-	3.07	1.3 x
44	Jasper Therapeutics	JSPR	29.4	442	244	6%	-86%	272%	0	0	-	-	-	-	7.03	4.2 x
45	Kinnate Biopharma	KNTE-US	2.7	125	(26)	170%	-61%	12%	0	0	-	-	-	-	3.38	0.8 x
46	Adverum Biotechnologies	ADVM-US	14.1	293	122	110%	-52%	88%	4	0	-	(124)	(111)	-	8.23	1.7 x
47	GeneDx Holdings	WGS	9.1	238	227	34%	-87%	232%	194	226	1.0 x	(109)	(53)	-	8.78	1.0 x
48	Bionano Genomics	BNGO-US	1.1	61	37	963%	-10%	-41%	36	39	1.0 x	(202)	(69)	-	2.10	0.5 x
49	Precision BioSciences	DTIL	13.6	94	(29)	110%	-39%	111%	49	21	-1.4 x	(37)	(52)	-	4.53	3.0 x
50	Singular Genomics	OMIC	0.5	38	(61)	157%	-40%	12%	3	3	-17.6 x	(101)	(88)	-	2.42	0.2 x
51	Freeline Therapeutics	FRLN	6.5	28	3	34%	-67%	2%	-	-	-	-	-	-	6.89	0.9 x
52	SENTI BIOSCIENCES, INC.	SNTI	0.4	17	19	229%	-28%	-43%	3	-	-	-	-	-	1.46	0.3 x

53	NanoString Technologies	NSTG	0.1	4	154	13675%	-50%	-89%	176	210	0.7 x	-	-	-	(1.05)	-0.1 x
54	Metagenomi	MGX	10.6	396	502	21%	-8%	-	45	32	15.5 x	(76)	(86)	-	(3.17)	-3.3 x
55	Genprex	GNPX	3.0	4	(2)	1444%	-16%	-68%	0	0	-	-	-	-	8.28	0.4 x

Monthly Newsletter – The Healthtech Industry

			Price	Mkt Cap (\$ Mns)	Ent Val (\$ Mns)	Price Performance			Sales			EBITDA			Book Value	
						% to High	% to Low	% YTD	FY0	FY1	EV/Sales	FY0	FY1	EV/ EBITDA	Book/ Share	P/ Book
Peer Set																
HealthTech		Ticker		104,082	92,710			1%	38,206	42,073	2.2 x	3,309	2,953	31.4 x		2.5 x
56	Veeva Systems	VEEV-US	231.7	37,375	33,478	2%	-31%	20%	2,364	2,734	12.2 x	835	1,065	31.4 x	28.80	8.0 x
57	BioNTech	BNTX	92.3	21,930	9,288	43%	-8%	-13%	4,145	3,104	3.0 x	995	(434)	-	94.08	1.0 x
58	R1 RCM,	RCM-US	12.9	5,413	6,979	45%	-31%	22%	2,254	2,649	2.6 x	614	662	10.5 x	6.55	2.0 x
59	Engagesmart, Inc.	ESMT-US				-	-	-	-	-	-	-	-	-	5.02	-
60	Evolent Health	EVH-US	32.8	3,785	4,351	12%	-29%	-1%	1,964	2,468	1.8 x	195	253	17.2 x	9.38	3.5 x
61	Sectra AB	SECT.B-SE	19.4	3,507	3,668	11%	-46%	9%	218	276	13.3 x	51	58	62.7 x	0.67	28.8 x
62	Certara, Inc.	CERT-US	17.9	2,858	2,921	40%	-34%	2%	354	389	7.5 x	123	125	23.4 x	6.55	2.7 x
63	Privia Health	PRVA-US	19.6	2,323	1,981	54%	-5%	-15%	1,658	1,639	1.2 x	72	87	22.7 x	4.75	4.1 x
64	Oscar Health	OSCR-US	14.9	2,888	1,842	25%	-68%	63%	5,686	8,294	0.2 x	(45)	164	11.2 x	3.50	4.2 x
65	Alphatec Holdings	ATEC-US	13.8	1,903	2,265	39%	-37%	-9%	482	596	3.8 x	(9)	21	105.5 x	0.56	24.6 x
66	Peloton Interactive	PTON	4.3	1,495	3,158	181%	-8%	-30%	2,800	2,703	1.2 x	(209)	(63)	-	(1.37)	-3.1 x
67	Schrodinger, Inc.	SDGR-US	27.0	1,705	1,607	119%	-23%	-25%	217	207	7.7 x	(172)	(200)	-	7.60	3.6 x
68	Omniceil, Inc.	OMCL-US	29.2	1,342	1,444	164%	-12%	-22%	1,147	1,064	1.4 x	138	100	14.5 x	26.11	1.1 x
69	Phreesia, Inc.	PHR-US	23.9	1,331	1,260	46%	-50%	3%	356	428	2.9 x	(35)	15	85.6 x	4.46	5.4 x
70	Model N	MODN-US	28.5	1,111	1,099	26%	-27%	6%	249	262	4.2 x	43	49	22.5 x	3.19	8.9 x
71	Definitive Healthcare	DH-US	8.1	950	1,238	54%	-31%	-19%	251	266	4.6 x	74	86	14.4 x	7.39	1.1 x
72	NEXUS AG	NXU-DE	60.8	1,050	967	15%	-23%	-5%	262	293	3.3 x	55	63	15.3 x	15.96	3.8 x
73	Autolus Therapeutics	AUTL	6.4	1,697	1,094	17%	-75%	51%	2	43	25.2 x	(173)	(108)	-	0.87	7.3 x

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74	Veradigm, Inc.	MDRX-US	7.7	835		83%	-35%	-27%	631	665	-	128	127	-	10.77	0.7 x
75	B-Soft Co.	300451-CN	0.6	973	851	172%	-25%	-32%	223	243	3.5 x	21	49	17.4 x	0.42	1.5 x
76	Accolade, Inc.	ACCD-US	10.5	811	818	62%	-40%	-13%	363	413	2.0 x	(37)	(8)	-	5.65	1.9 x
77	Craneware Plc	CRW-GB	27.8	982	970	5%	-53%	26%	174	185	5.3 x	55	57	16.9 x	9.21	3.0 x
78	Equasnes	EQS-FR	55.4	841	835	70%	-10%	-17%	237	249	3.3 x	74	80	10.5 x	13.99	4.0 x
79	HealthStream, Inc.	HSTM-US	26.7	808	760	9%	-23%	-1%	279	294	2.6 x	61	66	11.6 x	11.25	2.4 x
80	Simulations Plus	SLP-US	41.2	822	709	28%	-21%	-8%	60	67	10.6 x	21	22	32.8 x	8.63	4.8 x
81	Health Catalyst	HCAT-US	7.5	441	370	91%	-12%	-19%	296	309	1.2 x	11	25	15.0 x	6.29	1.2 x
82	Sharecare, Inc.	SHCR-US	0.8	275	203	135%	-37%	-28%	445	431	0.5 x	16	13	15.7 x	1.22	0.6 x
83	OptimizeRx Corporation	OPRX-US	12.2	221	160	37%	-43%	-15%	71	105	1.5 x	4	11	14.3 x	6.31	1.9 x
84	Cegedim SA	CGM-FR	14.0	197	493	82%	-13%	-27%	665	701	0.7 x	121	135	3.7 x	22.03	0.6 x
85	RaySearch Laboratories	RAY.B-SE	10.8	286	387	1%	-52%	20%	99	105	3.7 x	39	44	8.7 x	2.01	5.4 x
86	Augmedix, Inc.	AUGX-US	4.1	199	178	53%	-63%	-30%	45	61	2.9 x	(15)	(21)	-	0.48	8.5 x
87	Quantum-Si Incorporated	QSI-US	2.0	240	37	98%	-43%	-2%	1	4	9.0 x	(94)	(95)	-	1.92	1.0 x
88	Computer Programs	CPSI-US	9.2	134	334	236%	-18%	-18%	339	344	1.0 x	48	46	7.2 x	12.83	0.7 x
89	Allurion Technologies, Inc.	ALUR	1.8	84	87	525%	-11%	-53%	53	64	1.4 x	(72)	(31)	-	(1.48)	-1.2 x
90	Nordhealth AS	NORDH-NO	2.9	129	199	5%	-36%	17%	40	48	4.1 x	(1)	3	62.3 x	1.09	2.6 x
91	Mach7 Technologies	M7T-AU	0.5	113	98	41%	-26%	-13%	19	19	5.0 x	1	(1)	-	0.15	3.2 x
92	MedAdvisor Limited	MDR-AU	0.2	99	92	25%	-43%	22%	64	74	1.2 x	(2)	3	36.1 x	0.07	2.7 x
93	Aiforia Technologies	AIFORIA-FI	4.1	106	97	40%	-19%	6%	3	5	21.0 x	(11)	(7)	-	0.75	5.5 x
94	FORIAN INC.	FORA-US	3.3	103	77	25%	-44%	14%	20	22	3.4 x	2	2	40.7 x	0.85	3.9 x

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95	Omda AS	OMDA-NO	2.8	59	93	102%	-26%	-21%	39	43	2.1 x	6	9	9.9 x	0.51	5.6 x
96	ContextVision AB	CONTX-NO	0.6	49	43	47%	-7%	-17%	12	13	3.5 x	5	4	10.0 x	0.10	6.6 x
97	DarioHealth Corp.	DRIO-US	1.5	42	34	199%	-56%	-18%	20	33	1.0 x	(31)	(28)	-	2.14	0.7 x
98	Owlet Baby	OWLT	4.3	39	44	74%	-42%	-18%	54	75	0.6 x	(17)	2	21.5 x	(4.27)	-1.0 x
99	Alcidion Group	ALC-AU	0.0	45	41	159%	-22%	-35%	26	25	1.6 x	(1)	(2)	-	0.04	0.8 x
100	Spectral AI	MDAI	2.1	37	31	815%	-20%	-13%	18	30	1.0 x	(12)	(8)	-	(0.10)	-20.3 x
101	Beachbody Company	BODY	9.6	39	60	197%	-34%	16%	527	456	0.1 x	(9)	14	4.3 x	12.34	0.8 x
102	EUDA Health	EUDA	1.8	44	48	72%	-76%	26%	-	-	-	-	-	-	(0.23)	-7.8 x
103	Science 37	SNCE	5.8	35	(22)	125%	-35%	8%	58	60	-0.4 x	(32)	(20)	-	8.69	0.7 x
104	Akili Interactive	AKLI	0.3	23	(39)	477%	-34%	-41%	2	4	-10.9 x	(52)	(37)	-	0.75	0.4 x
105	CloudMD Software	DOC-CA	0.1	19	27	147%	-35%	-3%	84	69	0.4 x	(8)	(1)	-	0.24	0.3 x
106	Medi Assist Health	544088-IN	6.1	417	391	11%	-15%	-	-	-	-	-	-	-	0.66	9.2 x
107	Brightspring Health Services	BTSG	10.9	1,861	5,546	12%	-28%	-	8,826	9,440	0.6 x	538	560	9.9 x	3.42	3.2 x
108	iCoreConnect	ICCT	1.2	12	15	1597%	-25%	-2%	-	-	-	-	-	-	0.76	1.6 x
109	Xybian Digital	XYBN-CA	0.3	0	3	347%	-24%	-12%	-	16	0.2 x	-	-	-	5.57	0.1 x

