

Positron Emission Tomography Market Size to Reach USD 4.44 Billion by 2034, Growing at 6.60% CAGR

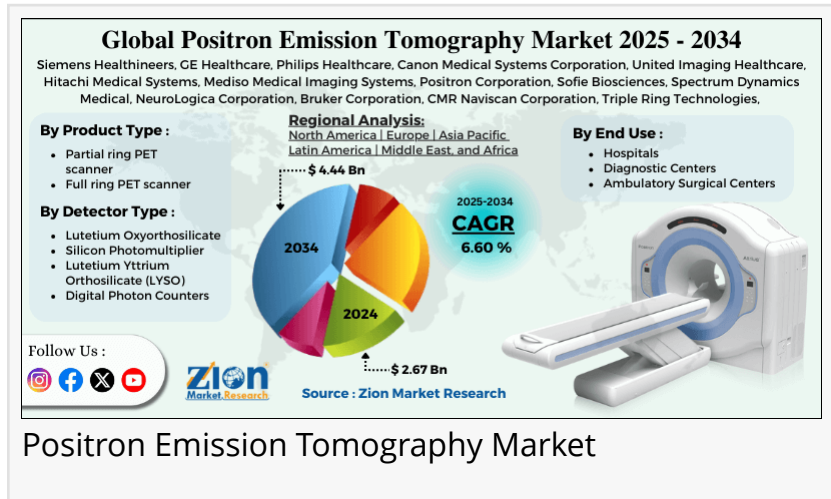
The global positron emission tomography market size was worth around USD 2.67 billion in 2024 and is predicted to grow to around USD 4.44 billion by 2034

PUNE, MAHARASHTRA, INDIA,

September 18, 2025 /

EINPresswire.com/ -- The [global positron emission tomography \(PET\) market size](#) is expanding rapidly due to

increasing demand for early disease diagnosis, rising cancer prevalence, and continuous innovation in imaging technology. Valued at approximately USD 2.67 billion in 2024, the market is projected to reach USD 4.44 billion by 2034, growing at a compound annual growth rate (CAGR) of roughly 6.60% between 2025 and 2034.



“

The global positron emission tomography market size was worth around USD 2.67 billion in 2024 and is predicted to grow to around USD 4.44 billion by 2034,(CAGR) of roughly 6.60% between 2025 and 2034.”

Deepak Rupnar

Access key findings and insights from our Report in this Free sample -

<https://www.zionmarketresearch.com/sample/positron-emission-tomography-market>

Positron emission tomography (PET) is a nuclear imaging technology that produces high-resolution, three-dimensional images of metabolic processes in the body. PET scans are widely used in oncology, cardiology, neurology, and research for disease detection, therapy monitoring, and clinical trials. Technological advances such as hybrid PET/CT and PET/MRI systems, artificial

intelligence (AI)-driven image analysis, and new radiotracers are driving the market forward.

Key Insights:

As per the analysis shared by our research analyst, the global positron emission tomography

market is estimated to grow annually at a CAGR of around 6.60% over the forecast period (2025-2034)

In terms of revenue, the global positron emission tomography market size was valued at around USD 2.67 billion in 2024 and is projected to reach USD 4.44 billion by 2034.

The positron emission tomography market is projected to grow significantly owing to expanding applications in cardiology and neurology, rising availability of radiopharmaceuticals, and increasing incidences of cardiovascular and cancer diseases.

Based on product type, the full ring PET scanner segment is expected to lead the market, while the partial ring PET scanner segment is expected to grow considerably.

