Precision Medicine - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2026 - 2031)

Market Report | 2026-01-16 | 120 pages | Mordor Intelligence

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Report description:

Precision Medicine Market Analysis

Precision Medicine market size in 2026 is estimated at USD 125.71 billion, growing from 2025 value of USD 110.68 billion with 2031 projections showing USD 237.28 billion, growing at 13.58% CAGR over 2026-2031.

Falling sequencing costs, AI-driven analytics, and friendlier regulatory pathways are aligning to shift healthcare away from one-size-fits-all therapy toward data-rich, patient-specific interventions. Genomic programs in the United States, China, and India are feeding large multi-omics datasets into clinical decision support tools, while cloud-based bioinformatics platforms shorten the time from variant discovery to treatment choice. Progress in pan-cancer companion diagnostics is expanding label-linked drug markets, and new reimbursement codes for pharmacogenomics are improving test affordability. At the same time, stricter oversight of laboratory-developed tests in major markets is raising compliance costs but promises higher test quality and patient safety.

Global Precision Medicine Market Trends and Insights

National Genomic Initiatives Accelerating R&D Funding

Government genomics programs are underwriting infrastructure that moves sequencing from research labs to routine care. The NIH funded USD 27 million for learning health systems that embed genomics into six U.S. hospital networks. China's Human

Genome Project 2 plans to sequence 80 million genomes, creating the world's largest reference panel for variant interpretation. India released 10,000 personal genomes in 2025, filling South Asian gaps in global databases. Sweden's PROMISE program links national registries with multi-omics data to support real-time clinical decision making. Collectively, these projects create interoperable data ecosystems that lift diagnostic accuracy and spur new drug targets.

Oncology Biomarker Pipeline Expansion Fuelling Companion Diagnostics

More than 15 FDA clearances since 2024 have tied targeted drugs to specific biomarker tests, widening the addressable patient pool for precision oncology. Illumina's TruSight Oncology Comprehensive became the first FDA-cleared pan-cancer in-vitro diagnostic that reads 500 plus biomarkers in one run. FoundationOne CDx now detects NTRK fusions across solid tumors, linking patients to larotrectinib therapy. The therascreen KRAS RGQ PCR Kit guides sotorasib plus panitumumab for KRAS G12C-mutated colorectal cancer. Guardant Health's Shield blood test adds a non-invasive option that detects colorectal cancer with 83% sensitivity in average-risk adults. Frequent diagnostic approvals give drug developers strong incentives to co-develop assays, reinforcing a virtuous cycle for biomarker-guided therapy.

Fragmented Cross-Border Multi-Omics Data Regulations

GDPR in Europe treats genomic data as highly sensitive, forcing most omics repositories to operate outside the bloc or navigate complex consent rules. The European Health Data Space introduces extra documentation for any non-EU entity seeking access, lengthening project timelines. In the United States HIPAA governs clinical data, yet many research databases fall outside its scope, adding another compliance layer for cross-Atlantic studies. Privacy-preserving technologies such as federated learning help but cannot fully align legal interpretations across borders. Consequently, global consortia must negotiate region-specific contracts, raising transaction costs and delaying large-scale studies.

Other drivers and restraints analyzed in the detailed report include:

Integration of AI and Machine Learning in GenomicsStrategic Pharma-Big-Tech Alliances Speeding Precision Drug DiscoveryHigh Cost and Limited Accessibility of Genetic Testing

For complete list of drivers and restraints, kindly check the Table Of Contents.

Segment Analysis

Next-generation sequencing captured 33.78% of the precision medicine market share in 2025, underpinning most companion diagnostics and pharmacogenomic workflows. FDA clearance of Illumina's TruSight Oncology Comprehensive assay, which profiles more than 500 biomarkers in one run, cements NGS as the gold standard for broad genomic profiling. Sequencers now feed cloud bioinformatics pipelines that flag actionable variants within hours, making genomic reports manageable during routine clinician visits. Parallel advances in spatial proteomics and high-throughput plasma protein analysis extend the reach of omics beyond DNA, while metabolomics and epigenomics add regulatory context. The integration of these layers enables the creation of patient-specific molecular signatures that inform both drug selection and dosing.

A second technology wave centers on artificial intelligence and machine learning, the fastest-growing segment at a 17.62% CAGR. AI tools scale variant annotation, detect mutational signatures linked to tumor aggressiveness, and optimize algorithmic trial enrollment. Proteomics firm SomaLogic measures 10,000 proteins from a microliter sample, producing high-density data that AI models translate into early disease risk scores. As datasets expand, model performance improves, generating a self-reinforcing cycle that attracts further R&D funds. The enduring centrality of sequencing, combined with the rapid adoption of AI analytics, suggests a hybrid ecosystem where NGS provides raw data while intelligent software unlocks its clinical value.

The Precision Medicine Market Report is Segmented by Technology (Big Data Analytics, Bioinformatics, and More), Application (Oncology, Neurology, Immunology, Cardiology, Infectious Diseases, and More), End User (Pharmaceutical & Biotechnology Companies, and More), and Geography (North America, Europe, Asia-Pacific, Middle East & Africa, South America). The Market Forecasts are Provided in Terms of Value (USD).

Geography Analysis

North America led the precision medicine market with a 47.85% revenue share in 2025, underpinned by federal genomics funding, payer coverage for pharmacogenomics, and an accommodating regulatory stance. The FDA's July 2024 framework for laboratory-developed tests introduces USD 1.29 billion in annual compliance spend, yet stakeholders anticipate higher assay quality that will reinforce patient and clinician confidence fda.gov. Canada supports similar progress through Genomics for Precision Health initiatives, while Mexico is channeling INMEGEN resources into rare-disease sequencing. Collectively, the region hosts most top-ten sequencing vendors and a high concentration of AI health startups, ensuring ongoing leadership in technology and clinical adoption.

Europe ranks second by revenue yet faces slower cross-border data exchange due to GDPR. Germany's Digital Health Act lifts restrictions on using anonymized claims data for research, which could attract multinational trials to the country. Sweden's PROMISE links national cancer registry data with whole-genome sequencing and electronic health records, illustrating how coordinated data strategy can work inside existing privacy law. The United Kingdom, France, Italy, and Spain are each expanding biobank capacity and revising reimbursement schedules for pharmacogenomic tests, narrowing the adoption gap with North America.

Asia-Pacific is the fastest-growing region with a 14.12% CAGR, propelled by national genome initiatives and rising healthcare spend. China's Human Genome Project 2 and its AI-centered precision health roadmap receive strong central funding and provincial rollouts. India's Genome India Project corrects South-Asian under-representation and boosts discovery of region-specific drug targets. Japan has committed to analyze 100,000 cancer genomes under a national program to guide targeted therapy development. Australia and South Korea are combining government grants with venture investment to build multi-omics hubs, and Singapore is scaling AI genomics in public hospitals. Southeast Asian and Middle East countries are laying regulatory and reimbursement groundwork that will support catch-up growth during the forecast horizon.

List of Companies Covered in this Report:

Roche Thermo Fisher Scientific Illumina QIAGEN AstraZeneca Novartis Pfizer Bristol-Myers Squibb Merck Biogen Guardant Health Medtronic Foundation Medicine Inc. Adaptive Biotechnologies Corp. Tempus Labs Inc. 23andMe Holding Co. LabCorp Holdings Inc. Agilent Technologies Siemens Healthineers Myriad Genetics

Additional Benefits:

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