						Price Performance			Sales			EBITDA			Book Value	
						% to High	% to Low	% YTD	FY0	FY1	EV/Sales	FY0	FY1	EV/ EBITDA	Book/ Share	P/ Book
Peer Set																
Home Health Services			Ticker	83,270	116,708	15%			60,703	63,227	1.8 x	7,864	8,701	13.4 x		5.7 x
110	Clorox Company	CLX	153.1	19,002	21,937	16%	-25%	7%	7,389	7,237	3.0 x	1,168	1,237	17.7 x	0.43	358.5 x
111	DaVita Inc.	DVA-US	138.1	12,107	24,590	3%	-48%	32%	12,140	12,606	2.0 x	2,407	2,577	9.5 x	11.89	11.6 x
112	Chemed Corp.	CHE	641.9	9,704	9,542	2%	-23%	10%	2,264	2,423	3.9 x	452	515	18.5 x	73.69	8.7 x
113	AptarGroup, Inc.	ATR	143.9	9,499	10,471	1%	-22%	16%	3,487	3,635	2.9 x	703	770	13.6 x	35.00	4.1 x
114	Encompass Health	EHC-US	82.6	8,270	11,720	1%	-36%	24%	4,801	5,250	2.2 x	971	1,043	11.2 x	16.43	5.0 x
115	Bright Horizons	BFAM	113.4	6,571	8,305	5%	-37%	20%	2,418	2,663	3.1 x	352	394	21.1 x	20.97	5.4 x
116	Option Care	OPCH	33.5	5,819	6,678	7%	-28%	0%	4,302	4,707	1.4 x	425	441	15.1 x	8.14	4.1 x
117	Amedisys, Inc.	AMED-US	92.2	3,011	3,405	5%	-21%	-3%	2,236	2,320	1.5 x	247	251	13.5 x	32.65	2.8 x
118	BrightSpring Health	BTSG	10.9	1,861	5,546	12%	-28%	-	8,826	9,440	0.6 x	538	560	9.9 x	3.42	3.2 x
119	Addus HomeCare	ADUS-US	103.3	1,677	1,787	11%	-25%	11%	1,057	1,144	1.6 x	120	130	13.8 x	43.55	2.4 x
120	AdaptHealth Corp.	AHCO	11.5	1,530	3,752	34%	-45%	58%	3,200	3,317	1.1 x	671	683	5.5 x	11.00	1.0 x
121	Adaptive Biotechnologies	ADPT-US	3.2	466	349	183%	-19%	-34%	170	176	2.0 x	(120)	(102)	-	2.13	1.5 x
122	Enhabit Inc	EHAB	11.7	584	1,195	25%	-39%	13%	1,046	1,086	1.1 x	98	101	11.8 x	13.38	0.9 x
123	Aveanna Healthcare	AVAH	2.5	479	1,930	20%	-66%	-7%	1,895	1,975	1.0 x	139	148	13.0 x	(0.68)	-3.7 x

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124	Clover Health	CLOV	0.8	322	264	105%	-11%	-17%	2,034	1,275	0.2 x	(45)	(10)	-	0.60	1.3 x
125	Ambulnz, Inc.	DCGO	4.0	421	412	168%	-31%	-28%	624	745	0.6 x	54	82	5.0 x	2.89	1.4 x
126	Humacyte, Inc.	HUMA	3.1	370	300	80%	-37%	10%	0	3	105.5 x	-	-	-	0.13	23.8 x
127	Orchestra BioMed, Inc.	OBIO	5.3	189	103	344%	-19%	-42%	3	4	26.5 x	(51)	(63)	-	1.90	2.8 x
128	Scilex Holding Company	SCLX	1.6	264	284	963%	-43%	-22%	47	96	3.0 x	-	-	-	(1.73)	-0.9 x
129	ALPHA TAU MEDICAL LTD	DRTS	3.0	206	134	63%	-8%	-2%	0	0	472.5 x	-	-	-	1.21	2.4 x
130	InfuSystems Holdings	INFU	8.6	182	216	34%	-13%	-19%	126	135	1.6 x	22	25	8.6 x	2.47	3.5 x
131	The Oncology Institute	TOI	1.6	117	154	68%	-79%	-23%	324	413	0.4 x	(26)	(14)	-	0.77	2.1 x
132	P3 Health Partners	PIII	1.0	119	495	440%	-36%	-27%	1,266	1,498	0.3 x	(86)	9	53.9 x	1.22	0.8 x
133	CareRx Corporation	CRRX-CA	1.5	91	159	22%	-47%	24%	275	272	0.6 x	21	24	6.5 x	1.01	1.5 x
134	Cardio Diagnostics Inc.	CDIO	1.4	29	17	185%	-88%	-43%	0	1	25.0 x	-	-	-	0.17	8.1 x
135	Cue Health	HLTH-US	0.2	30	(4)	955%	-14%	16%	71	57	-0.1 x	(233)	(148)	-	1.61	0.1 x
136	Auna SA	AUNA	10.7	320		2%	-13%	-	-	-	-	-	-	-	-	-
137	ATI Physical Therapy	ATIP	5.6	23	961	166%	-7%	-9%	699	751	1.3 x	36	46	20.9 x	(25.05)	-0.2 x
138	MSP Recovery	MSPR	0.7	10	2,006	3659%	-5%	-70%	-	-	-	-	-	-	20.67	0.0 x

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Peer Set																
Personalized Medicine			Ticker	399,289	448,020			12%	68,242	68,522	6.5 x	26,502	27,497	16.3 x		4.0 x
139	AbbVie Inc.	ABBV-US	182.1	321,675	368,919	0%	-28%	18%	54,318	54,475	6.8 x	25,710	26,196	14.1 x	5.87	31.0 x
140	Biogen Inc.	BIIB-US	215.6	31,344	37,623	48%	-2%	-17%	9,836	9,483	4.0 x	2,741	3,321	11.3 x	102.14	2.1 x
141	Exact Sciences	EXAS-US	69.1	12,537	14,314	46%	-19%	-7%	2,500	2,833	5.1 x	219	337	42.5 x	17.34	4.0 x
142	MGI Tech	688114-CN	8.2	3,401	2,749	82%	-2%	-33%	614	417	6.6 x	68	(13)	-	3.05	2.7 x
143	Amicus Therapeutics	FOLD-US	11.8	3,480	3,617	24%	-18%	-17%	399	532	6.8 x	(40)	63	57.7 x	0.55	21.6 x
144	Springworks Therapeutics	SWTX-US	49.2	3,632	3,145	10%	-63%	35%	5	87	36.2 x	(342)	(353)	-	8.52	5.8 x
145	IDEAYA Biosciences	IDYA-US	43.9	3,272	2,332	9%	-70%	23%	23	19	122.0 x	(132)	(163)	-	9.55	4.6 x
146	Rhythm Pharmaceuticals	RYTM-US	43.3	2,606	2,407	21%	-64%	-6%	77	137	17.5 x	(183)	(265)	-	2.86	15.2 x
147	Twist Bioscience	TWST-US	34.3	1,984	1,763	26%	-67%	-7%	245	293	6.0 x	(185)	(151)	-	10.21	3.4 x
148	Anhui Anke Biotech	300009-CN	1.3	2,255	2,057	33%	-22%	-4%	-	-	-	-	-	-	0.32	4.3 x
149	Kymera Therapeutics	KYMR-US	40.2	2,457	1,944	13%	-76%	58%	79	55	35.3 x	(153)	(192)	-	7.11	5.7 x
150	Ambrox Biopharma,	AMAM-US	28.0	1,772	1,504	1%	-77%	97%	7	1	1,253.5 x	(75)	-	-	4.05	6.9 x
151	Gemini Therapeutics	GMTX	62.3	1,537	1,144	25%	-71%	8%	0	0	-	(91)	(110)	-	14.87	4.2 x
152	Edgewise Therapeutics	EWTX-US	18.2	1,698	972	13%	-72%	67%	0	0	-	(113)	(130)	-	4.53	4.0 x

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153	Fusion Pharmaceuticals	FUSN	21.3	1,806	1,515	1%	-89%	122%	2	4	407.0 x	(99)	(121)	-	2.79	7.6 x
154	Exscientia Plc	EXAI	5.7	721	280	59%	-27%	-10%	26	73	3.8 x	(202)	(183)	-	3.61	1.6 x
155	ORIC Pharmaceuticals	ORIC-US	13.8	926	556	21%	-64%	49%	0	0	-	(111)	(123)	-	4.08	3.4 x
156	Praxis Precision Med.	PRAX-US	61.0	808	458	10%	-81%	174%	2	2	199.0 x	(126)	(112)	-	7.92	7.7 x
157	Tenaya Therapeutics	TNYA-US	5.2	411	265	55%	-68%	61%	0	1	371.2 x	(119)	(142)	-	2.04	2.6 x
158	Monte Rosa	GLUE-US	7.1	354	167	25%	-65%	25%	0	6	26.8 x	(143)	(138)	-	3.57	2.0 x
159	INmune Bio	INMB	11.8	212	186	25%	-49%	4%	0	0	1,656.3 x	-	-	-	2.12	5.5 x
160	Foghorn Therapeutics	FHTX-US	6.7	286	95	49%	-60%	4%	34	29	3.3 x	(104)	(147)	-	(1.83)	-3.7 x
161	Personalis, Inc.	PSNL-US	1.5	75	10	119%	-40%	-29%	73	74	0.1 x	(95)	(77)	-	2.56	0.6 x
162	Prenetics Global Ltd	PRE	4.1	43	(3)	300%	-20%	-31%	22	-	-	-	-	-	18.67	0.2 x

