

Positron Emission Tomography Market Assessment, By Product [Device, Platform/Service], By Detector [Silicon Photomultiplier, Digital Photon Counters, Lutetium Oxyorthosilicate, Lutetium Yttrium Orthosilicate, Others], By Application [Neurology, Oncology, Cardiovascular, Others], By End-user [Hospitals, Diagnostic and Imaging Clinics, Others], By Region, Opportunities and Forecast, 2017-2031F

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Abstracts

Global positron emission tomography market is projected to witness a CAGR of 5.1% during the forecast period 2024-2031, growing from USD 1.7 billion in 2023 to USD 2.58 billion in 2031. The global positron emission tomography market is being influenced by the increasing prevalence of chronic diseases such as heart diseases, stroke, and cancer. This surge in chronic diseases is increasing the demand for advanced diagnostic tools like PET scans, known for their precision and early detection capabilities. Another important driver include technological advancements, such as increased resolution and fast scanning abilities, which enable precise imaging for complicated procedures, ultimately enhancing diagnostic precision and patient outcomes. Moreover, the introduction of hybrid PET/CT and PET/MRI systems have diversified and enhanced the effectiveness of PET scans in clinical settings, thereby propelling the growth of global positron emission tomography market.

Government initiatives and funding are also driving the global positron emission tomography market through extensive research and development (R&D), expansion in infrastructure, and reimbursement policies. Combined with increased investments and partnerships within the industry, these efforts encourage innovation and propel PET

technology's evolution. Additionally, a burgeoning elderly population is increasing the demand for PET scans as age-related ailments become more prevalent. Growing recognition and acceptance of PET imaging, along with its expansion into fields like neurology and cardiology, is further solidifying its pivotal role as a diagnostic tool.

Growing Application of PET Scans

The growing scope of positron emission tomography (PET) imaging applications significantly drives the market expansion. Initially recognized for its dominance in oncology diagnostics, PET imaging now spans diverse medical domains like neurology and cardiology. With the evolution of PET technology and the development of novel radiotracers, its utility continues to grow, empowering healthcare experts to delve deeper into disease mechanisms, treatment responses, and personalized medical approaches. This increased array of applications not only elevates patient care standards, but also increases the demand for PET imaging systems, thus significantly contributing to the widespread adoption and continuous growth of the global positron emission tomography market. In addition, the device's maximized sensitivity can be used to reduce the dosage and offer faster diagnosis, which will expand the application of PET scans across the healthcare domain.

Establishment of Research Facilities

The establishment of new research facilities is a key driving factor for the global positron emission tomography market. These centers act as innovation hubs, nurturing the advancement of cutting-edge PET imaging technologies, radiotracers, and methods. They facilitate joint research endeavors, support the exploration of various medical applications, and help improve PET's effectiveness in diagnosing and tracking different conditions. These initiatives not only draw investments and collaborations, but also expedite the development of PET technology, amplifying its influence on healthcare. This process stimulates market expansion and guarantees ongoing progress in diagnostic capabilities.

For example, the establishment of The Australian National Total Body PET Facility occurred on December 12th, 2023. Marking Australia's inaugural total body PET scanner available for unrestricted research use, this facility is poised to propel progress in cancer research, neurological disorders, cardiovascular disease studies, and pharmaceutical development. Its implementation aims to minimize scanning durations and radiation exposure, thereby revolutionizing patient care standards.

Government Initiatives

Governments around the globe are proactively implementing strategies to drive the advancement of the global positron emission tomography market. These strategies involve financing research, promoting technological progress, and improving the availability of PET technology. By supporting R&D, governments encourage the evolution of PET imaging, nurturing the development of advanced imaging systems and innovative radiotracers. Moreover, initiatives to improve reimbursement policies and healthcare infrastructure play a major role in driving the adoption of PET scan. These extensive government initiatives aim to strengthen the PET market, fostering its expansion and reinforcing its essential role in contemporary diagnostic medicine.