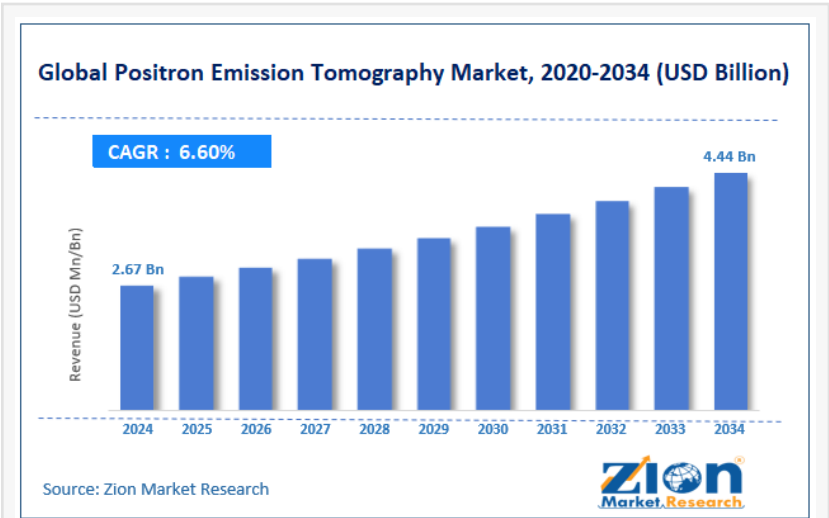
Based on detector type, the Lutetium Yttrium Orthosilicate (LYSO) segment is the dominating segment, while the Silicon Photomultiplier (SiPM) segment is projected to witness sizeable revenue over the forecast period.

Based on end use, the hospitals segment is expected to lead the market compared to the diagnostic centers segment.

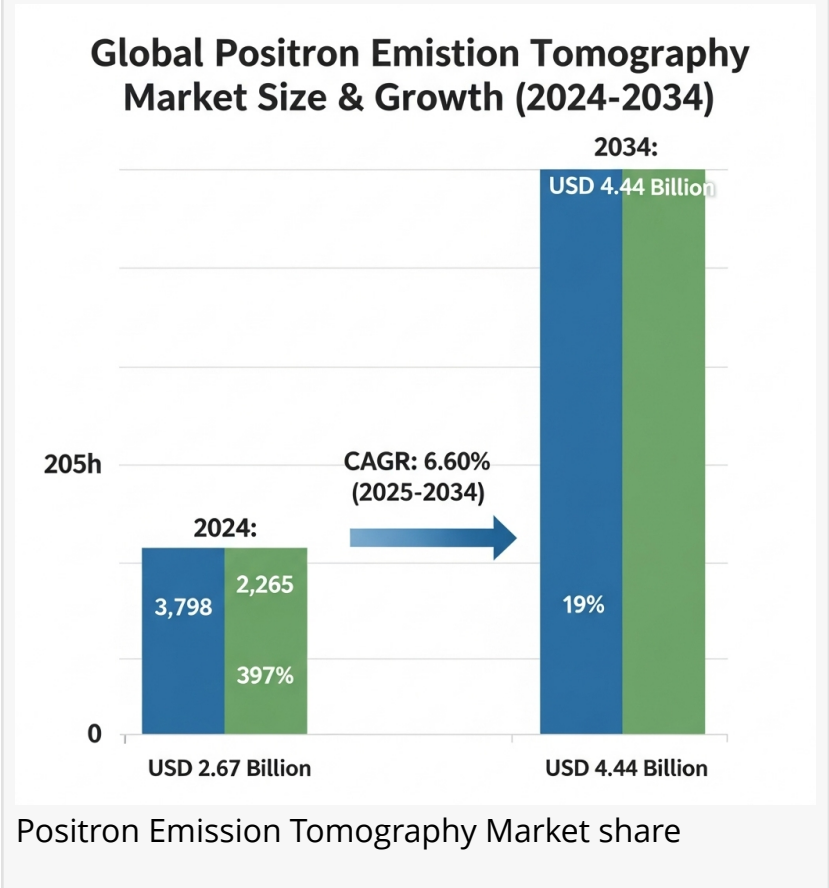
Based on region, North America is projected to dominate the global market during the estimated period, followed by Europe.

Key Market Drivers

- Rising Cancer and Neurological Disorder Incidence: PET imaging critical for tumor detection, staging, and monitoring therapy effectiveness.
- Technological Innovation: Development of hybrid imaging systems (PET/CT, PET/MRI) enhancing diagnostic accuracy.
- Growing Awareness of Early Diagnosis: Increased focus on preventive healthcare and screening programs.



Positron Emission Tomography Market Size



Positron Emission Tomography Market share

New Radiopharmaceuticals: Introduction of targeted tracers improving disease-specific imaging.

Government and Private Investment: Expanding diagnostic centers and funding research into advanced imaging.