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Peer Set																
Remote Surgery			Ticker	582,649	644,531			11%	116,578	123,995	5.2 x	31,368	33,638	19.2 x		4.2 x
163	Intuitive Surgical,	ISRG-US	399.1	141,457	135,556	1%	-37%	18%	7,124	8,005	16.9 x	2,793	3,040	44.6 x	37.77	10.6 x
164	Stryker Corporation	SYK-US	357.9	136,085	146,467	1%	-30%	20%	20,498	22,159	6.6 x	5,402	6,046	24.2 x	48.92	7.3 x
165	Medtronic	MDT-US	87.2	115,720	133,412	6%	-21%	6%	31,227	32,221	4.1 x	9,315	9,158	14.6 x	38.95	2.2 x
166	Becton, Dickinson	BDX-US	247.5	71,489	86,363	16%	-7%	1%	19,372	20,302	4.3 x	5,306	5,714	15.1 x	87.68	2.8 x
167	Siemens Healthineers	SHL-DE	61.3	69,099	84,450	5%	-23%	7%	23,212	24,480	3.4 x	4,402	5,032	16.8 x	17.26	3.5 x
168	Zimmer Biomet	ZBH-US	132.0	27,067	32,722	13%	-23%	8%	7,394	7,753	4.2 x	2,513	2,710	12.1 x	60.70	2.2 x
169	Smith & Nephew	SN-GB	12.5	10,952	13,694	32%	-14%	-9%	5,549	5,837	2.3 x	1,419	1,424	9.6 x	5.93	2.1 x
170	Globus Medical,	GMED-US	53.6	6,058	7,316	17%	-19%	1%	1,568	2,465	3.0 x	493	730	10.0 x	29.32	1.8 x
171	PROCEPT BioRobotics	PRCT-US	49.4	2,519	2,331	6%	-50%	18%	136	210	11.1 x	(87)	(78)	-	5.53	8.9 x
172	Shanghai MicroPort	2252-HK	1.7	1,635	1,629	123%	-28%	-36%	14	58	28.2 x	(123)	(93)	-	0.14	12.5 x
173	Accuray Incorporated	ARRAY-US	2.5	245	374	74%	-4%	-13%	448	462	0.8 x	24	28	13.4 x	0.48	5.1 x
174	Stereotaxis, Inc.	STXS-US	2.6	214	202	26%	-49%	49%	27	31	6.6 x	(14)	(11)	-	0.20	12.9 x
175	Asensus Surgical	ASXC	0.2	63	46	274%	-11%	-28%	9	12	3.7 x	-	-	-	0.13	1.8 x
176	Vicarious Surgical	RBOT	0.3	47	(30)	714%	-34%	-18%	0	0	-	(75)	(62)	-	0.56	0.5 x

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						% to High	% to Low	% YTD	FY0	FY1	EV/Sales	FY0	FY1	EV/ EBITDA	Book/ Share	P/ Book
Peer Set																
Telemedicine		Ticker	Price	Mkt Cap (\$ Mns)	Ent Val (\$ Mns)	10%			664,156	706,867	5.1 x	149,538	172,926	20.7 x	3.8 x	
177	Microsoft	MSFT	420.7	3,126,133	3,157,132	2%	-35%	12%	211,915	244,280	12.9 x	103,406	127,561	24.7 x	32.06	13.1 x
178	Cisco Systems	CSCO	49.9	202,095	186,928	17%	-9%	-1%	56,998	52,496	3.6 x	20,128	19,104	9.8 x	11.42	4.4 x
179	CVS Health	CVS	79.8	100,374	170,746	4%	-19%	1%	357,776	370,289	0.5 x	20,049	19,598	8.7 x	59.36	1.3 x
180	Philips Healthcare	PHG	20.0	18,270	24,594	21%	-15%	-14%	19,620	20,314	1.2 x	3,077	3,295	7.5 x	14.66	1.4 x
181	Zoom	ZM	65.4	17,055	13,685	16%	-10%	-9%	4,527	4,606	3.0 x	1,857	1,822	7.5 x	26.07	2.5 x
182	Grab Holdings	GRAB	3.1	11,973	8,121	25%	-15%	-7%	2,359	2,727	3.0 x	(22)	111	73.1 x	1.64	1.9 x
183	Doximity, Inc.	DOCS-US	26.9	3,287	4,315	38%	-27%	-4%	419	474	9.1 x	184	225	19.2 x	4.64	5.8 x
184	Teladoc, Inc.	TDOC-US	15.1	2,522	2,985	101%	-5%	-30%	2,602	2,670	1.1 x	328	366	8.2 x	13.96	1.1 x
185	LifeStance Health	LFST-US	6.2	2,349	2,769	55%	-23%	-21%	1,056	1,221	2.3 x	59	85	32.5 x	3.77	1.6 x
186	Hims & Hers	HIMS-US	15.5	3,185	3,092	11%	-63%	74%	872	1,191	2.6 x	50	113	27.3 x	1.61	9.6 x
187	JMDC, Inc.	4483-JP	23.8	1,558	1,589	92%	-7%	-21%	207	229	6.9 x	57	74	21.5 x	7.08	3.4 x
188	Terveystalo Oyj	TTALO-FI	8.1	1,034	1,691	15%	-16%	-4%	1,382	1,440	1.2 x	209	235	7.2 x	4.40	1.9 x
189	Medley, Inc.	4480-JP	30.5	998	890	36%	-17%	-1%	137	192	4.6 x	23	32	28.1 x	3.58	8.5 x
190	InnovAge Holding	INNV-US	4.4	603	635	84%	-11%	-26%	688	755	0.8 x	(1)	16	39.5 x	2.10	2.1 x

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191	WELL Health	WELL-CA	2.7	651	1,005	63%	-4%	-7%	573	703	1.4 x	84	94	10.7 x	2.35	1.2 x
192	GoodRx	GDRX	7.1	662	2,837	32%	-42%	6%	750	801	3.5 x	217	249	11.4 x	1.93	3.7 x
193	Talkspace, Inc.	TALK-US	3.6	603	477	5%	-81%	41%	150	191	2.5 x	(14)	6	78.9 x	0.70	5.1 x
194	DocGo, Inc.	DCGO-US	4.0	421	412	168%	-31%	-28%	624	745	0.6 x	54	82	5.0 x	2.89	1.4 x
195	American Well	AMWL-US	0.8	208	(110)	237%	-7%	-46%	259	262	-0.4 x	(165)	(163)	-	1.61	0.5 x
196	23andMe Holding	ME-US	0.5	168	92	336%	-25%	-42%	299	217	0.4 x	(161)	-	-	0.78	0.7 x
197	LifeMD, Inc.	LFMD-US	10.3	415	381	17%	-86%	24%	153	201	1.9 x	12	19	19.6 x	0.09	112.2 x
198	Vitalhub Corp.	VHI-CA	4.4	186	169	14%	-61%	44%	39	44	3.8 x	10	12	14.1 x	1.38	3.2 x
199	CareMax, Inc.	CMAX-US	4.8	18	444	2514%	-23%	-68%	751	819	0.5 x	(63)	(10)	-	16.41	0.3 x
200	ETAO International Group	ETAO	4.2	22	40	685%	-38%	-53%	-	-	-	-	-	-	0.16	26.1 x

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			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		4,058,725	4,998,236			-6%	935,584	1,014,544	4.9 x	287,661	336,099	14.9 x		6.8 x
201	Apple	AAPL	171.5	2,647,974	2,686,059	16%	-7%	-11%	383,285	388,308	6.9 x	126,233	132,802	20.2 x	4.79	35.8 x
202	Alphabet	GOOGL	150.9	889,430	1,799,539	3%	-33%	8%	307,394	342,899	5.2 x	122,164	140,437	12.8 x	22.74	6.6 x
203	Samsung Electronics	005930-KR	61.2	365,393	361,968	1%	-23%	0%	194,013	225,166	1.6 x	33,562	57,022	6.3 x	38.63	1.6 x
204	DexCom, Inc.	DXCM-US	138.7	53,471	53,325	2%	-46%	12%	3,622	4,327	12.3 x	1,022	1,222	43.6 x	5.37	25.8 x
205	Xiaomi Corporation	1810-HK	1.9	38,964	36,911	14%	-34%	-4%	37,638	43,157	0.9 x	2,908	2,565	14.4 x	0.88	2.2 x
206	Garmin	GRMN	148.9	28,550	26,723	0%	-36%	16%	5,228	5,721	4.7 x	1,271	1,344	19.9 x	36.56	4.1 x
207	Axon Enterprise	AAXN	312.9	23,561	22,948	4%	-44%	21%	1,563	1,932	11.9 x	329	432	53.1 x	21.41	14.6 x
208	Universal Display	OLED	168.5	7,979	7,491	16%	-25%	-12%	576	653	11.5 x	266	297	25.2 x	30.55	5.5 x
209	Tandem Diabetes	TNDM-US	35.4	2,324	2,269	23%	-61%	20%	748	849	2.7 x	(9)	1	2,537.6 x	4.78	7.4 x
210	GoPro, Inc.	GPRO	2.2	276	216	126%	-5%	-36%	1,005	1,010	0.2 x	(27)	(7)	-	3.71	0.6 x
211	Augmedix, Inc.	AUGX	4.1	199	178	53%	-63%	-30%	45	61	2.9 x	(15)	(21)	-	0.48	8.5 x
212	Catapult Group	CAT-AU	1.0	264	265	2%	-60%	10%	84	101	2.6 x	(4)	11	24.5 x	0.32	3.2 x
213	QuickLogic	QUIK	16.0	230	224	29%	-68%	16%	21	28	8.1 x	5	10	22.9 x	1.20	13.4 x
214	Vuzix	VUZI	1.2	78	39	401%	-2%	-42%	13	14	2.7 x	(23)	(24)	-	1.51	0.8 x
215	Zepp Health	ZEPP	1.0	32	81	106%	-12%	-28%	347	318	0.3 x	(19)	7	11.3 x	6.27	0.2 x

