

Virtual Clinical-Trial Avatars Market to Grow at 28.4% CAGR, Hitting \$4.17 Billion Revenue by 2029

The Business Research Company's Virtual Clinical-Trial Avatars Market to Grow at 28.4% CAGR, Hitting \$4.17 Billion Revenue by 2029

LONDON, GREATER LONDON, UNITED KINGDOM, October 15, 2025

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What Is The Projected Market Size & Growth Rate Of The Virtual Clinical-Trial Participant Avatars Market?

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Expected to grow to \$4.18 billion in 2029 at a compound annual growth rate (CAGR) of 28.4%”

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The market for virtual participant avatars in clinical trials has seen significant growth in the past few years. This industry is projected to expand from \$1.19 billion in 2024 to \$1.54 billion in 2025, boasting a compound annual growth rate (CAGR) of 28.8%. Factors leading to such growth during the historic period include the increasing embrace of decentralized clinical trials, growing requirement for diverse patient representation in trials, expansion of wearable health monitoring device usage,

regulatory backing for digital trial solutions, and the urgency to shorten clinical trial durations.

The market size for avatars used in virtual clinical trials is predicted to witness a massive surge in growth in the upcoming years, reaching a value of \$4.18 billion by 2029, with a compound annual growth rate (CAGR) of 28.4%. This significant growth during the forecast period can be credited to the progress in AI-driven patient simulation, the convergence of virtual avatars with electronic data capture systems, the growing emphasis on personalized medicine, increased investments in digital twin technologies, and the broadening of virtual trials for rare diseases and chronic ailments. Key trends anticipated during this period include applying AI-powered digital twins for patient simulation, the incorporation of real-life data and electronic health records, the

use of machine learning to predict trial outcomes, the creation of immersive VR/AR platforms for enhancing patient engagement, and the employment of blockchain for the secure management of patient data.

Download a free sample of the virtual clinical-trial participant avatars market report:

<https://www.thebusinessresearchcompany.com/sample.aspx?id=28351&type=smp>

What Is The Crucial Factor Driving The Global Virtual Clinical-Trial Participant Avatars Market?

The expansion of the virtual clinical-trial participant avatars market is anticipated to be driven by the increasing number of clinical trials. Clinical trials, which are structured studies designed to assess the safety and effectiveness of medical interventions in human subjects, are on the rise due to amplified pharmaceutical investment in pharmaceutical development. This is due to the quest for novel treatments for complicated illnesses and personalized medicine methods. Avatars of clinical-trial participants generate AI-enabled digital patient profiles that mimic disease progression, treatment reaction, and safety results. These assist in quicker recruitment, intelligent trial design, earlier detection of effective therapies, and minimized expenses and risks. For instance, as reported by the Association of the British Pharmaceutical Industry, a trade organization based in the UK in November 2023, the total number of industry-funded clinical trials initiated in the UK annually rose modestly by 4.3%, escalating from 394 trials in 2021 to 411 trials in 2022. Hence, the escalation in the number of clinical trials is spurring the growth of the virtual clinical-trial participant avatars market.

Who Are The Emerging Players In The Virtual Clinical-Trial Participant Avatars Market?

Major players in the Virtual Clinical-Trial Participant Avatars Global Market Report 2025 include:

- NVIDIA Corporation
- Dassault Systèmes SE
- Signant Health Holding Corp.
- Owkin Inc
- Medable Inc.
- Insilico Medicine Inc.
- Science 37 Inc.
- THREAD Inc.
- Lindus Health Limited
- Obvio Health

What Are The Main Trends, Positively Impacting The Growth Of Virtual Clinical-Trial Participant Avatars Market?

Major corporations in the virtual clinical trial participant avatars sector are turning their attention towards the development of cutting-edge solutions, such as digital twin-based clinical trial participants. These innovative solutions aim to boost the effectiveness of trials and enhance the precision in predicting drug development outcomes. By simulating real patients, digital twin-based clinical trial participants replicate their physiological and behavioral reactions, allowing researchers to predict the results of treatments and fine-tune trial designs, thereby decreasing

the need for extensive physical testing. An illustration of this innovation is the update launched by the US-based AI clinical trial technology firm, Unlearn.ai, Inc., in July 2023. They unveiled an updated digital twin generator (DTG) for Alzheimer's disease, 3.1 version, which significantly improves the handling of missing baseline data by incorporating a neural network imputation model within a Neural Boltzmann Machine structure. This led to less sensitivity towards missing data and an overall superior performance. The DTG draws upon various patient data sets to generate individualized digital twins that can accurately forecast clinical and biomarker trajectories, thereby aiding clinical trials with a more exact and robust modeling of Alzheimer's progression.

What Segments Are Covered In The Virtual Clinical-Trial Participant Avatars Market Report?

The virtual clinical-trial participant avatars market covered in this report is segmented as

- 1) By Avatar Type: Artificial Intelligence-Generated Avatars, Digitally Modeled Human Avatars, Hybrid Avatars
- 2) By Deployment Mode: Cloud-Based, On-Premises
- 3) By Application: Drug Development, Patient Recruitment, Data Simulation, Remote Monitoring, Other Applications
- 4) By End-User: Pharmaceutical Companies, Contract Research Organizations, Academic And Research Institutes, Other End-Users

Subsegments:

- 1) By Artificial Intelligence-Generated Avatars: Machine Learning-Based Avatars, Deep Learning-Based Avatars, Natural Language Processing (NLP)-Enabled Avatars, Generative Adversarial Network (GAN)-Based Avatars
- 2) By Digitally Modeled Human Avatars: Three-Dimensional (3D) Scanned Human Avatars, Motion Capture Modeled Avatars, Photorealistic Rendered Avatars, Anatomically Accurate Human Avatars
- 3) By Hybrid Avatars: artificial intelligence (AI)-Enhanced Digitally Modeled Avatars, Mixed Reality (MR) Enabled Avatars, Cognitive Simulation Avatars, Sensor-Integrated Virtual Avatars

View the full virtual clinical-trial participant avatars market report:

<https://www.thebusinessresearchcompany.com/report/virtual-clinical-trial-participant-avatars-global-market-report>

Which Region Is Projected To Hold The Largest Market Share In The Global Virtual Clinical-Trial Participant Avatars Market?

In the year 2024, the Virtual Clinical-Trial Participant Avatars Global Market Report indicated North America as the dominant region. The projected growth outlook suggests that Asia-Pacific will experience the quickest expansion during the forecast period. The report incorporates a thorough examination of regions including Asia-Pacific, Western Europe, Eastern Europe, North America, South America, the Middle East, and Africa.

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