Integration with AI: AI-powered PET analysis enabling faster, more accurate interpretations.

Do You Have Any Query Or Specific Requirement? Request Free Brochure:

<https://www.zionmarketresearch.com/requestbrochure/positron-emission-tomography-market>

Market Segmentation

By Product Type

PET Scanners: Dedicated imaging equipment for diagnostic centers and hospitals.

PET/CT Systems: Integrated systems combining metabolic and anatomical imaging.

PET/MRI Systems: Advanced hybrid scanners for oncology and neurology applications.

Software & Services: Imaging analytics, workflow management, and image storage.

By Detector Technology

Bismuth Germanate (BGO): Traditional scintillation material.

Lutetium Oxyorthosilicate (LSO) & Lutetium Yttrium Orthosilicate (LYSO): Higher sensitivity and resolution materials.

Digital PET Detectors: Next-generation solid-state detectors improving accuracy and speed.

By Application

Oncology: Tumor detection, staging, recurrence monitoring.

Cardiology: Assessing myocardial perfusion and viability.

Neurology: Imaging Alzheimer's disease, epilepsy, and other CNS disorders.

Research Applications: Drug development and clinical trials.

By End User

Hospitals & Clinics: Large-scale diagnostic and treatment centers.

Diagnostic Imaging Centers: Specialized facilities offering PET and hybrid imaging services.

Academic & Research Institutes: Advanced imaging for studies and clinical trials.

Pharmaceutical & Biotech Companies: Drug development and monitoring therapy outcomes.

By Radiotracer

FDG (Fluorodeoxyglucose): Most common radiotracer for oncology.

Non-FDG Tracers: For neurology, cardiology, and specialized oncology imaging.

Emerging Tracers: PSMA-based agents for prostate cancer, amyloid tracers for Alzheimer's.

Regional Analysis

North America

North America dominates the PET market due to high healthcare expenditure, widespread adoption of hybrid imaging, and strong presence of major manufacturers. The U.S. leads with

advanced radiopharmaceutical development, reimbursement policies, and clinical research.

Europe

Europe shows robust growth due to aging populations, increased cancer screening programs, and EU funding for medical imaging innovation. Germany, the UK, France, and Italy are the major markets for PET scanners and radiopharmaceuticals.

Asia-Pacific (APAC)

APAC is the fastest-growing region, driven by healthcare infrastructure upgrades, growing middle-class populations, and rising cancer incidence in countries such as China, India, and Japan. Governments are investing in nuclear medicine facilities and training healthcare professionals.

Latin America

Countries like Brazil, Mexico, and Chile are expanding diagnostic imaging facilities with growing private healthcare investment. Improved access to advanced imaging technologies is fueling market adoption.

Middle East & Africa (MEA)

MEA markets are emerging, with Gulf countries investing in cutting-edge healthcare technologies. South Africa and UAE are key early adopters of hybrid imaging systems and advanced radiotracers.

Key Market Trends

Hybrid Imaging Growth: PET/CT and PET/MRI rapidly replacing standalone PET due to higher accuracy.

AI and Machine Learning Integration: Automated image interpretation and enhanced predictive analytics.

New Radiotracer Development: Expanding beyond FDG for more disease-specific imaging.

Point-of-Care PET Imaging: Compact scanners and mobile units increasing accessibility.

Theranostics Expansion: PET combined with targeted radiotherapy enabling personalized treatment.

Improved Detector Technologies: Digital PET and time-of-flight (TOF) improving sensitivity and speed.

Collaborations Between Pharma and Imaging Companies: Accelerating drug discovery and clinical trials.

Inquiry For Buying- <https://www.zionmarketresearch.com/inquiry/positron-emission-tomography-market>

Competitive Landscape & Major Key Players

The PET market is moderately consolidated with a few global leaders dominating high-end

imaging systems and radiotracers. Partnerships, R&D investments, and mergers drive innovation and market reach.

Major Key Players Include:

Siemens Healthineers AG – Leading supplier of PET/CT and PET/MRI scanners.

GE HealthCare Technologies Inc. – Strong portfolio of digital PET solutions and radiopharmaceuticals.

Philips Healthcare – Advanced imaging systems integrating AI and digital technologies.