						Price Performance			Sales			EBITDA			Book Value	
						% to High	% to Low	% YTD	FY0	FY1	EV/Sales	FY0	FY1	EV/ EBITDA	Book/ Share	P/ Book
Peer Set			Price	Mkt Cap (\$ Mns)	Ent Val (\$ Mns)											
Medical Devices			Ticker	1,189,200	1,266,545	5%			264,445	276,412	4.6 x	62,850	66,319	19.1 x	4.0 x	
216	Abbott Laboratories	ABT-US	113.7	197,221	205,913	7%	-21%	3%	40,109	42,005	4.9 x	10,279	10,786	19.1 x	22.26	5.1 x
217	Boston Scientific	BSX-US	68.5	100,481	109,132	1%	-29%	18%	14,240	15,586	7.0 x	4,037	4,530	24.1 x	13.16	5.2 x
218	Edwards Lifesciences	EW-US	95.6	57,460	56,558	1%	-37%	25%	6,005	6,520	8.7 x	1,902	2,101	26.9 x	11.06	8.6 x
219	Shenzhen Mindray	300760-CN	38.9	47,216	44,399	19%	-11%	-5%	4,383	4,903	9.1 x	1,610	1,839	24.1 x	4.21	9.3 x
220	HOYA CORPORATION	7741-JP	123.8	43,457	40,344	10%	-26%	-1%	5,365	5,001	8.1 x	1,945	1,752	23.0 x	16.60	7.5 x
221	Alcon AG	ALC-CH	83.0	41,465	44,978	6%	-19%	8%	9,370	9,725	4.6 x	2,294	2,541	17.7 x	39.08	2.1 x
222	GE Healthcare	GEHC-US	90.9	41,397	48,931	4%	-31%	18%	19,552	20,345	2.4 x	3,514	3,711	13.2 x	15.67	5.8 x
223	ResMed Inc.	RMD-US	198.0	29,128	30,309	23%	-33%	15%	4,223	4,635	6.5 x	1,343	1,539	19.7 x	30.47	6.5 x
224	West Pharmaceutical	WST-US	395.7	28,968	28,540	5%	-22%	12%	2,950	3,011	9.5 x	829	843	33.9 x	39.20	10.1 x
225	Terumo Corporation	4543-JP	18.0	26,880	27,240	11%	-31%	11%	6,009	5,976	4.6 x	1,389	1,415	19.3 x	5.41	3.3 x
226	Straumann Holding	STMN-CH	159.9	25,493	25,532	8%	-32%	-1%	2,743	2,840	9.0 x	806	855	29.9 x	12.79	12.5 x
227	Coloplast A/S	COLO.B-DK	135.3	28,432	33,458	9%	-27%	20%	3,520	3,937	8.5 x	1,140	1,277	26.2 x	9.77	13.8 x
228	Sartorius Stedim	DIM-FR	285.4	27,782	31,755	19%	-40%	8%	3,015	3,205	9.9 x	847	994	32.0 x	30.91	9.2 x
229	Align Technology,	ALGN-US	327.9	24,628	24,269	26%	-46%	20%	3,862	4,043	6.0 x	964	1,012	24.0 x	49.64	6.6 x
230	Baxter International	BAX-US	42.7	21,712	32,928	17%	-27%	11%	14,813	15,104	2.2 x	3,082	3,107	10.6 x	16.55	2.6 x

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231	Koninklijke Philips	PHIA-NL	20.1	18,357	24,679	21%	-23%	-13%	19,620	20,179	1.2 x	3,068	3,271	7.5 x	14.33	1.4 x
232	Sonova Holding	SOON-CH	289.9	17,285	19,123	15%	-21%	-11%	4,172	4,051	4.7 x	1,132	1,036	18.4 x	39.30	7.4 x
233	Cooper Companies	COO-US	101.5	20,166	22,862	3%	-25%	7%	3,593	3,881	5.9 x	1,028	1,162	19.7 x	38.73	2.6 x
234	Olympus Corp.	7733-JP	14.6	17,764	16,785	29%	-16%	8%	6,478	6,102	2.8 x	1,859	974	17.2 x	4.19	3.5 x
235	Hologic, Inc.	HOLX-US	78.0	18,300	18,931	13%	-18%	9%	4,030	4,029	4.7 x	1,298	1,319	14.4 x	19.84	3.9 x
236	Insulet Corporation	PODD-US	171.4	11,985	12,727	96%	-27%	-21%	1,697	1,961	6.5 x	327	379	33.5 x	10.48	16.4 x
237	Revvity, Inc.	RVTY-US	105.0	12,971	15,421	32%	-24%	-4%	2,751	2,817	5.5 x	834	849	18.2 x	63.79	1.6 x
238	Cochlear Limited	COH-AU	220.2	14,422	14,232	4%	-33%	8%	1,270	1,475	9.6 x	308	394	36.1 x	17.75	12.4 x
239	bioMerieux SA	BIM-FR	110.4	13,071	13,232	4%	-19%	0%	4,001	4,206	3.1 x	885	962	13.8 x	34.30	3.2 x
240	Teleflex Incorporated	TFX-US	226.2	10,643	12,590	22%	-21%	-9%	2,974	3,093	4.1 x	842	892	14.1 x	92.43	2.4 x
241	Sysmex Corporation	6869-JP	17.6	11,066	10,902	39%	-15%	-4%	3,034	2,995	3.6 x	777	766	14.2 x	4.31	4.1 x
242	Shanghai United	688271-CN	18.0	10,614	13,166	35%	-23%	-7%	1,342	1,582	8.3 x	299	296	44.4 x	3.02	5.9 x
243	Demant A/S	DEMANT-DK	49.8	11,143	12,960	9%	-35%	15%	3,233	3,361	3.9 x	810	898	14.4 x	6.09	8.2 x
244	QIAGEN NV	QGEN-US	43.0	9,516	10,289	14%	-17%	-4%	1,970	2,013	5.1 x	659	706	14.6 x	16.81	2.6 x
245	Penumbra, Inc.	PEN-US	223.2	8,638	8,578	56%	-19%	-11%	1,059	1,244	6.9 x	120	164	52.3 x	30.48	7.3 x
246	Carl Zeiss	AFX-DE	125.1	11,186	11,481	18%	-39%	15%	2,253	2,429	4.7 x	467	478	24.0 x	26.08	4.8 x
247	Imeik Technology	300896-CN	47.8	10,341	9,757	81%	-23%	16%	399	540	18.1 x	295	389	25.1 x	4.08	11.7 x
248	Fisher & Paykel	FPH-NZ	15.3	8,959	9,111	13%	-23%	3%	955	1,032	8.8 x	260	281	32.4 x	1.80	8.5 x
249	Shockwave Medical	SWAV-US	325.6	12,178	11,825	2%	-52%	71%	730	921	12.8 x	171	297	39.8 x	16.30	20.0 x

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250	Bio-Rad Laboratories	BIO-US	345.9	8,101	9,657	43%	-24%	7%	2,671	2,698	3.6 x	536	497	19.4 x	306.51	1.1 x
251	Shenzhen New	300832-CN	9.2	7,190	6,732	27%	-21%	-17%	443	538	12.5 x	221	251	26.9 x	1.25	7.3 x
252	DENTSPLY SIRONA	XRAY-US	33.2	6,882	8,843	30%	-21%	-7%	3,965	3,997	2.2 x	691	740	12.0 x	15.89	2.1 x
253	Masimo Corporation	MASI-US	146.9	7,770	8,558	35%	-49%	25%	2,048	2,102	4.1 x	394	395	21.6 x	25.85	5.7 x
254	Inspire Medical	INSP-US	214.8	6,355	5,914	54%	-43%	6%	625	782	7.6 x	40	57	103.7 x	19.37	11.1 x
255	Convatec Group	CTEC-GB	3.6	7,416	8,751	2%	-34%	17%	2,142	2,270	3.9 x	524	586	14.9 x	0.79	4.6 x
256	SCHOTT Pharma	1SXP-DE	42.8	6,441	6,493	10%	-33%	15%	976	1,057	6.1 x	258	283	22.9 x	4.95	8.6 x
257	Getinge AB	GETI.B-SE	20.1	5,120	6,041	32%	-20%	-9%	3,050	3,135	1.9 x	548	601	10.0 x	10.36	1.9 x
258	Asahi Intecc	7747-JP	17.4	4,728	4,557	24%	-9%	-14%	621	687	6.6 x	178	206	22.1 x	3.36	5.2 x
259	DiaSorin S.p.A.	DIA-IT	96.7	5,408	6,116	20%	-11%	-1%	1,250	1,267	4.8 x	402	409	15.0 x	30.32	3.2 x
260	QuidelOrtho Corporation	QDEL-US	47.9	3,205	5,644	106%	-13%	-35%	2,998	2,826	2.0 x	723	615	9.2 x	75.05	0.6 x
261	Merit Medical	MMSI-US	75.8	4,388	4,685	13%	-17%	0%	1,257	1,320	3.6 x	261	290	16.1 x	20.78	3.6 x
262	Glaukos Corporation	GKOS-US	94.3	4,665	4,721	3%	-52%	19%	315	357	13.2 x	(68)	(61)	-	9.40	10.0 x
263	Jiangsu Yuyue	002223-CN	4.7	4,451	3,988	11%	-11%	-2%	1,025	1,152	3.5 x	253	373	10.7 x	1.61	2.9 x
264	Envista Holdings	NVST-US	21.4	3,668	4,380	91%	-6%	-11%	2,567	2,604	1.7 x	463	430	10.2 x	24.34	0.9 x
265	Giant Biogene	2367-HK	5.4	5,410	4,925	23%	-33%	22%	488	645	7.6 x	234	293	16.8 x	0.50	11.0 x
266	Haemonetics Corporation	HAE-US	85.4	4,335	5,011	12%	-17%	0%	1,169	1,295	3.9 x	280	358	14.0 x	18.57	4.6 x
267	Ambu A/S	AMBU.B-DK	16.5	3,871	4,439	11%	-44%	7%	685	758	5.9 x	87	123	36.0 x	2.96	5.6 x
268	Sichuan Kelun	002422-CN	4.2	5,216	6,845	12%	-29%	3%	2,761	2,950	2.3 x	507	544	12.6 x	1.77	2.4 x

