

# Precision Medicine Software Market - A Global and Regional Analysis: Focus on Product Type, Application, End User, and Region - Analysis and Forecast, 2024-2033

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## Abstracts

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### Global Precision Medicine Software Market Industry Overview

The global precision medicine software market was valued at \$1,824.9 million in 2023 and is expected to reach \$5,696.3 million by 2033, growing at a CAGR of 12.13% between 2024 and 2033. Precision medicine software refers to specialized computer programs or applications designed to support and enhance the practice of precision medicine in healthcare. Precision medicine, also known as personalized medicine, involves tailoring medical treatment and healthcare decisions to the individual characteristics of each patient. This approach considers factors such as genetics, lifestyle, environment, and specific molecular or cellular characteristics.

### Market Introduction

Precision medicine software is a critical component of the evolving landscape of healthcare, aiming to move away from a one-size-fits-all approach to a more tailored and effective model of medical care. The integration of advanced technologies, such as artificial intelligence and machine learning, further enhances the capabilities of precision medicine software in analyzing complex datasets and deriving meaningful insights for personalized healthcare strategies.

The precision medicine software market has witnessed substantial growth in recent

years, driven by the convergence of healthcare and cutting-edge technologies. Precision medicine, characterized by its focus on individual patient variability in genetics, environment, and lifestyle, has spurred the development and adoption of specialized software solutions. These offerings span genomics analysis, clinical decision support, data integration, patient engagement, and research support. Advancements in genomic technologies, coupled with a growing understanding of genetic contributions to diseases, have propelled the market forward.

## Industrial Impact

The industrial impact on the precision medicine software market has been profound, with various sectors contributing to the growth and advancement of this specialized field. Industries such as biotechnology, pharmaceuticals, and information technology have played pivotal roles in driving innovation and shaping the landscape of precision medicine software. The biotechnology industry has been instrumental in the development of advanced genomic technologies, thereby making it feasible to analyze and interpret individual genetic data on a larger scale.

## Market Segmentation:

### Segmentation 1: by Delivery Mode

On-Premises Delivery Mode

Cloud-Based Delivery Mode

### On-Premises Segment to Dominate the Precision Medicine Software Market (by Delivery Mode)

Based on delivery mode, the global precision medicine software market was led by the on-premises segment, which held a 65.38% share in 2023 primarily due to several key factors, such as heightened concerns regarding data security in the healthcare sector, which have driven organizations to opt for on-premises solutions, enabling them to maintain full control over sensitive patient information and ensure compliance with stringent regulatory standards such as HIPAA and GDPR. Moreover, the ability to customize software configurations and seamlessly integrate with existing legacy systems has made on-premises an attractive option for healthcare institutions with specific workflow requirements.

## Segmentation 2: by Application

Oncology

Cardiovascular

Rare Diseases

Others

### Oncology Segment to Dominate the Precision Medicine Software Market (by Application)

Based on application, the global precision medicine software market was led by the oncology segment, which held a 47.60% share in 2023, primarily due to the fact that oncology represents one of the most prominent areas of application for precision medicine, given the complex and diverse nature of cancer and the need for tailored treatment approaches. Precision medicine software offers advanced analytics and predictive modeling capabilities that are particularly well-suited to oncology, enabling healthcare providers to analyze genomic data, identify molecular biomarkers, and personalize treatment strategies based on individual patient characteristics.

## Segmentation 3: by End User

Healthcare Providers

Research Centers and Government Institutes

Pharmaceutical and Biotechnology Companies

Other End Users

### Healthcare Provider Segment to Dominate the Precision Medicine Software Market (by End User)

Based on end users, the global precision medicine software market was led by the

healthcare providers segment, which held a 58.20% share in 2023, primarily because healthcare providers play a central role in the adoption and utilization of precision medicine software, as they are responsible for delivering personalized care to patients. Precision medicine software equips healthcare providers with advanced tools and analytics capabilities to analyze patient data, including genetic information, and tailor treatment plans accordingly. Additionally, healthcare providers are increasingly recognizing the potential of precision medicine to improve clinical outcomes, enhance patient satisfaction, and optimize resource utilization.

#### Segmentation 4: by Region

North America

U.S.

Canada

Europe

Germany

U.K.

France

Italy

Spain

Rest-of-Europe

Asia-Pacific

Japan

India

China

South Korea

Australia

Rest-of-Asia-Pacific

Rest-of-the-World

## Recent Developments in the Precision Medicine Software Market

In February 2024, Veracyte, Inc., a prominent cancer diagnostics company, concluded its acquisition of C2i Genomics. With this acquisition, Veracyte enhances its novel diagnostics platform by incorporating whole-genome minimal residual disease (MRD) capabilities. This expansion would broaden the company's capacity to support patients throughout the entire cancer care continuum.

In May 2023, F. Hoffmann-La Roche Ltd unveiled navify sample tracking, a cloud-based digital solution designed to assist laboratories in addressing quality challenges during the journey of diagnostic test samples.