Canon Medical Systems Corporation – Expanding PET/CT offerings in Asia and Europe.

United Imaging Healthcare – Fast-growing Chinese manufacturer of digital PET systems.

Positron Corporation – Specialized PET technology provider.

Bruker Corporation – Research and preclinical PET imaging systems.

Curium Pharma – Leading radiopharmaceutical supplier.

Cardinal Health, Inc. – Distributor of PET radiopharmaceuticals.

Blue Earth Diagnostics – Developer of novel PET tracers for prostate and brain imaging.

Emerging players are also entering the PET software and analytics segment, providing cloud-based image storage and AI-driven interpretation tools.

Future Outlook (2025–2034)

Personalized Medicine & Theranostics: PET imaging to guide precision therapies.

Broader Access in Developing Markets: Affordable scanners and mobile imaging centers.

Integrated AI Platforms: Cloud-based systems for global image sharing and interpretation.

Next-Generation Radiotracers: Expanding applications in neurology and immuno-oncology.

Increased Use in Clinical Trials: PET imaging as a biomarker for drug efficacy.

Shift Toward Outpatient Imaging Centers: Reducing costs and increasing convenience.

Challenges

High Equipment & Maintenance Costs: Barrier for smaller healthcare facilities.

Short Half-Life of Radiopharmaceuticals: Need for nearby cyclotron facilities or supply chain efficiency.

Regulatory Approvals: Lengthy processes for new tracers and technologies.

Workforce Shortages: Need for trained nuclear medicine professionals.

Conclusion

The global positron emission tomography (PET) market is set to grow from USD 2.67 billion in 2024 to USD 4.44 billion by 2034, at a CAGR of 6.60%. Increasing cancer prevalence, technological innovations, and the shift toward personalized medicine will drive strong demand for PET imaging systems and radiopharmaceuticals. Companies focusing on hybrid imaging, AI integration, and tracer development will be at the forefront of market expansion.

Browse Other Related Research Reports from [Zion Market Research](#)-

Geospatial Imagery Analytics Market By Type (Image Analytics And Video Analytics), By

Technology (GIS/GPS/GNSS, Remote Sensing, Mobile Mapping/Handheld, And Office & Field Software), By Application (Weather Monitoring, Security & Law Enforcement, Crisis Management, Climate Change Modeling, And Population Forecasting & Management), By Vertical (Defense & Security, Government, Environmental Monitoring, Mining & Manufacturing, Energy & Utility, Construction, Agriculture, Healthcare, And Others), And By Region - Global And Regional Industry Overview, Market Intelligence, Comprehensive Analysis, Historical Data, And Forecasts 2024-2032-<https://www.zionmarketresearch.com/report/geospatial-imagery-analytics-market>

Open Source Intelligence Market By Deployment Type (Cloud And On-Premises); By Source (Public Government Data, Professional And Academic Publications, Commercial Data, Grey Literature, Media, And Internet); By Security Type (Data Analytics, Text Analytics, Artificial Intelligence, Big Data, Human Intelligence, Content Intelligence, And Dark Web Analysis); By Application (Private Sector, Public Sector, Military And Defense, Homeland Security, And National Security) , And By Region - Global And Regional Industry Overview, Market Intelligence, Comprehensive Analysis, Historical Data, And Forecasts 2024-2032-<https://www.zionmarketresearch.com/report/open-source-intelligence-market>

Restaurant Management Software Market by Software (Table Management, Cashflow Management, Accounting, Employee Scheduling, Order Monitoring, Payroll Processing, Analytics, and Others), by Deployment (Cloud, On-Premise, and Hybrid), and by End-User (Full-Service Restaurants, Fast Food Restaurants, and Institutional), and By Region: Global Industry Perspective, Comprehensive Analysis, and Forecast, 2024—2032-<https://www.zionmarketresearch.com/report/restaurant-management-software-market>

Supply Chain Analytics Market By Solution (Logistics Analytics, Manufacturing Analytics, Sales & Operations Analytics, Supply Chain Planning And Procurement, And Visualization & Reporting), By End-user (Transportation & Logistics, Manufacturing, Retail & Consumer Goods, Healthcare, Aerospace & Defense, And Others), and By Region: Global Industry Perspective, Comprehensive Analysis And Forecast, 2024 - 2032-<https://www.zionmarketresearch.com/report/supply-chain-analytics-market>