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269	Autobio Diagnostics	603658-CN	7.9	4,619	4,696	18%	-29%	-1%	645	630	7.5 x	242	228	20.6 x	1.96	4.0 x
270	iRhythm Technologies	IRTC-US	116.0	3,594	3,587	21%	-39%	8%	493	581	6.2 x	(5)	21	173.3 x	6.79	17.1 x
271	Lantheus Holdings	LNTH-US	62.2	4,265	4,253	62%	-19%	0%	1,296	1,425	3.0 x	607	711	6.0 x	11.68	5.3 x
272	APT Medical	688617-CN	59.2	3,960	3,792	13%	-32%	8%	229	306	12.4 x	86	115	32.9 x	3.95	15.0 x
273	Axonics, Inc.	AXNX-US	69.0	3,518	3,184	1%	-31%	11%	366	445	7.2 x	47	68	46.5 x	12.56	5.5 x
274	Inari Medical	NARI-US	48.0	2,781	2,687	50%	-17%	-26%	494	588	4.6 x	(4)	(24)	-	8.05	6.0 x
275	Enovis Corporation	ENOV-US	62.5	3,411	3,912	6%	-31%	11%	1,707	2,118	1.8 x	269	373	10.5 x	62.61	1.0 x
276	Integra LifeSciences	IART-US	35.5	2,773	4,144	67%	-6%	-19%	1,542	1,616	2.6 x	370	382	10.8 x	20.31	1.7 x
277	Shandong Weigao	1066-HK	0.6	2,820	2,643	190%	-8%	-36%	1,830	1,951	1.4 x	411	461	5.7 x	0.66	0.9 x
278	iRay Technology	688301-CN	30.3	3,095	2,986	57%	-13%	-34%	226	261	11.4 x	93	106	28.3 x	5.61	5.4 x
279	Medacta Group	MOVE-CH	135.9	2,718	2,910	15%	-21%	-9%	559	635	4.6 x	150	171	17.0 x	17.10	7.9 x
280	Lepu Medical	300003-CN	1.9	3,081	3,747	91%	-15%	-16%	1,533	1,266	3.0 x	476	372	10.1 x	1.20	1.6 x
281	CONMED Corporation	CNMD-US	80.1	2,465	3,431	73%	-7%	-27%	1,245	1,350	2.5 x	235	279	12.3 x	27.12	3.0 x
282	Guardant Health	GH-US	20.6	2,511	2,694	99%	-18%	-24%	564	664	4.1 x	(476)	(330)	-	1.30	15.8 x
283	TransMedics Group	TMDX-US	73.9	2,419	2,537	35%	-51%	-6%	242	367	6.9 x	(12)	24	105.9 x	4.20	17.6 x
284	Winner Medical	300888-CN	4.8	2,800	2,114	47%	-15%	-8%	1,641	1,134	1.9 x	341	201	10.5 x	3.10	1.5 x
285	Elekta AB	EKTA.B-SE	7.5	2,782	3,348	15%	-15%	-7%	1,559	1,690	2.0 x	248	312	10.7 x	2.51	3.0 x
286	LivaNova Plc	LIVN-US	55.9	3,018	3,079	7%	-25%	8%	1,150	1,210	2.5 x	215	250	12.3 x	23.70	2.4 x
287	RadNet, Inc.	RDNT	48.7	3,553	4,638	2%	-50%	40%	1,617	1,753	2.6 x	232	269	17.3 x	9.28	5.2 x

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288	Telix Pharmaceuticals	TLX-AU	8.4	2,725	2,652	6%	-47%	22%	330	451	5.9 x	16	59	45.3 x	0.30	28.0 x
289	ICU Medical	ICUI-US	107.3	2,591	4,041	98%	-27%	8%	2,213	2,277	1.8 x	376	352	11.5 x	87.96	1.2 x
290	Ovctek China	300595-CN	2.5	2,258	1,910	122%	-16%	-21%	240	283	6.7 x	121	140	13.7 x	0.67	3.8 x
291	Vitrolife AB	VITR-SE	18.8	2,546	2,667	25%	-41%	-3%	335	349	7.6 x	110	117	22.8 x	8.79	2.1 x
292	Sonoscape Medical	300633-CN	5.3	2,264	2,038	68%	-16%	-21%	256	297	6.9 x	61	76	26.7 x	0.98	5.3 x
293	Eyebright Medical	688050-CN	17.8	1,876	1,825	92%	-7%	-27%	84	132	13.9 x	48	58	31.4 x	2.73	6.5 x
294	Jafron Biomedical	300529-CN	3.1	2,484	2,304	54%	-28%	0%	363	277	8.3 x	161	97	23.8 x	0.55	5.6 x
295	Ansell Limited	ANN-AU	16.0	2,017	2,358	20%	-17%	-6%	1,655	1,630	1.4 x	276	245	9.6 x	12.09	1.3 x
296	InMode Ltd.	INMD-US	21.6	1,821	1,082	123%	-14%	-3%	492	499	2.2 x	220	220	4.9 x	9.38	2.3 x
297	Hartalega Holdings	5168-MY	0.6	1,992	1,672	13%	-31%	-1%	541	416	4.0 x	(17)	33	50.0 x	0.29	2.0 x
298	Micro-Tech (Nanjing)	688029-CN	9.2	1,733	1,568	52%	-13%	-32%	286	329	4.8 x	51	69	22.6 x	2.59	3.6 x
299	NovoCure Limited	NVCR-US	15.6	1,674	1,366	435%	-30%	5%	509	538	2.5 x	(106)	(132)	-	3.39	4.6 x
300	Top Glove	7113-MY	0.2	1,387	1,525	63%	-13%	-12%	479	621	2.5 x	(35)	46	33.2 x	0.12	1.4 x
301	Nakanishi Inc.	7716-JP	15.6	1,467	1,179	65%	-15%	2%	396	501	2.4 x	118	133	8.9 x	8.77	1.8 x
302	CLASSYS, Inc.	214150-KR	26.2	1,678	1,637	27%	-39%	-10%	135	167	9.8 x	70	89	18.3 x	3.14	8.3 x
303	STAAR Surgical	STAA-US	38.3	1,871	1,685	91%	-30%	23%	322	337	5.0 x	57	36	46.5 x	7.90	4.8 x
304	Lunit, Inc.	328130-KR	43.8	1,260	1,101	124%	-70%	-31%	19	40	27.7 x	(30)	(10)	-	6.08	7.2 x
305	Butterfly Networks	BFLY	1.1	196	115	169%	-30%	0%	66	73	1.6 x	(68)	(60)	-	1.06	1.0 x
306	Hyperfine, Inc.	HYPR	1.0	55	(4)	228%	-9%	-11%	11	13	-0.3 x	(58)	(41)	-	1.17	0.9 x

307	SeaStar Medical, Inc.	ICU	0.7	48	30	241%	-78%	66%	-	-	-	-	-	-	(0.58)	-1.3 x
308	OneMedNet Corp	ONMD	0.7	23	7	1803%	-41%	-12%	-	-	-	-	-	-	1.57	0.5 x
309	Envoy Medical Corp	COCH	3.9	77	73	199%	-81%	117%	0	0	236.1 x	-	-	-	0.24	16.0 x
310	BioSig Technologies	BSGM	0.7	6	6	2396%	-60%	-86%	-	-	-	-	-	-	(0.15)	-4.5 x
311	Rapid Dose Therapeutics	DOSE-CA	0.1	14	16	49%	-59%	6%	-	-	-	-	-	-	(0.03)	-4.2 x
312	Intelligent Bio Solutions	INBS	4.2	12	75	1066%	-46%	4%	1	4	17.8 x	-	-	-	0.19	22.8 x

						Price Performance						Sales			EBITDA			Book Value	
						% to High	% to Low	% YTD	FY0	FY1	EV/Sales	FY0	FY1	EV/ EBITDA	Book/ Share	P/ Book			
Peer Set																			
Biopharma		Ticker		4,442,366	4,961,517			9%	915,239	961,260	5.2 x	282,969	330,103	15.0 x		5.2 x			
313	Eli Lilly	LLY-US	778.0	739,658	760,968	3%	-56%	33%	34,124	41,412	18.4 x	8,439	14,942	50.9 x	11.35	68.6 x			
314	Johnson & Johnson	JNJ-US	158.2	381,043	388,281	11%	-8%	1%	85,159	88,380	4.4 x	32,141	33,306	11.7 x	28.57	5.5 x			
315	Novo Nordisk	NOVO.B-DK	127.9	439,183	569,519	7%	-41%	25%	33,848	41,536	13.7 x	16,268	20,107	28.3 x	3.47	36.8 x			
316	Merck & Co.	MRK-US	132.0	334,182	363,210	1%	-25%	21%	60,115	63,794	5.7 x	8,999	28,923	12.6 x	14.84	8.9 x			
317	Novartis AG	NOVN-CH	97.0	212,428	201,787	12%	-8%	8%	45,440	48,168	4.2 x	17,993	19,127	10.5 x	21.33	4.5 x			
318	AstraZeneca	AZN-GB	134.9	209,107	231,791	14%	-12%	0%	45,811	50,873	4.6 x	14,895	17,539	13.2 x	25.02	5.4 x			
319	Roche Holding	ROG-CH	255.0	179,170	232,093	27%	-2%	-11%	68,152	66,412	3.5 x	25,484	24,728	9.4 x	40.82	6.2 x			
320	Amgen Inc.	AMGN-US	284.3	152,372	206,704	16%	-26%	-1%	28,190	33,052	6.3 x	17,338	17,364	11.9 x	11.64	24.4 x			
321	Pfizer Inc.	PFE-US	27.8	156,698	219,302	52%	-8%	-4%	58,496	59,916	3.7 x	11,445	19,442	11.3 x	15.77	1.8 x			
322	Sanofi	SAN-FR	98.2	124,250	134,003	18%	-13%	0%	46,641	50,584	2.6 x	15,305	15,115	8.9 x	63.90	1.5 x			
323	Vertex Pharmaceuticals	VRTX-US	418.0	107,975	97,306	7%	-25%	3%	9,869	10,717	9.1 x	4,543	5,183	18.8 x	68.22	6.1 x			
324	Regeneron Pharmaceuticals	REGN-US	962.5	103,895	97,155	4%	-29%	10%	13,117	13,927	7.0 x	5,360	5,522	17.6 x	237.41	4.1 x			

