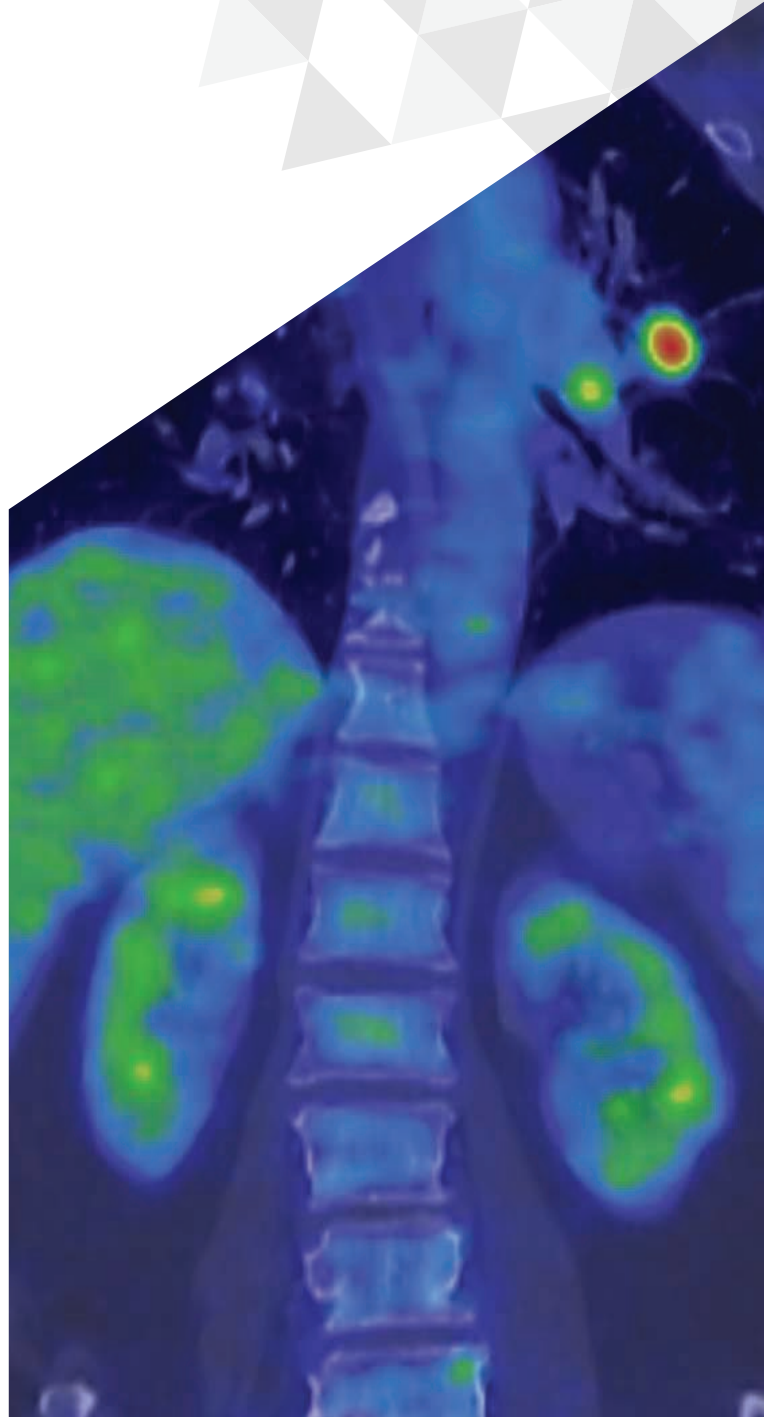


FIRST IN SOUTH INDIA

Precision Molecular-Imaging
using state-of-the-art

PET/CT



What is a PET/CT?

PET/CT is a powerful imaging technique that helps in the diagnosis and treatment of many diseases especially Cancers, Alzheimer's disease, Infections, etc. It can detect diseases that are not identified on conventional CT scans. PET/CT scan consists of 2 components - the diagnostic CT (Computerized Tomography) scan (anatomical) and the PET (Positron Emission Tomography) scan (functional) - both in the same sitting. Therefore PET/CT accurately images metabolic and anatomic information in the body.