Indoor Farming Technology Market by Growing System (Hydroponics, Aeroponics, Aquaponics, Soil-based, and Hybrid), by Components (Hardware and Software & Services), by Facility Type (Glass or Poly Greenhouses, Container Farms, Indoor Vertical Farms, and Indoor Deep Water Culture (DWC) Systems), and by Crop Type (Fruits & Vegetables, Herbs & microgreens, Flowers & Ornamentals, and Other Crop Types): Global Industry Perspective, Comprehensive Analysis and Forecast, 2024 - 2032-<https://www.zionmarketresearch.com/report/indoor-farming-technology-market>

Manufacturing Execution System (MES) Market By Function (Quality Analysis, Document Control, Inventory Management, Production Tracking, Production Performance Analysis, Resource Allocation, And Others), By Process Industry (Oil And Gas, Food And Beverages, Chemical, Power And Energy, And Others), By Discrete Industry (Automotive, Consumer Electronics, Aerospace

And Defense, Metal And Mining, And Others), and By Region: Global Industry Perspective, Comprehensive Analysis, And Forecast 2024-2032-

<https://www.zionmarketresearch.com/report/manufacturing-execution-system-mes-market>

Machine Learning Market By Service (Professional Services And Managed Services), By Application (BFSI, Healthcare & Life Sciences, Retail, Telecommunication, Government & Defense, Manufacturing, And Energy & Utilities), And By Region: Global Industry Perspective, Comprehensive Analysis, And Forecast, 2024-2032-

<https://www.zionmarketresearch.com/report/machine-learning-market>

Cloud Computing In Industrial IoT Market by Model (Software as a Service (SaaS), Infrastructure as a Service (IaaS), and Platform as a Service (PaaS)), by Cloud Type (Private, Public, and Hybrid), by Sensor Type (Temperature Sensors, Proximity Sensor, Optical Sensors, Pressure Sensors, and Others (Sound Sensors and Gyroscopic Sensors)), and by End Users (Manufacturing, Healthcare, Oil and Gas, Transportation, Energy, and Others (Mining, Logistics, and Agriculture)), and By Region: Global Industry Analysis, Size, Share, Growth, Trends, and Forecast 2024-2032-

<https://www.zionmarketresearch.com/report/cloud-computing-industrial-iot-market>

Enterprise Resource Planning Technologies Market by Deployment (Cloud, On-Premises, and Hybrid), by Application (Customer Relationship Management, Supply Chain Management, Supplier Relationship Management, Finance & Accounting Management, Human Resource Management, Risk Management, Project Portfolio Management, and Manufacturing), by Organization Size (Small- and Medium-Sized Enterprises (SMEs) and Large Enterprises), and by End-Use Industry (IT & Telecom, BFSI, Government Sector, Retail, Manufacturing, Healthcare, Transportation, and Others), and By Region: Global Industry Perspective, Comprehensive Analysis, and Forecast, 2024-2032-

<https://www.zionmarketresearch.com/report/enterprise-resource-planning-technologies-market>

Community Cloud Market By Components (Hardware And Software), By Professional Services (Consulting Support Services, Training Support Services, Maintenance Support Services, Customer/Public Portal Services, Regulation And Compliance Services, And Other Services), By Applications (Cloud-Based Storage, Cloud Backup And Recovery, Cloud Security And Data Privacy, Web-Based Applications, High Performance Computation (HPC) And Analytics) By Verticals (BFSI, Gaming, Government, Healthcare, Academia And Education, And Others), and By Region - Global And Regional Industry Overview, Market Intelligence, Comprehensive Analysis, Historical Data, And Forecasts 2024-2032-

<https://www.zionmarketresearch.com/report/community-cloud-market>

Deepak Rupnar

Zion Market Research

+1 855-465-4651

richard@zionmarketresearch.com

Visit us on social media:

[LinkedIn](#)

[Instagram](#)

[Facebook](#)

[YouTube](#)

[X](#)

This press release can be viewed online at: <https://www.einpresswire.com/article/850202912>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2025 Newsmatics Inc. All Right Reserved.