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325	Bristol-Myers Squibb	BMY-US	54.2	109,664	138,783	31%	-12%	6%	45,006	45,976	3.0 x	19,988	18,835	7.4 x	14.56	3.7 x
326	Gilead Sciences,	GILD-US	73.3	91,253	108,494	20%	-3%	-10%	27,116	27,494	3.9 x	12,160	13,115	8.3 x	18.33	4.0 x
327	CSL Limited	CSL-AU	187.8	90,774	103,849	12%	-23%	-4%	13,310	14,706	7.1 x	4,116	4,883	21.3 x	34.00	5.5 x
328	GSK Plc	GSK-GB	21.6	89,463	103,253	2%	-23%	19%	38,621	39,549	2.6 x	12,862	13,299	7.8 x	4.16	5.2 x
329	Chugai Pharmaceutical	4519-JP	38.2	64,058	57,624	20%	-37%	3%	7,496	7,214	8.0 x	3,177	3,265	17.6 x	6.53	5.8 x
330	Daiichi Sankyo	4568-JP	31.6	61,455	56,520	17%	-25%	17%	9,532	10,416	5.4 x	1,401	1,658	34.1 x	5.47	5.8 x
331	Takeda Pharmaceutical	4502-JP	27.6	43,746	74,416	24%	-5%	-3%	29,766	26,985	2.8 x	9,108	7,068	10.5 x	28.39	1.0 x
332	Moderna, Inc.	MRNA-US	106.6	40,800	33,328	53%	-41%	7%	6,848	4,212	7.9 x	(3,752)	(2,829)	-	36.27	2.9 x
333	Sun Pharmaceutical	524715-IN	19.4	46,618	45,473	1%	-43%	28%	5,294	5,832	7.8 x	1,415	1,574	28.9 x	2.99	6.5 x
334	Haleon plc.	HLN-GB	4.2	38,428	49,308	5%	-9%	3%	14,296	14,340	3.4 x	3,545	3,606	13.7 x	2.27	1.9 x
335	Jiangsu Hengrui	600276-CN	6.4	40,573	38,085	15%	-22%	0%	3,088	3,222	11.8 x	557	696	54.7 x	0.86	7.4 x
336	Bayer Aktiengesellschaft	BAYN-DE	30.7	30,165	68,107	121%	-11%	-17%	51,789	50,712	1.3 x	12,726	11,215	6.1 x	36.20	0.8 x
337	Celltrion, Inc.	068270-KR	142.0	30,968	30,420	30%	-32%	-3%	1,647	2,371	12.8 x	694	791	38.4 x	60.87	2.3 x
338	Alnylam Pharmaceuticals	ALNY-US	149.5	18,823	19,043	46%	-4%	-22%	1,828	1,844	10.3 x	(230)	(346)	-	(1.75)	-85.2 x
339	argenx SE	ARGX-BE	395.4	23,447	20,288	39%	-25%	4%	1,269	1,783	11.4 x	(339)	(161)	-	67.68	5.8 x

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340	Otsuka Holdings	4578-JP	41.7	23,258	20,807	3%	-25%	14%	13,401	14,186	1.5 x	2,327	2,944	7.1 x	29.14	1.4 x
341	Astellas Pharma	4503-JP	10.9	19,652	24,554	56%	-3%	-8%	11,153	10,396	2.4 x	2,226	1,711	14.4 x	5.54	2.0 x
342	Genmab A/S	GMAB-DK	302.3	19,991	15,711	43%	-13%	-4%	2,378	2,824	5.6 x	813	929	16.9 x	70.24	4.3 x
343	UCB S.A.	UCB-BE	123.6	24,032	25,733	1%	-44%	45%	5,690	6,043	4.3 x	1,462	1,481	17.4 x	51.08	2.4 x
344	BeiGene, Ltd.	6160-HK	12.2	15,098	14,240	75%	-13%	-14%	2,459	3,045	4.7 x	(1,098)	(772)	-	2.60	4.7 x
345	Shionogi &	4507-JP	51.2	15,740	12,919	7%	-21%	14%	3,174	2,917	4.4 x	1,249	1,152	11.2 x	27.42	1.9 x
346	Viatris Inc.	VTRS-US	11.9	14,180	31,637	14%	-27%	10%	15,427	15,367	2.1 x	5,124	4,915	6.4 x	17.05	0.7 x
347	Eisai Co.,	4523-JP	41.1	12,181	11,117	96%	-2%	-15%	5,468	4,853	2.3 x	608	590	18.8 x	18.85	2.2 x
348	Neurocrine Biosciences	NBIX-US	137.9	13,724	13,042	8%	-35%	5%	1,887	2,214	5.9 x	496	668	19.5 x	22.61	6.1 x
349	Incyte Corporation	INCY-US	57.0	12,791	9,174	33%	-12%	-9%	3,696	4,133	2.2 x	783	1,064	8.6 x	23.14	2.5 x
350	Teva Pharmaceutical	TEVA-IL	14.2	15,953	33,599	3%	-50%	33%	15,846	15,650	2.1 x	4,818	4,687	7.2 x	6.58	2.2 x
351	Royalty Pharma	RPRX-US	30.4	13,566	22,764	21%	-15%	8%	2,920	2,672	8.5 x	2,538	2,488	9.2 x	14.61	2.1 x
352	Cipla Limited	500087-IN	17.9	14,469	14,029	2%	-40%	20%	2,822	3,089	4.5 x	612	753	18.6 x	3.69	4.9 x
353	Karuna Therapeutics	KRTX-US	329.8	7,722	11,313	0%	-52%	-36%	1	41	273.8 x	-	-	-	32.94	10.0 x
354	Dr. Reddy's	500124-IN	73.8	12,311	11,655	6%	-28%	6%	2,995	3,315	3.5 x	775	943	12.4 x	19.29	3.8 x

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355	Recordati Industria	REC-IT	55.3	11,573	13,002	6%	-24%	4%	2,251	2,468	5.3 x	832	909	14.3 x	9.04	6.1 x
356	Sarepta Therapeutics,	SRPT-US	129.5	12,151	11,855	24%	-57%	34%	1,243	1,866	6.4 x	(90)	353	33.6 x	9.17	14.1 x
357	United Therapeutics	UTHR-US	229.7	10,810	8,512	14%	-11%	4%	2,328	2,686	3.2 x	1,257	1,422	6.0 x	127.23	1.8 x
358	Mankind Pharma	543904-IN	27.5	11,034	10,801	4%	-46%	16%	1,058	1,236	8.7 x	232	299	36.2 x	2.52	10.9 x
359	Swedish Orphan	SOBI-SE	25.0	8,855	10,364	16%	-30%	-2%	2,107	2,231	4.6 x	704	834	12.4 x	9.49	2.6 x
360	Ipsen SA	IPN-FR	119.1	9,984	9,771	17%	-10%	1%	3,366	3,677	2.7 x	1,234	1,300	7.5 x	49.99	2.4 x
361	Beijing Wantai	603392-CN	9.4	11,835	11,059	35%	-41%	-12%	764	714	15.5 x	-	240	46.1 x	1.39	6.8 x
362	Hansoh Pharmaceutical	3692-HK	2.0	11,736	9,117	11%	-39%	-2%	1,398	1,635	5.6 x	492	596	15.3 x	0.61	3.2 x
363	Ono Pharmaceutical	4528-JP	16.2	8,088	6,842	32%	-2%	-1%	3,327	3,357	2.0 x	1,215	1,255	5.5 x	10.92	1.5 x
364	CSPC Pharmaceutical	1093-HK	0.8	9,354	7,936	34%	-16%	-15%	4,368	4,802	1.7 x	1,157	1,282	6.2 x	0.37	2.1 x
365	Roivant Sciences	ROIV-US	10.5	8,494	2,809	26%	-34%	-6%	61	588	4.8 x	(1,202)	311	9.0 x	7.57	1.4 x
366	Jazz Pharmaceuticals	JAZZ-US	120.4	7,508	11,667	23%	-8%	-2%	3,834	4,093	2.9 x	1,647	1,781	6.6 x	60.03	2.0 x
367	Apellis Pharmaceuticals	APLS-US	58.8	7,088	6,786	61%	-66%	-2%	397	782	8.7 x	(495)	(132)	-	1.63	36.1 x
368	Cerevel Therapeutics	CERE-US	42.3	7,675	7,156	3%	-54%	0%	0	0	-	(416)	(458)	-	3.71	11.4 x
369	Exelixis, Inc.	EXEL-US	23.7	7,195	6,406	3%	-24%	-1%	1,830	1,914	3.3 x	228	486	13.2 x	7.48	3.2 x

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370	Intra-Cellular Therapies	ITCI-US	69.2	6,699	6,187	10%	-34%	-3%	464	659	9.4 x	(159)	(88)	-	6.14	11.3 x
371	Innovent Biologics	1801-HK	4.8	7,816	7,117	32%	-27%	-12%	862	1,040	6.8 x	(180)	(65)	-	0.96	5.0 x
372	BridgeBio Pharma	BBIO-US	30.9	5,703	6,714	43%	-59%	-23%	9	27	250.3 x	(562)	(537)	-	(7.73)	-4.0 x
373	Immunovant, Inc.	IMVT-US	32.3	4,694	3,997	41%	-57%	-23%	0	0	-	(218)	(270)	-	4.68	6.9 x
374	SK Biopharmaceuticals	326030-KR	68.1	5,334	5,314	18%	-32%	-13%	266	360	14.8 x	(17)	45	118.7 x	2.69	25.3 x
375	Bausch + Lomb	BLCO-US	17.3	6,072	10,483	27%	-21%	1%	4,146	4,649	2.3 x	738	862	12.2 x	19.52	0.9 x
376	Revolution Medicines	RVMD-US	32.2	5,308	3,542	10%	-52%	12%	12	7	527.9 x	(483)	(587)	-	11.09	2.9 x
377	Alkermes Public	ALKS-US	27.1	4,523	4,119	25%	-19%	-2%	1,663	1,529	2.7 x	324	509	8.1 x	7.20	3.8 x
378	Halozyne Therapeutics	HALO-US	40.7	5,169	6,352	11%	-27%	10%	829	957	6.6 x	426	555	11.4 x	0.66	61.5 x
379	Madrigal Pharmaceuticals	MDGL-US	267.0	5,313	4,791	21%	-55%	15%	0	83	57.9 x	(379)	(580)	-	20.39	13.1 x
380	Nuvalent, Inc.	NUVL-US	75.1	4,403	4,091	19%	-69%	2%	0	0	-	(149)	(207)	-	10.94	6.9 x
381	Akeso Inc.	9926-HK	6.0	5,161	4,742	18%	-35%	1%	629	368	12.9 x	295	(39)	-	0.85	7.0 x
382	ALVOTECH	ALVO	12.2	3,261	4,325	47%	-45%	6%	93	321	13.5 x	(291)	66	65.9 x	(3.49)	-3.5 x
383	Insmmed Incorporated	INSM-US	27.1	4,029	4,597	18%	-40%	-12%	305	357	12.9 x	(699)	(676)	-	(2.24)	-12.1 x
384	Walvax Biotechnology	300142-CN	2.1	3,336	3,195	150%	-5%	-35%	569	622	5.1 x	168	226	14.1 x	0.81	2.6 x

