

Positron Emission Tomography (Pet) Scanners Market Outlook 2025-2034: Market Share, and Growth Analysis By Modality (PET-CT (Positron Emission Tomography-Computed Tomography), PET-MRI (Positron Emission Tomography-Magnetic Resonance Imaging)), By Detector Type (Gadolinium Oxyorthosilicate, Lutetium Fine Silicate, Bismuth Germanium Oxide, Lutetium Oxyorthosilicate), By Application, By End User

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Abstracts

The Positron Emission Tomography (Pet) Scanners Market is valued at USD 1.8 billion in 2025 and is projected to grow at a CAGR of 5.9% to reach USD 3 billion by 2034. The global positron emission tomography (PET) scanners market is experiencing steady growth, driven by the increasing prevalence of cancer, neurological disorders, and cardiovascular diseases. PET scanners play a critical role in early disease detection, treatment planning, and monitoring therapeutic responses by providing high-resolution functional imaging. The rising adoption of hybrid imaging systems, such as PET/CT and PET/MRI, has further enhanced diagnostic accuracy and efficiency. Additionally, advancements in radiotracers and molecular imaging techniques are expanding the clinical applications of PET scanners beyond oncology to neurology, cardiology, and infectious disease management. Government initiatives and healthcare investments aimed at improving diagnostic imaging capabilities, particularly in developing regions, are also contributing to market expansion. As precision medicine and personalized treatment strategies gain traction, PET imaging continues to be an indispensable tool for clinicians and researchers. The PET scanners market witnessed significant advancements in scanner technology, artificial intelligence (AI)-driven imaging analysis,

and radiopharmaceutical development. The adoption of total-body PET scanners gained momentum, enabling faster scans with lower radiation doses, improving patient comfort and throughput. AI-powered imaging software enhanced image reconstruction, reducing scan times and improving diagnostic accuracy. Additionally, the development of novel radiotracers, such as fluorodeoxyglucose (FDG) alternatives and targeted molecular probes, expanded PET imaging's role in early-stage disease detection. The integration of PET/MRI systems in neurology advanced research in Alzheimer's and Parkinson's disease, supporting early intervention strategies. Meanwhile, healthcare providers focused on expanding PET imaging accessibility through mobile PET scanner units, particularly in underserved and rural areas. Regulatory approvals and increased reimbursement policies for PET procedures also contributed to market growth, making advanced imaging more widely available. The PET scanners market is expected to see further advancements in precision imaging, digital PET technology, and AI-assisted diagnostic solutions. The development of ultra-high sensitivity digital PET detectors will enhance resolution and reduce scan times, making PET imaging more efficient and cost-effective. The integration of AI-powered decision support systems will improve disease classification, helping radiologists make faster and more accurate diagnoses. Increasing investments in theranostics, which combine diagnostic imaging with targeted therapy, will drive demand for PET scanners in personalized medicine applications. The expansion of PET imaging for immunotherapy response assessment and infectious disease tracking will further diversify market opportunities. Additionally, the push for sustainable healthcare solutions will lead to the development of eco-friendly radiopharmaceutical production methods and energy-efficient PET scanner models. With ongoing technological innovations and rising healthcare investments, PET imaging is poised to play an increasingly vital role in disease management and precision healthcare.

Key Insights Positron Emission Tomography (Pet) Scanners Market

Growth of Total-Body PET Scanners: The adoption of full-body PET systems is enabling faster scans with lower radiation exposure, improving diagnostic efficiency and patient throughput.

Integration of AI in PET Imaging: AI-driven imaging software is enhancing image reconstruction, improving disease detection accuracy, and reducing scan times for more efficient workflows.

Expansion of PET/MRI Hybrid Imaging: The increasing use of PET/MRI scanners in neurology and oncology is providing superior soft-tissue contrast

and functional imaging capabilities.

Advancements in Radiotracer Development: The development of novel PET tracers is improving early-stage disease detection, expanding PET applications beyond oncology to neurology, cardiology, and infectious diseases.

Increase in Mobile and Point-of-Care PET Scanners: The expansion of portable PET scanners is enhancing access to advanced imaging in remote and underserved healthcare settings.

Rising Prevalence of Cancer and Neurological Disorders: The increasing incidence of cancer, Alzheimer's, and Parkinson's disease is driving demand for PET imaging in early diagnosis and disease monitoring.

Advancements in Molecular Imaging and Precision Medicine: The growing focus on personalized treatment strategies is boosting the adoption of PET scanners in targeted therapy planning and theranostics.

Expansion of Healthcare Infrastructure and Imaging Centers: Increased investments in diagnostic imaging facilities, particularly in emerging markets, are making PET imaging more accessible to a broader patient population.

Improved Reimbursement Policies and Regulatory Approvals: Favorable reimbursement for PET scans and regulatory support for new radiotracers are enhancing market adoption and affordability.

High Cost of PET Scanners and Radiopharmaceuticals: The significant capital investment required for PET imaging systems and the cost of radiotracer production pose challenges for smaller healthcare facilities and developing regions.

Positron Emission Tomography (Pet) Scanners Market Segmentation

By Modality

PET-CT (Positron Emission Tomography-Computed Tomography)

PET-MRI (Positron Emission Tomography-Magnetic Resonance Imaging)

By Detector Type

Gadolinium Oxyorthosilicate

Lutetium Fine Silicate

Bismuth Germanium Oxide

Lutetium Oxyorthosilicate

By Application

Cardiology

Neurology

Oncology

Orthopedics

Urology

Gastroenterology

Other Applications

By End User

Hospitals

Diagnostic Centers

Other End-Users

Key Companies Analysed

Clarity Pharmaceuticals Ltd.