How will PET/CT scan help in a patient's treatment?

Improved diagnosis:

See MORE, See BETTER, See EARLIER:

The significantly improved precision (higher imaging / diagnostic accuracy) of co-registration of anatomy and function down to the molecular level by the PET/CT results in

- Improved reader (nuclear physician) confidence
- Earlier detection of disease
- Precise localization and interpretation (characterization) of the hyper metabolic disease areas
- Marked reduction in inconclusive scan findings

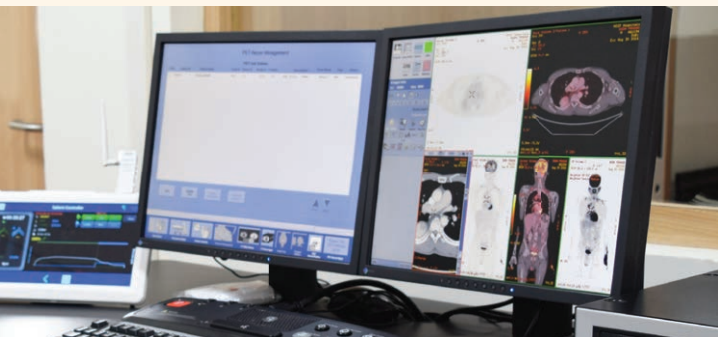
Better evaluation and devising treatment protocol:

The PET/CT scan results not only help to have a major impact on physician's diagnosis of cancer but also help

- Physician to predict the likely outcome of various therapeutic alternatives during primary staging / re-staging of cancer
- Planning and individualizing treatment protocols and methods by efficiently monitoring the response of the disease to treatment

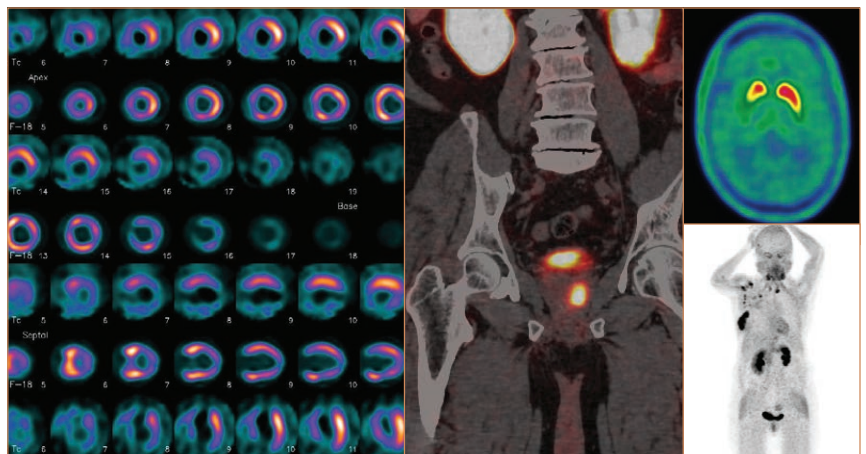
Impacting disease management & lives:

- Lesser time & better patient compliance
- Both functional and detailed anatomical imaging done in a single setting
- Avoiding un-necessary surgeries and invasive procedures
- Reducing treatment related side effects
- Reducing overall treatment costs



Different types of PET/CT's available at MIOT

- ^{18}F -FDG PET
- ^{18}F -Flourine Bone PET
- ^{18}F -FDOPA (Parkinson's, Recurrent Brain tumors, etc)
- ^{68}Ga -PSMA (Prostate cancer)
- ^{68}Ga -DOTANOC (Somato statin receptor imaging)
- ^{68}Ga -FAPI (Oncology)
- Other ^{68}Ga -labelled molecules including CXCR-4 (Multiple myeloma), Exendin (Insulinoma), etc



Besides revolutionizing cancer diagnosis and treatment protocols, the PET/CT is a powerful tool for diagnostic assessment of modern day diseases such as neuro degenerative disorders (Alzheimer's, Parkinson's disease, etc.), coronary artery disease, etc.

