

# **Precision Genomic Testing Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented By Technology (Next-Generation Sequencing, Polymerase Chain Reaction, Microarray Technology, Sanger Sequencing, CRISPR/Cas Systems, Others), By Product & Services (Consumables (Kits & Reagents), Equipment, Services), By Application (Oncology, Cardiovascular Diseases, Neurological Disorders, Reproductive Health, Rare Diseases, Others), By End-Use (Hospitals and Clinics, Diagnostic Laboratories, Research & Academic Institutes, Others), By Region and Competition, 2020-2030F**

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## **Abstracts**

The Global Precision Genomic Testing Market was valued at USD 15.51 billion in 2024 and is projected to reach USD 20.98 billion by 2030, growing at a compound annual growth rate (CAGR) of 5.12% during the forecast period. The market is expanding rapidly due to advancements in genomic sequencing technologies, the increasing adoption of personalized medicine, and the rising prevalence of genetic disorders and cancers. Precision genomic testing involves analyzing an individual's DNA to assess disease predisposition, inform treatment decisions, and customize medical interventions based on genetic profiles. As healthcare systems globally shift toward precision medicine, genomic testing is becoming a fundamental component of modern diagnostics and therapeutics.

Next-generation sequencing (NGS) has played a key role in reducing the costs and enhancing the efficiency of genomic testing, enabling the rapid sequencing of entire genomes, exomes, or targeted gene panels for comprehensive genetic analysis. This has made genomic testing more accessible for clinical applications, such as cancer diagnostics, hereditary disease screening, and pharmacogenomics. Additionally, the development of third-generation sequencing (TGS) technologies, like Oxford Nanopore and PacBio's SMRT sequencing, has further improved the accuracy and efficiency of DNA analysis.

## Key Market Drivers

### Increasing Prevalence of Genetic Disorders and Cancer

The global precision genomic testing market is experiencing significant growth, driven by the increasing prevalence of genetic disorders and cancer worldwide. Precision genomic testing supports early detection, accurate diagnosis, and personalized treatment by analyzing an individual's genetic makeup. As demand for targeted therapies and precision medicine rises, the genomic testing market continues to expand, offering promising advancements in healthcare.

According to the CDC, when one parent carries an autosomal dominant disease, each child has a 50% chance of inheriting the associated genetic mutation. The rising prevalence of genetic disorders such as cystic fibrosis, sickle cell anemia, and Huntington's disease, largely due to greater awareness and improved diagnostic capabilities, is further driving market demand. Many inherited diseases require precise genetic analysis for proper diagnosis and management, making genomic testing a critical tool in modern medicine. Moreover, the growing use of whole genome sequencing and NGS technologies has enhanced the ability to identify genetic mutations linked to various hereditary conditions.

With approximately 10,000 distinct types of monogenic diseases—resulting from mutations in a single gene—that affect about 10 in every 1,000 people, the global prevalence of these diseases is estimated at 70 to 80 million individuals. Furthermore, cancer remains one of the leading causes of death worldwide, with millions of new cases diagnosed annually. Precision genomic testing plays a vital role in oncology by identifying genetic mutations that contribute to tumor formation.

## Key Market Challenges

## High Costs and Limited Accessibility

One of the primary challenges in the precision genomic testing market is the high cost associated with genomic sequencing and analysis. Advanced tests such as whole genome sequencing require sophisticated technologies, specialized expertise, and robust bioinformatics infrastructure, contributing to their high cost. Many healthcare systems, particularly in developing regions, face difficulties in integrating these services due to limited funding and the absence of reimbursement policies. Consequently, access to precision genomic testing remains restricted, limiting its broader adoption among patients who could benefit from early diagnosis and personalized treatment.

## Key Market Players

Danaher Corporation

Merck KGaA

Revvity, Inc.

Maravai LifeSciences

GenScript Biotech

QIAGEN N.V.

PacBio Biosciences Inc.

Oxford Nanopore Technologies plc.

Illumina, Inc.

10x Genomics, Inc.

## Report Scope

This report segments the Global Precision Genomic Testing Market as follows, detailing the industry trends:

Market by Technology:

Next-Generation Sequencing

Polymerase Chain Reaction

Microarray Technology

Sanger Sequencing

CRISPR/Cas Systems

Others

Market by Product & Service:

Consumables

Equipment

Services

Market by Application:

Oncology

Cardiovascular Diseases

Neurological Disorders

Reproductive Health

Rare Diseases

Others

Market by End Use:

Hospitals and Clinics

Diagnostic Laboratories

Research & Academic Institutes

Others

Market by Region:

North America (United States, Canada, Mexico)

Europe (France, United Kingdom, Italy, Germany, Spain)

Asia Pacific (China, India, Japan, Australia, South Korea)

South America (Brazil, Argentina, Colombia)

Middle East & Africa (South Africa, Saudi Arabia, UAE)

Competitive Landscape

Company Profiles: A detailed analysis of the major players in the Global Precision Genomic Testing Market.

Available Customizations:

TechSci Research offers customization options for the Global Precision Genomic Testing Market report, tailored to meet a company's specific needs.

Company Information

Detailed analysis and profiling of additional market players (up to five).

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