Hitachi Ltd.

Eli Lilly and Company

Canon Medical Systems USA Inc.

Toshiba Corporation

Siemens Healthineers

Fujifilm Holdings Corporation

Koninklijke Phillips N.V.

GE HealthCare

Perkin Elmer Inc.

CMR Naviscan Corporation

Shimadzu Corporation

Neusoft Medical Systems Co. Ltd.

Blue Earth Diagnostics Limited

Mediso Medical Imaging Systems

Cubresa Inc.

Oncovision

Radiology Oncology Systems Inc.

FMI Medical Systems Inc.

Edger Systems LLC

Mediso Ltd.

MR Solutions Group Ltd.

Modus Medical Devices Inc.

MinFound Medical Systems Co. Ltd

PETsys Electronics SA

Yangzhou Kindsway Biotech Co. Ltd.

Positron Corporation

RefleXion Medical

Positron Emission Tomography (Pet) Scanners Market Analytics

The report employs rigorous tools, including Porter's Five Forces, value chain mapping, and scenario-based modeling, to assess supply–demand dynamics. Cross-sector influences from parent, derived, and substitute markets are evaluated to identify risks and opportunities. Trade and pricing analytics provide an up-to-date view of international flows, including leading exporters, importers, and regional price trends.

Macroeconomic indicators, policy frameworks such as carbon pricing and energy security strategies, and evolving consumer behavior are considered in forecasting scenarios. Recent deal flows, partnerships, and technology innovations are incorporated to assess their impact on future market performance.

Positron Emission Tomography (Pet) Scanners Market Competitive Intelligence

The competitive landscape is mapped through OG Analysis' proprietary frameworks, profiling leading companies with details on business models, product portfolios, financial performance, and strategic initiatives. Key developments such as mergers & acquisitions, technology collaborations, investment inflows, and regional expansions are

analyzed for their competitive impact. The report also identifies emerging players and innovative startups contributing to market disruption.

Regional insights highlight the most promising investment destinations, regulatory landscapes, and evolving partnerships across energy and industrial corridors.

Countries Covered

North America — Positron Emission Tomography (Pet) Scanners market data and outlook to 2034

United States

Canada

Mexico

Europe — Positron Emission Tomography (Pet) Scanners market data and outlook to 2034

Germany

United Kingdom

France

Italy

Spain

BeNeLux

Russia

Sweden

Asia-Pacific — Positron Emission Tomography (Pet) Scanners market data and outlook to 2034

China

Japan

India

South Korea

Australia

Indonesia

Malaysia

Vietnam

Middle East and Africa — Positron Emission Tomography (Pet) Scanners market data and outlook to 2034

Saudi Arabia

South Africa

Iran

UAE

Egypt

South and Central America — Positron Emission Tomography (Pet) Scanners market data and outlook to 2034

Brazil

Argentina

Chile

Peru

** We can include data and analysis of additional countries on demand.*

Research Methodology

This study combines primary inputs from industry experts across the Positron Emission Tomography (Pet) Scanners value chain with secondary data from associations, government publications, trade databases, and company disclosures. Proprietary modeling techniques, including data triangulation, statistical correlation, and scenario planning, are applied to deliver reliable market sizing and forecasting.

Key Questions Addressed

What is the current and forecast market size of the Positron Emission Tomography (Pet) Scanners industry at global, regional, and country levels?

Which types, applications, and technologies present the highest growth potential?

How are supply chains adapting to geopolitical and economic shocks?

What role do policy frameworks, trade flows, and sustainability targets play in shaping demand?

Who are the leading players, and how are their strategies evolving in the face of global uncertainty?

Which regional “hotspots” and customer segments will outpace the market, and what go-to-market and partnership models best support entry and expansion?

Where are the most investable opportunities—across technology roadmaps, sustainability-linked innovation, and M&A—and what is the best segment to invest over the next 3–5 years?

Your Key Takeaways from the Positron Emission Tomography (Pet) Scanners Market Report

Global Positron Emission Tomography (Pet) Scanners market size and growth projections (CAGR), 2024-2034

Impact of Russia-Ukraine, Israel-Palestine, and Hamas conflicts on Positron Emission Tomography (Pet) Scanners trade, costs, and supply chains

Positron Emission Tomography (Pet) Scanners market size, share, and outlook across 5 regions and 27 countries, 2023-2034

Positron Emission Tomography (Pet) Scanners market size, CAGR, and market share of key products, applications, and end-user verticals, 2023-2034

Short- and long-term Positron Emission Tomography (Pet) Scanners market trends, drivers, restraints, and opportunities

Porter's Five Forces analysis, technological developments, and Positron Emission Tomography (Pet) Scanners supply chain analysis

Positron Emission Tomography (Pet) Scanners trade analysis, Positron Emission Tomography (Pet) Scanners market price analysis, and Positron Emission Tomography (Pet) Scanners supply/demand dynamics

Profiles of 5 leading companies—overview, key strategies, financials, and products

Latest Positron Emission Tomography (Pet) Scanners market news and developments

Additional Support

With the purchase of this report, you will receive

An updated PDF report and an MS Excel data workbook containing all market tables and figures for easy analysis.

7-day post-sale analyst support for clarifications and in-scope supplementary data, ensuring the deliverable aligns precisely with your requirements.

Complimentary report update to incorporate the latest available data and the impact of recent market developments.

** The updated report will be delivered within 3 working days*

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