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385	Moon Lake	MLTX	50.2	3,011	2,548	29%	-65%	-17%	0	0	-	(51)	(80)	-	8.20	6.1 x
386	Arcellx, Inc.	ACLX-US	69.6	3,672	3,030	8%	-61%	25%	110	88	34.4 x	(86)	(90)	-	9.28	7.5 x
387	Shenzhen Kangtai	300601-CN	3.0	2,651	3,591	66%	-15%	-21%	458	498	7.2 x	75	220	16.3 x	1.19	2.6 x
388	Betta Pharmaceuticals	300558-CN	5.7	2,369	2,624	93%	-19%	-22%	345	376	7.0 x	95	87	30.1 x	1.73	3.3 x
389	Zai Lab	9688-HK	1.6	1,635	836	150%	-5%	-40%	267	376	2.2 x	(347)	(319)	-	0.82	2.0 x
390	NewAmsterdam Pharma	NAMS	23.7	2,111	1,610	11%	-76%	112%	14	11	145.2 x	-	-	-	3.50	6.8 x
391	Tango Therapeutics	TNGX	7.9	847	513	64%	-69%	-20%	37	32	15.8 x	(112)	(151)	-	2.48	3.2 x
392	IMMATICS NV	IMTX	10.5	1,082	457	25%	-44%	0%	59	63	7.3 x	(103)	(103)	-	2.94	3.6 x
393	OmniAb, Inc.	OABI	5.4	635	572	24%	-42%	-12%	34	32	18.0 x	(41)	(42)	-	2.69	2.0 x
394	OCULIS HOLDING AG	OCS	12.1	442	333	20%	-39%	7%	1	1	336.7 x	(89)	(63)	-	3.04	4.0 x
395	PROCAPS GROUP SA	PROC	2.9	327	598	86%	-33%	-29%	425	460	1.3 x	112	98	6.1 x	0.35	8.3 x
396	Nuvation Bio Inc.	NUVB	3.6	794	190	14%	-74%	141%	0	0	-	-	-	-	2.76	1.3 x
397	AEON Biopharma, Inc.	AEON	11.6	431	426	48%	-71%	61%	-	-	-	-	-	-	(2.48)	-4.7 x
398	TriSalus Life Sciences, Inc.	TLSI	9.8	258	247	67%	-66%	15%	19	31	8.1 x	-	-	-	(0.98)	-9.9 x
399	Conduit Pharmaceuticals	CDT	3.7	271	23	581%	-74%	-19%	-	-	-	-	-	-	2.73	1.3 x

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400	Reviva Pharmaceuticals	RVPH	3.8	106	73	145%	-29%	-27%	-	-	-	-	-	-	(0.41)	-9.2 x
401	ProKidney	PROK	1.6	101	1,234	724%	-32%	-8%	0	0	-	(133)	(171)	-	(18.43)	-0.1 x
402	Carmell Therapeutics Corp.	CTCX	2.6	59	51	420%	-34%	-33%	-	-	-	-	-	-	7.90	0.3 x
403	Apollomics Inc.	APLM	0.8	67	(28)	3940%	-31%	-22%	5	1	-28.3 x	(38)	(42)	-	8.69	0.1 x
404	Celularity Inc.	CELU	5.2	114	162	70%	-70%	111%	-	-	-	-	-	-	1.56	3.3 x
405	Clene Nanomedicine, Inc.	CLNN	0.4	55	52	187%	-41%	43%	1	1	94.2 x	(40)	(40)	-	0.10	4.1 x
406	The American Oncology	AONC	5.5	52	354	621%	-13%	-7%	-	-	-	-	-	-	(16.99)	-0.3 x
407	SAB Biotherapeutics	SABS	4.5	42	(9)	219%	-19%	-34%	2	0	-	-	-	-	6.21	0.7 x
408	NKGen Biotech, Inc.	NKGN	1.9	41	52	581%	-59%	-31%	-	-	-	-	-	-	(0.35)	-5.4 x
409	Estrella Biopharma, Inc.	ESLA	1.2	45	35	2561%	-30%	12%	-	-	-	-	-	-	0.26	4.8 x
410	YS Biopharma	YS	0.7	136	108	229%	-51%	41%	97	80	1.3 x	(14)	-	-	0.83	0.9 x
411	Dyadic International	DYAI	1.7	48	41	44%	-29%	3%	3	4	9.8 x	-	-	-	0.20	8.2 x
412	NeuroRx, Inc.	NRXP	4.7	44	401	154%	-53%	-90%	0	0	-	-	-	-	(0.14)	-33.7 x
413	FSD Pharma	HUGE	0.7	29	25	193%	-9%	62%	-	-	-	-	-	-	0.34	2.1 x
414	Calidi Biotherapeutics	CLDI	0.6	20	25	2341%	-15%	-63%	0	0	-	-	-	-	(0.23)	-2.4 x

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415	EFFECTOR THERAPEUTICS	EFTR	14.4	53	44	157%	-41%	23%	0	0	-	-	-	-	(1.94)	-7.4 x
416	Vincera Pharma Inc.	VINC	5.1	108	98	85%	-88%	329%	0	0	-	-	-	-	0.52	9.7 x
417	Ocean Biomedical	AEHA	3.8	129	138	219%	-86%	473%	-	-	-	-	-	-	(0.25)	-15.3 x
418	Coeptis Therapeutics	COEP	0.3	11	10	636%	-4%	-62%	-	-	-	-	-	-	0.12	2.4 x
419	Alto Neuroscience	ANRO	15.4	413	482	56%	-16%	-	0	0	-	-	-	-	(2.67)	-5.8 x
420	Fractyl Health	GUTS	7.4	352	374	96%	-22%	-	0	0	-	(45)	(72)	-	(71.93)	-0.1 x
421	ArriVent BioPharma	AVBP	17.9	571	753	45%	-5%	-	0	(2)	-376.3 x	(75)	(112)	-	(4.57)	-3.9 x
422	Kyverna Therapeutics	KYTX	24.8	1,071	1,203	41%	-11%	-	0	4	320.8 x	(63)	(135)	-	(3.05)	-8.2 x
423	CG Oncology	CGON	43.9	2,919	3,046	14%	-35%	-	0	1	4,061.8 x	(55)	(91)	-	(1.85)	-23.8 x
424	Telomir Pharmaceuticals	TELO	5.2	152	153	302%	-8%	-	-	-	-	-	-	-	0.12	44.4 x
425	Surrozen, Inc.	SRZN	15.7	32	(7)	3%	-71%	67%	-	-	-	-	-	-	22.34	0.7 x

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			Price	Mkt Cap (\$ Mns)	Ent Val (\$ Mns)	Price Performance			Sales			EBITDA			Book Value	
						% to High	% to Low	% YTD	FY0	FY1	EV/Sales	FY0	FY1	EV/ EBITDA	Book/ Share	P/ Book
Peer Set																
Healthcare Services		Ticker		2,360,344	2,743,925			3%	2,238,331	2,417,998	1.1 x	182,096	191,195	14.4 x		5.5 x
426	UnitedHealth Group	UNH-US	494.7	456,081	509,274	12%	-10%	-6%	371,622	400,946	1.3 x	36,796	40,275	12.6 x	96.06	5.2 x
427	Thermo Fisher	TMO-US	581.2	221,622	253,171	4%	-28%	9%	42,857	42,839	5.9 x	10,852	10,731	23.6 x	120.87	4.8 x
428	Danaher Corporation	DHR-US	249.7	184,718	198,269	8%	-27%	8%	23,890	24,058	8.2 x	7,507	7,633	26.0 x	72.36	3.5 x
429	Elevance Health	ELV-US	518.5	120,648	140,399	1%	-21%	10%	170,209	172,748	0.8 x	11,238	12,722	11.0 x	168.64	3.1 x
430	Zoetis Inc.	ZTS-US	169.2	77,476	82,316	19%	-11%	-14%	8,544	9,177	9.0 x	3,513	4,009	20.5 x	10.90	15.5 x
431	Cigna Group	CI-US	363.2	106,180	130,021	1%	-34%	21%	195,322	234,514	0.6 x	11,875	12,909	10.1 x	158.03	2.3 x
432	HCA Healthcare,	HCA-US	333.5	88,218	132,236	0%	-35%	23%	64,968	69,017	1.9 x	12,726	13,241	10.0 x	(6.68)	-49.9 x
433	McKesson Corporation	MCK-US	536.9	70,547	76,323	1%	-34%	16%	276,711	311,076	0.2 x	5,217	5,323	14.3 x	(15.67)	-34.3 x
434	Humana Inc.	HUM-US	346.7	41,797	50,009	56%	-4%	-24%	106,374	111,327	0.4 x	5,457	3,719	13.4 x	133.05	2.6 x
435	IDEXX Laboratories	IDXX-US	539.9	44,862	45,445	8%	-31%	-3%	3,661	3,999	11.4 x	1,219	1,361	33.4 x	17.88	30.2 x
436	SAMSUNG BIOLOGICS	207940-KR	617.3	43,934	43,849	7%	-21%	5%	2,764	3,165	13.9 x	1,146	1,229	35.7 x	102.60	6.0 x
437	Cencora, Inc.	COR-US	243.0	48,472	50,423	1%	-35%	18%	262,173	291,852	0.2 x	4,296	4,218	12.0 x	4.57	53.2 x
438	IQVIA Holdings	IQV-US	252.9	46,029	58,635	3%	-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	78.5	41,976	43,746	4%	-22%	6%	153,999	146,155	0.3 x	4,968	4,589	9.5 x	48.35	1.6 x
440	Agilent Technologies	A-US	145.5	42,642	43,950	4%	-33%	5%	6,826	6,763	6.5 x	2,025	2,006	21.9 x	21.12	6.9 x
441	Lonza Group	LONN-CH	599.8	44,663	45,474	10%	-43%	43%	7,782	7,310	6.2 x	2,242	2,019	22.5 x	154.04	3.9 x

