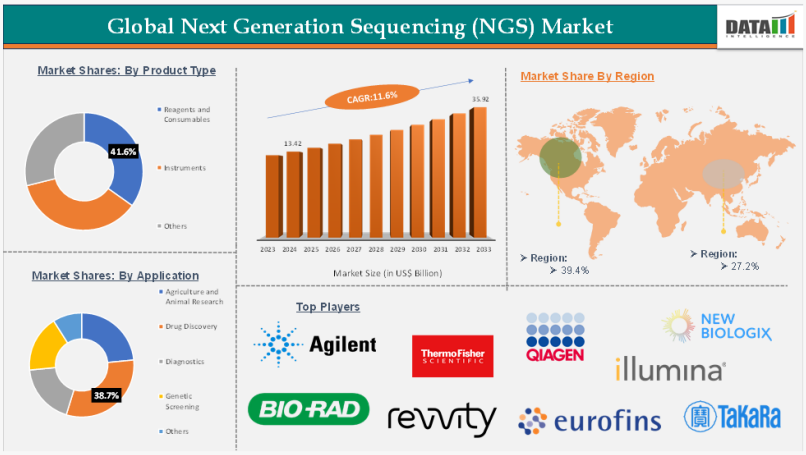
Next-Gen Sequencing Market to Reach $35.9B by 2033, Driven by Diagnostics, Innovation & Global Demand

DataM Intelligence projects 11.6% CAGR for NGS market as clinical adoption, tech upgrades, and multi-omics integration fuel rapid expansion.



Next Generation Sequencing (NGS) Market 2025

LOS ANGELES, CA, UNITED STATES, July 28, 2025 /EINPresswire.com/ -- The Next Generation Sequencing (NGS) market, valued at approximately US$ 13.42 billion in 2024, is projected to grow at a CAGR of 11.6%, reaching US$ 35.92 billion by 2033, driven by its expanding use in clinical diagnostics, particularly in oncology and rare disease detection. Rising prevalence of chronic and genetic disorders, technological advancements like nanopore and single-cell sequencing, and declining sequencing costs are fueling adoption across clinical and research sectors.

> NGS is redefining diagnostics and drug discovery through its speed, precision, and growing clinical relevance."
>
> *DataM Intelligence*

Regionally, North America leads due to strong infrastructure and investments, followed by Europe, while Asia-Pacific is the fastest-growing region. Key players include Illumina, Thermo Fisher, and Qiagen. Recent strategic developments include GeneDx's acquisition of Fabric Genomics and Illumina's planned merger with SomaLogic, alongside innovative product launches from Tempus AI, Roche, and Oxford Nanopore Technologies, highlighting a growing focus on multi-omics and accessible diagnostics.

Key Market Drivers:

- Growing Applications in Clinical Diagnostics

NGS is rapidly becoming a cornerstone in clinical diagnostics, especially in oncology, infectious

disease detection, and rare genetic disorder identification. Its ability to deliver high-throughput and accurate genetic data makes it indispensable in personalized medicine.

- Rising Prevalence of Chronic and Genetic Diseases

The increasing global burden of cancer, inherited disorders, and infectious diseases is pushing demand for rapid and cost-effective diagnostic tools. NGS enables early detection and deeper insights into disease mechanisms, supporting better treatment outcomes.

- Technological Advancements in Sequencing Platforms

Innovations such as nanopore sequencing, single-cell sequencing, and long-read technologies are improving speed, accuracy, and affordability. These advancements are accelerating adoption across research labs, clinical settings, and biotech companies.

- Expanding Research in Genomics and Precision Medicine

Government initiatives and academic partnerships are fueling large-scale genomic projects, driving demand for sequencing technologies. NGS plays a central role in understanding population-specific genetic variations and tailoring treatment strategies accordingly.

- Increased Accessibility and Reduced Costs

Over the past decade, the cost of sequencing a human genome has plummeted, making NGS more accessible to smaller labs and clinics. This democratization of technology is widening the market's footprint globally.

Market Geographical Share

The Next Generation Sequencing (NGS) market demonstrates strong regional growth patterns, with North America maintaining its dominance due to widespread adoption of precision medicine, robust healthcare infrastructure, and significant government and private investment in genomics research. The United States, in particular, benefits from early access to advanced NGS technologies, strong R&D funding, and favorable regulatory pathways.

Europe holds the second-largest share, supported by increasing genetic research initiatives, collaborations among academic institutions, and a growing focus on rare disease diagnostics. Countries like Germany, the UK, and France are witnessing steady demand for sequencing in both clinical and research settings.

Asia-Pacific is emerging as the fastest-growing region, driven by rising awareness of genomics, expansion of molecular diagnostic services, and governmental initiatives in countries such as China, India, Japan, and South Korea. The region also benefits from a growing population, increasing burden of chronic diseases, and expanding biotech ecosystems.

Other regions, including Latin America and the Middle East & Africa, are gradually adopting NGS technologies, primarily in academic research and oncology diagnostics, although growth is currently constrained by limited access to infrastructure and high costs.

Market Key Players:
Key players are Thermo Fisher Scientific Inc., Agilent Technologies, Inc., Bio-Rad Laboratories, Inc., Qiagen, Eurofins Scientific, Revvity (PerkinElmer Inc.), Takara Bio Inc., Illumina Inc., Alithea Genomics SA, and NewBiologix SA.

M&A & Asset Acquisitions:
• GeneDx secured a deal to acquire Fabric Genomics—an AI powered genomic interpretation firm for up to $51 million, including $33 million upfront and $18 million in milestones. This enhances GeneDx's platform capability and supports scalable genomic interpretation for clinical use, especially in NICUs.
• Illumina is positioned to acquire SomaLogic via Standard BioTools in a ~$425 million transaction. This acquisition is designed to merge SomaLogic's proteomics platform with Illumina's genomics strengths, building a broader multi omics capability for research and drug discovery.

Product Launches & Technological Innovations:
• Tempus AI unveiled its first whole genome sequencing assay, branded xH, with early access marked for research use and full clinical rollout within a year. This assay targets hematological oncology and has shown ≥ 98.9% sensitivity in detecting clinically critical variants in pilot studies.

• Roche introduced its innovative SBX (Sequencing by Expansion) technology, which uses biochemical conversion to generate long "Xpandomer" surrogate molecules, enabling high accuracy single molecule nanopore sequencing via CMOS based sensor modules.

• Oxford Nanopore Technologies has declared 2025 as the "year of the proteome", signaling a shift toward multi omics, including proteomics. In February, it also launched a veterinary diagnostics collaboration with PathoSense, aiming to consolidate infectious disease testing into a single, affordable sequencing based solution using MinION-type platforms.

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