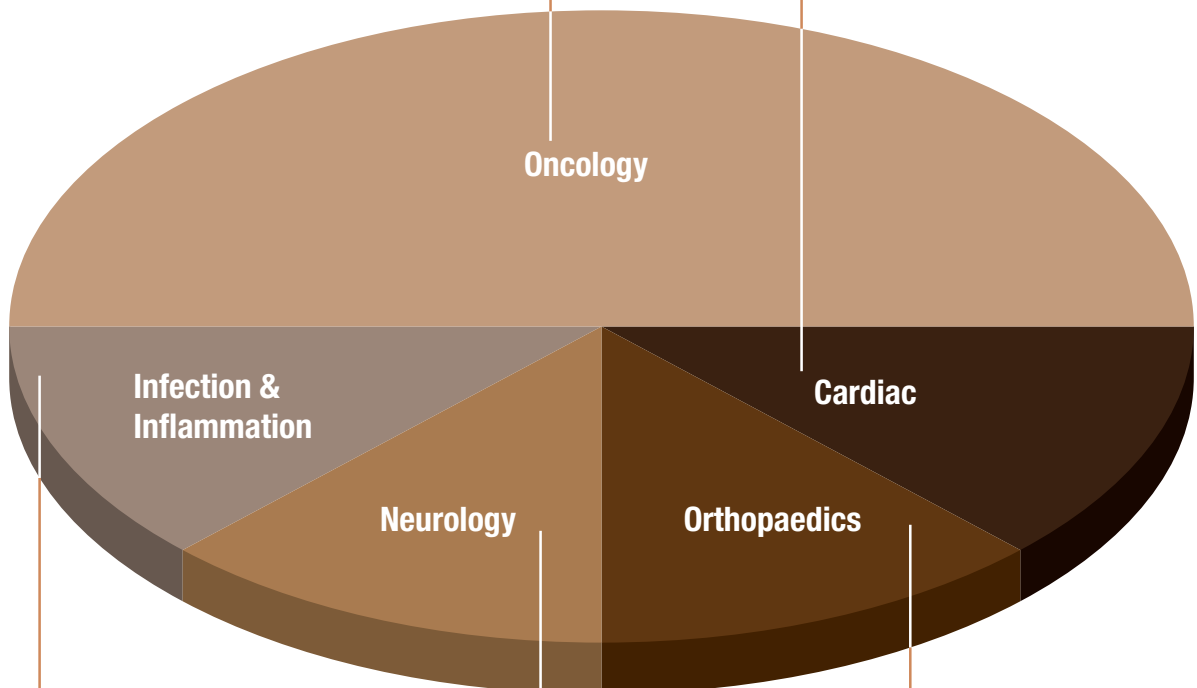
Indications

Oncology

- Initial staging
- Restaging
- Guiding appropriate site for biopsy
- Treatment response evaluation
- Unknown primary diagnosis

Cardiac

- Viability assessment
- Sarcoidosis
- Myocarditis
- Prosthetic valve infections



Infection & Inflammation

- PUO, Immuno-compromised patients
- Infected implants & grafts
- Vasculitis, Sarcoidosis / TB, IBD, Plaque imaging, Sepsis

