

Global Nuclear Medicine (Medical Isotopes/  
Radioisotopes/ Radiopharmaceuticals) Market in  
PET/SPECT Imaging and Therapy (2010 – 2015)



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### **Global Nuclear Medicine (Medical Isotopes/ Radioisotopes/ Radiopharmaceuticals) Market in PET/SPECT Imaging and Therapy - Competitive Landscape, Current trends and Forecasts (2010 – 2015)**

#### **Report Description:**

Radiopharmaceuticals Therapy and PET/SPECT Imaging – A Global Scenario (2010-2015)

Radiopharmaceuticals are pharmaceutical agents used to diagnose certain medical problems such as cardiac, cancer, neurology, and/or treat certain conditions such as cancers. The use of radiopharmaceuticals as tracer dates back to 1930's. Over the years, technical advancement in production, diagnostic equipments (SPECT and PET), and discovery of new radiopharmaceutical have driven the market. The global radiopharmaceuticals market for therapy and PET & SPECT imaging was valued at \$3,213 million in 2010 and is expected to reach \$4,734 million by 2015; growing at a CAGR of 8.1% from 2010 to 2015. The PET & SPECT diagnosis accounted for the largest share -90%- of the global radiopharmaceutical market.

Diagnostic applications of radiopharmaceuticals have around 90% of the market share. The market is growing due to the increasing incidences of cancer and cardiac diseases, requisition of better imaging techniques for diseases such as Alzheimer's. Targeted alpha therapy is one of the most promising treatments for cancer, which is being researched upon by cancer institutes.

Driven by the increasing incidence of cardiac and cancer diseases, early and accurate diagnosis, increasing awareness amongst the masses, and expanding application segment; the global radiopharmaceutical market reached around \$3.2 billion in 2010. Radiopharmaceuticals are used for the diagnosis and treatment of various ailments such as cancer, cardiac, renal, and respiratory diseases among the others. PET machines enable radiologists in early detection of cancer, cardiac, and Alzheimer's disease among the patients. This would increase the demand for PET machines among the healthcare centers and providers. Similarly, SPECT scanners have been on the forefront to bring about significant changes in the diagnostic imaging equipment landscape with opportunities in the market for neuroendocrine tumor imaging. For diagnostic applications of radiopharmaceuticals, radioisotopes such as FDG for PET and technetium for SPECT are most commonly used.

PET and SPECT scans provide dynamic images of the body's interior, rather than just the bones, like X-ray and magnetic resonance imaging (MRI). PET scan lets the doctor identify glucose metabolism in different parts of the body in a patient. Cancer cells grow at a faster rate than the other cells. The machine detects the speed of glucose being used and indicates the presence of cancerous tumors. The cancerous cell breaks down glucose at a higher rate than the other cells and this increased activity can be seen in a scan. Thus, the use of PET and SPECT scans facilitates early and accurate diagnosis of diseases such as cancer. Increased usage of PET & SPECT scans in turn increases the demand for radiopharmaceuticals.

FDG is the major radiopharmaceutical used in PET (approximately 90%). PET procedures are preferred over SPECT as PET is more accurate, sensitive, and endowed with better spatial arrangement of the image. Besides, the main radiopharmaceutical used in SPECT; i.e. technetium (99m) has a limited supply,

forcing people to look for alternatives. FDG can be produced at desired levels to meet all the imaging requirements. This situation is boosting the FDG market.

Most of the radiopharmaceuticals are used in hospitals; accounting for 92%. Majority of the radiopharmaceuticals are administered intravenously. The market for radiopharmaceuticals is restricted by their high cost and difficulties faced while transporting them.

## Scope of the report

This research report categorizes the radiopharmaceuticals therapy and PET/SPECT imaging market on the basis of isotopes, routes of administration, applications, and geography; forecasting revenue, and analyzing trends in each of the following submarkets:

- On the basis of isotopes:
  - Fludeoxyglucose (F18), Technetium (Tc99m), Gallium (Ga67), Sodium Iodide (I123), Iobenguane (I131), Rhenium (Re186), Samarium (Sm153), Thallium (Tl201), Yttrium (Y90), Erbium (Er169), and others
- On the basis of routes of administration:
  - Intravenous, peroral, inhalation, and others
- On the basis of applications:
  - Diagnosis (PET and SPECT), indication for diagnosis, and therapy
- On the basis of geography:
  - North America (U.S. and Canada), Europe, Asia-Pacific, Japan, and Rest of the World

Each section provides market data, market drivers, trends and opportunities, top-selling products, key players, and competitive outlook. This report will also provide market tables for covering the sub-segments. In addition, the report provides more than 16 company profiles covering all the sub-segments.

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