In November 2023, Koninklijke Philips N.V. expanded its enterprise imaging portfolio and AI-enabled solutions. Philips HealthSuite Imaging, a next-generation cloud-based PACS, facilitates faster adoption of new capabilities for radiologists and clinicians. It aims to improve operational efficiency and enhance patient care. HealthSuite Imaging on Amazon Web Services (AWS) has introduced features such as high-speed remote access for diagnostic reading, integrated reporting, and AI-enabled workflow orchestration. All these capabilities are securely delivered through the cloud, aiming to ease the burden of IT management.

In November 2023, Fabric Genomics, a leading provider of AI-powered clinical next-generation sequencing (NGS) interpretation and reporting, collaborated with DNAnexus, Inc., a cloud-based data management pioneer. This collaboration would empower hospitals, clinical laboratories, and academic centers by enabling rapid access and analysis of large-scale clinical whole-genome data. The goal is to bring essential clinical insights to patients efficiently.

## Demand - Drivers, Challenges, and Opportunities

### Market Demand Drivers:

**Utilizing Artificial Intelligence and Precision Medicine Together:** The synergy between artificial intelligence (AI) and precision medicine is expected to be a powerful catalyst for the precision medicine software market. The integration of AI technologies would enhance the capabilities of precision medicine software by enabling advanced data analysis, rapid genomic interpretation, and personalized treatment recommendations.

### Market Challenges:

**Data Safety and Privacy Concerns:** In the precision medicine software market, data safety and privacy concerns can pose significant restraints. Precision medicine involves collecting and analyzing sensitive personal information, such as genomic data, clinical records, and lifestyle details, thereby ensuring the security of this data, which is crucial. Patients and healthcare providers may be hesitant to embrace precision medicine solutions if they are uncertain about the robustness of data protection measures.

### Market Opportunities:

**Leveraging Electronic Health Records in the Market:** Leveraging electronic health records (EHRs) in the precision medicine software market is a key strategy for enhancing personalized healthcare and improving patient outcomes. Precision medicine aims to tailor medical treatments and interventions to the individual characteristics of each patient, considering their genetic makeup, lifestyle, and environmental factors.

### How Can This Report Add Value to an Organization?

**Product/Innovation Strategy:** The global precision medicine software market has been segmented based on various categories, such as product type, application, end user, and region.

**Growth/Marketing Strategy:** Product launches, upgradations, and synergistic activities together accounted for the maximum number of key developments, at nearly 88.24% of the total developments in the precision medicine software market between January 2021 and December 2023.

**Competitive Strategy:** The global precision medicine software market is a highly fragmented market, with many smaller and private companies constantly entering the market. Key players in the precision medicine software market analyzed and profiled in the study involve established players that offer various kinds of products.

## Methodology

### Key Considerations and Assumptions in Market Engineering and Validation

The base year considered for the calculation of the market size is 2022. A historical year analysis has been done for the period FY2019-FY2021. The market size has been estimated for FY2023 and projected for the period FY2024-FY2033.

The scope of this report has been carefully derived based on interactions with experts in different companies across the world. This report provides a market study of precision medicine software.

The market contribution of precision medicine software anticipated to be launched in the future has been calculated based on the historical analysis of the solutions.

Revenues of the companies have been referenced from their annual reports for FY2022 and FY2023. For private companies, revenues have been estimated based on factors such as inputs obtained from primary research, funding history, market collaborations, and operational history.

The market has been mapped based on the available precision medicine software. All the key companies with significant offerings in this field have been considered and profiled in this report.

## Primary Research:

The primary sources involve industry experts in precision medicine, including the market players offering products and services. Resources such as CEOs, vice presidents, marketing directors, and technology and innovation directors have been interviewed to obtain and verify both qualitative and quantitative aspects of this research study.

The key data points taken from the primary sources include:

- validation and triangulation of all the numbers and graphs
- validation of the report's segmentation and key qualitative findings
- understanding the competitive landscape and business model
- current and proposed production values of a product by market players
- validation of the numbers of the different segments of the market in focus
- percentage split of individual markets for regional analysis

## Secondary Research

The key data points taken from the secondary sources include:

- segmentations and percentage shares
- data for market value
- key industry trends of the top players of the market
- qualitative insights into various aspects of the market, key trends, and emerging areas of innovation
- quantitative data for mathematical and statistical calculations

## Key Market Players and Competition Synopsis

The companies profiled have been selected based on inputs gathered from primary experts and analyzing company coverage, product portfolio, and market penetration.

Some prominent names established in this market are:



2bPrecise

F. Hoffmann-La Roche Ltd

Veracyte, Inc.

Roper Technologies, Inc.

Fabric Genomics, Inc.

Flatiron Health

Genedata AG

Koninklijke Philips N.V.

LifeOmic Holdings LLC

NantHealth, Inc.

PierianDx

QIAGEN N.V.

SOPHiA GENETICS SA

Syapse, Inc.

Tempus Labs, Inc.

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