For instance, in November 2023, as a part of the Chief Minister's Comprehensive Health Insurance Scheme, Coimbatore Medical College Hospital (CMCH) received a boost with the commissioning of a PET CT (Positron emission tomography and computed tomography) scan machine worth INR 12 crore. At the CMCH, the procedure, which would have cost INR 20,000 in private hospitals, would only cost INR 6,500 to INR 11,000, with the Chief Minister's insurance plan covering the cost.

Increasing Use of PET Scan in Oncology

The use of PET in oncology is significantly driving the global market. PET imaging's accuracy in identifying and tracking cancerous developments supports early detection, precise staging, and evaluation of treatment response. Its capacity to offer comprehensive metabolic insights into tumors aids oncologists in making informed decisions. As PET technology advances persistently and new radiotracers emerge, its role in oncology is also growing. This progression not only enhances patient results, but also substantially bolsters the global adoption and growth of PET technology.

For instance, Meilleur Technologies, Inc. unveiled a research collaboration pact with the Young Blood Institute (YBI) on exploring the application of Meilleur's [F-18]NAV-4694, an investigative imaging agent, in positron emission tomography examinations. This device is designed to evaluate the presence of amyloid plaque within the brain. Amyloid plaques signify a prominent feature across various neurodegenerative conditions, notably Alzheimer's disease.

Advanced Software Solutions in Positron Emission Tomography

The increasing demand for PET software solutions is acting as a driving force behind the expansion of the global positron emission tomography market. With healthcare institutions progressively depending on PET imaging for precise disease diagnosis and monitoring treatments, there's a growing requirement for advanced software that improves image processing, analysis, and interpretation. Advanced PET software enhances workflow efficiency, facilitates precise data analysis, and improves the integration of PET scans with other imaging methods. This increased demand not only enhances the effectiveness of PET technology, but also contributes to market growth by meeting the changing demands of healthcare practitioners to deliver enhanced patient care.

For example, in May 2023, Precision DL (GE HealthCare), an AI-driven image processing software, received 510(k) clearance from the Food and Drug Administration (FDA). This software is anticipated to deliver notable enhancements in contrast-to-noise ratio (CNR), precision in quantifying features, and the ability to diagnose small lesions in PET scans.

Future Market Scenario (2024-2031F)

The future of the global positron emission tomography market exhibits remarkable promise, poised for substantial expansion. Various factors are contributing to this positive projection. Advancements in PET technology, encompassing enhanced imaging resolution, faster scan speeds, and the creation of novel radiotracers are expanding PET scan applications with increased accuracy. Furthermore, the surge in chronic diseases worldwide, alongside a growing elderly population, is increasing the demand for precise diagnostic tools like PET scans. Additionally, PET's diversified usage spanning beyond oncology into segments like neurology, cardiology, and psychiatric disorders solidifies its significance in healthcare diagnostics. Collaborative endeavors between public and private sectors, reinforced by supportive government measures and improved reimbursement policies, foster market growth. Besides this, ongoing research and technological advancements are expected to position the global positron emission tomography market for notable progress and evolution in the coming years.

Key Players Landscape and Outlook

Key global positron emission tomography market players are establishing strategic alliances. These partnerships among leading firms seek to combine resources, knowledge, and technologies, aiming to propel advancements in PET imaging. These

collaborations focus on stimulating innovation, creating state-of-the-art PET systems, and pioneering new radiotracers. Such affiliations enable the integration of diverse strengths, fostering research and expediting the introduction of advanced PET solutions. Ultimately, these initiatives are driving the market's progression, ensuring refined diagnostic accuracy and substantially contributing to PET technology's global growth and progression.

In September 2023, Jubilant DraxImage Inc., operating as Jubilant Radiopharma, a wholly owned subsidiary of Jubilant Pharma Limited, initiated an exclusive collaboration with Cardiac Imaging, Inc. in Oakbrook Terrace, Illinois. The partnership aims to offer healthcare facilities a daily-leased rubidium solution for conducting cardiac PET scans, thereby enhancing access to cutting-edge cardiac PET imaging for patients suspected of coronary artery disease (CAD).

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*Companies mentioned above DO NOT hold any order as per market share and can be changed as per information available during research work

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