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442	Dr. Sulaiman	4013-SA	83.6	29,265	30,024	11%	-29%	10%	2,562	3,193	9.4 x	655	756	39.7 x	4.94	16.9 x
443	Mettler-Toledo International	MTD-US	1,331.3	28,594	30,784	21%	-30%	10%	3,788	3,827	8.0 x	1,206	1,241	24.8 x	(6.97)	-191.1 x
444	Cardinal Health	CAH-US	111.9	27,218	27,438	4%	-33%	11%	205,012	226,823	0.1 x	2,313	2,857	9.6 x	(14.14)	-7.9 x
445	ICON plc	ICLR-US	336.0	27,714	31,272	3%	-46%	19%	8,120	8,640	3.6 x	1,694	1,843	17.0 x	112.02	3.0 x
446	STERIS plc	STE-US	224.8	22,215	25,540	13%	-20%	2%	4,958	5,467	4.7 x	1,437	1,472	17.3 x	64.93	3.5 x
447	Molina Healthcare	MOH-US	410.8	24,068	21,470	3%	-35%	14%	34,072	39,302	0.5 x	1,826	2,081	10.3 x	72.67	5.7 x
448	Laboratory Corp.	LH	218.5	18,372	23,762	11%	-11%	-4%	12,162	12,765	1.9 x	2,106	2,221	10.7 x	93.86	2.3 x
449	Laboratory Corporation	LH-US	218.5	18,372	23,762	11%	-11%	-4%	12,162	12,765	1.9 x	2,106	2,221	10.7 x	93.86	2.3 x
450	Waters Corporation	WAT-US	344.2	20,379	22,416	6%	-33%	5%	2,956	2,981	7.5 x	1,062	1,076	20.8 x	19.44	17.7 x
451	Zhangzhou Pientzehuang	600436-CN	31.6	19,076	18,929	47%	-20%	-7%	1,269	1,397	13.5 x	431	483	39.2 x	2.98	10.6 x
452	AIER Eye Hospital	300015-CN	1.8	16,521	16,101	107%	-4%	-20%	2,328	2,847	5.7 x	693	803	20.0 x	0.28	6.3 x
453	Fresenius SE	FRE-DE	27.0	15,207	30,584	24%	-7%	-13%	24,095	24,616	1.2 x	3,758	4,026	7.6 x	36.43	0.7 x
454	Avantor, Inc.	AVTR-US	25.6	17,344	22,699	2%	-35%	12%	6,967	6,971	3.3 x	1,307	1,228	18.5 x	7.76	3.3 x
455	Quest Diagnostics	DGX-US	133.1	14,736	19,698	12%	-10%	-3%	9,252	9,401	2.1 x	1,816	1,908	10.3 x	56.82	2.3 x
456	Sartorius AG	SRT3-DE	398.1	14,904	33,446	13%	-43%	18%	3,689	3,907	8.6 x	1,046	1,174	28.5 x	32.63	12.2 x
457	Rede D'Or	RDOR3-BR	5.1	11,576	12,908	57%	-19%	-14%	10,226	10,638	1.2 x	1,332	1,578	8.2 x	2.00	2.5 x
458	Wuxi Biologics	2269-HK	1.8	7,781	7,469	295%	-9%	-52%	2,357	2,577	2.9 x	770	926	8.1 x	1.33	1.4 x
459	Bangkok Dusit	BDMS-TH	0.8	12,413	12,773	16%	-11%	-4%	2,802	2,980	4.3 x	678	712	17.9 x	0.16	5.0 x
460	Eurofins Scientific	ERF-FR	63.8	12,313	16,412	13%	-26%	-2%	7,067	7,551	2.2 x	1,480	1,597	10.3 x	22.93	2.8 x

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461	Charles River	CRL-US	271.0	13,913	16,816	1%	-40%	15%	4,129	4,225	4.0 x	1,009	1,093	15.4 x	70.06	3.9 x
462	Fresenius Medical	FME-DE	38.5	11,297	24,239	44%	-17%	-8%	21,056	21,130	1.1 x	3,564	3,665	6.6 x	50.13	0.8 x
463	Divi's Laboratories	532488-IN	41.2	10,939	10,506	19%	-17%	-12%	940	919	11.4 x	288	257	40.9 x	5.73	7.2 x
464	Yunnan Baiyao	000538-CN	7.0	11,841	10,749	23%	-11%	2%	5,411	5,933	1.8 x	611	776	13.9 x	3.09	2.3 x
465	IHH Healthcare	5225-MY	1.3	11,258	13,573	5%	-5%	-3%	4,412	4,657	2.9 x	1,098	1,009	13.4 x	0.70	1.8 x
466	Apollo Hospitals	508869-IN	76.2	10,951	11,410	9%	-33%	11%	2,007	2,292	5.0 x	248	292	39.1 x	5.43	14.0 x
467	Repligen Corporation	RGEN-US	183.9	10,257	10,217	15%	-40%	2%	599	640	16.0 x	128	125	81.8 x	35.35	5.2 x
468	Bruker Corporation	BRKR-US	93.9	12,933	14,564	1%	-43%	28%	2,965	3,263	4.5 x	617	659	22.1 x	9.49	9.9 x
469	Sonic Healthcare	SHL-AU	19.2	9,206	11,630	29%	-8%	-12%	5,246	5,710	2.0 x	1,097	1,086	10.7 x	10.56	1.8 x
470	Henry Schein	HSIC-US	75.5	9,705	13,829	14%	-21%	0%	12,339	13,408	1.0 x	984	1,155	12.0 x	28.28	2.7 x
471	Universal Health	UHS-US	182.5	10,942	17,558	1%	-34%	20%	14,282	15,492	1.1 x	1,742	1,969	8.9 x	91.53	2.0 x
472	Catalent, Inc	CTLT-US	56.5	10,203	14,984	20%	-44%	26%	4,276	4,378	3.4 x	714	713	21.0 x	20.41	2.8 x
473	Medpace Holdings	MEDP-US	404.2	12,431	12,319	4%	-55%	32%	1,886	2,187	5.6 x	362	416	29.6 x	18.22	22.2 x
474	Chongqing Zhifei	300122-CN	6.2	8,833	15,125	58%	-8%	-28%	5,568	6,559	2.3 x	1,355	1,454	10.4 x	1.73	3.6 x
475	Chemed Corporation	CHE-US	641.9	9,704	9,542	2%	-23%	10%	2,264	2,423	3.9 x	452	515	18.5 x	73.69	8.7 x
476	Max Healthcare	543220-IN	9.8	9,560	9,424	11%	-49%	19%	716	823	11.5 x	190	221	42.7 x	0.97	10.2 x
477	Tenet Healthcare	THC-US	105.1	10,510	29,391	3%	-51%	39%	20,548	20,263	1.5 x	3,541	3,393	8.7 x	16.09	6.5 x
478	Shimadzu Corporation	7701-JP	27.9	8,275	7,301	19%	-17%	0%	3,587	3,372	2.2 x	637	602	12.1 x	10.19	2.7 x
479	Acadia Healthcare	ACHC-US	79.2	7,311	8,746	11%	-16%	2%	2,929	3,220	2.7 x	678	742	11.8 x	30.48	2.6 x

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480	Ramsay Health	RHC-AU	36.9	8,459	16,358	27%	-19%	3%	9,892	10,887	1.5 x	1,291	1,383	11.8 x	13.09	2.8 x
481	Elanco Animal	ELAN-US	16.3	8,026	13,588	4%	-52%	9%	4,417	4,497	3.0 x	979	986	13.8 x	12.63	1.3 x
482	China Resources	000999-CN	7.2	7,095	7,171	39%	-23%	3%	3,423	3,841	1.9 x	620	670	10.7 x	2.68	2.7 x
483	Amplifon SpA	AMP-IT	36.5	8,264	9,711	8%	-29%	6%	2,470	2,639	3.7 x	592	652	14.9 x	5.27	6.9 x
484	Huadong Medicine	000963-CN	4.3	7,525	7,611	68%	-11%	-27%	5,483	5,686	1.3 x	570	597	12.7 x	1.60	2.7 x
485	Ensign Group,	ENSG-US	124.4	7,050	8,392	3%	-30%	11%	3,730	4,147	2.0 x	420	479	17.5 x	26.36	4.7 x
486	Mouwasat Medical	4002-SA	36.4	7,274	7,491	2%	-32%	22%	721	817	9.2 x	270	302	24.8 x	4.13	8.8 x
487	Hapvida Participacoes	HAPV3-BR	0.7	5,573	7,159	51%	-41%	-19%	5,499	5,841	1.2 x	556	759	9.4 x	1.31	0.6 x
488	Dechra Pharmaceuticals	DPH-GB	48.8	5,563	6,110	9%	-35%	-1%	930	1,067	5.7 x	249	-	-	8.38	5.8 x
489	Bumrungrad Hospital	BH-TH	6.1	4,878	4,591	23%	-3%	-6%	714	745	6.2 x	266	278	16.5 x	0.81	7.6 x
490	Bachem Holding	BANB-CH	95.9	7,194	6,838	24%	-35%	24%	657	733	9.3 x	193	214	32.0 x	19.56	4.9 x
491	Tecan Group	TECN-CH	415.0	5,305	5,242	12%	-33%	2%	1,223	1,196	4.4 x	247	243	21.5 x	117.16	3.5 x
492	Shijiazhuang Yiling	002603-CN	2.8	4,663	4,764	72%	-11%	-14%	1,811	1,465	3.3 x	452	321	14.8 x	0.98	2.8 x
493	Ypsomed Holding	YPSN-CH	400.2	5,463	5,637	7%	-50%	11%	562	652	8.6 x	163	220	25.7 x	46.73	8.6 x
494	Dong-E-E-Jiao Co.	000423-CN	8.5	5,482	4,316	3%	-28%	22%	654	763	5.7 x	196	222	19.4 x	2.30	3.7 x
495	Siegfried Holding	SFZN-CH	1,022.5	4,615	4,942	6%	-33%	5%	1,445	1,447	3.4 x	304	320	15.4 x	198.34	5.2 x
496	Sotera Health	SHC-US	12.0	3,397	5,422	62%	-11%	-29%	1,049	1,101	4.9 x	528	555	9.8 x	1.57	7.7 x
497	Hubei Jumpcan	600566-CN	5.2	4,774	3,493	5%	-36%	18%	1,309	1,335	2.6 x	397	448	7.8 x	1.88	2.7 x
498	Gland Pharma	543245-IN	22.1	3,637	3,422	20%	-53%	-4%	438	679	5.0 x	126	163	20.9 x	6.05	3.7 x

499	SK bioscience	302440-KR	45.5	3,498	2,525	50%	-7%	-19%	264	173	14.6 x	16	(15)	-	16.47	2.8 x
500	WuXi AppTec	2359-HK	4.7	1,835	13,009	179%	-4%	-53%	5,603	5,624	2.3 x	1,949	2,010	6.5 x	2.39	2.0 x
501	Chongqing Taiji	600129-CN	4.6	2,562	2,969	109%	-10%	-30%	2,162	2,450	1.2 x	229	249	11.9 x	0.90	5.1 x
502	biote Corp.	BTMD-US	5.8	207	217	42%	-37%	17%	185	202	1.1 x	55	61	3.6 x	(0.86)	-6.8 x

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