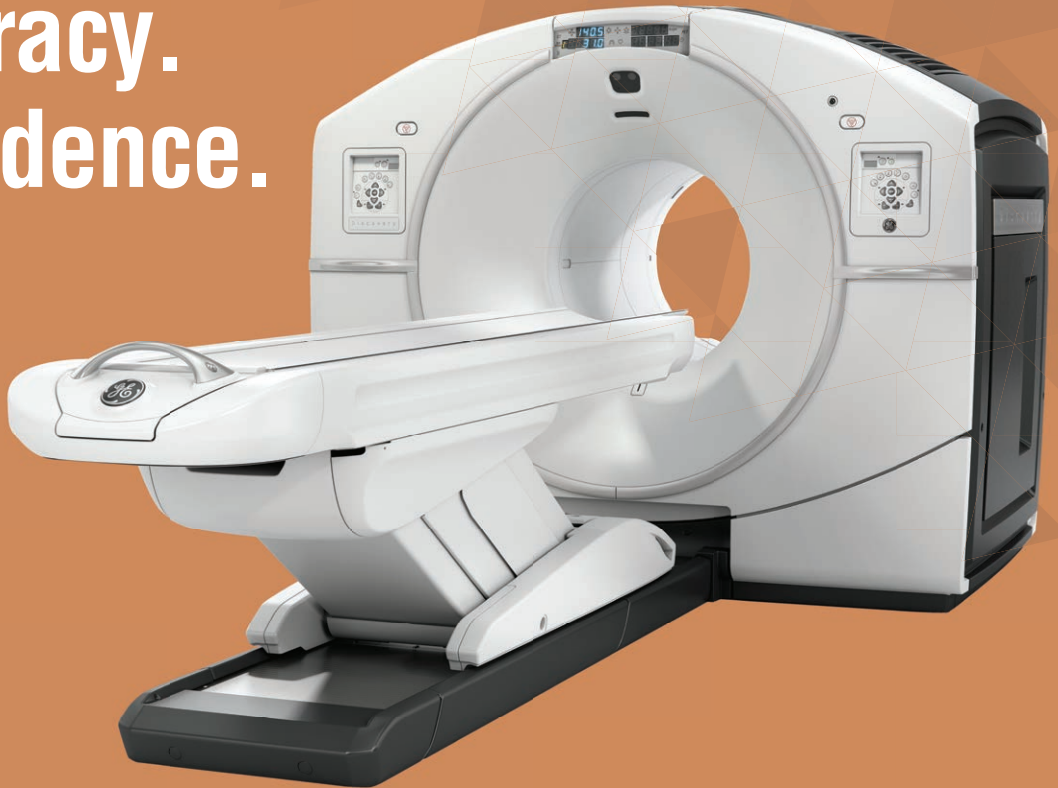
Orthopaedics

- Bone tumors
- Osteomyelitis
- Infected prosthesis / implants
- Graft viability

Neurology

- Refractory epilepsy
- Dementia
- Brain tumors
- Paraneoplastic syndromes
- Parkinson's disease & Autoimmune encephalitis

Sensitivity. Accuracy. Confidence.



The GE IQ PET/CT at **MIOT International (1st of its kind in South India)** offers Superior Image Quality and Intelligent Quantitation which enables the Physician to discover and diagnose cancer confidently. Now, we can detect even minute abnormalities and offer accurate diagnosis and monitoring for our patients.

Superior Imaging

-  Largest axial field-of-view for full-organ scans and greater throughput
-  Highest NEMA sensitivity for outstanding small lesion detectability at low dose
-  Highest clinical NECR for ¹⁸F-based tracers optimized for oncology practices

Greater Scalability

-  Fully-scalable detector
-  Field-upgradable PET axial field-of-view
-  Mobile-ready platform

Intelligent Quantitation

-  Q.Clear reconstruction technology for upto 2x improvement in image quality (SNR)
-  Q.Suite to deliver consistent SUV measurements with upto 2x improvement in quantitation accuracy (SUVmean)
-  Dual acquisition channels which ensure high quantitation accuracy for both low and high count rate isotopes

Better Patient Management

-  46% additional lesion detection with FDB PET/CT
-  13% improved diagnostic accuracy
 - 20% improved staging accuracy
 - 36% reduced unwanted procedures

Targeted Radionuclide Therapy

MIOT opens the door to better and safer treatment beyond imaging: PRECISION treatment in Oncology

In addition to the wide range of diagnostic services (using PET/CT and SPECT) the Department of Nuclear Medicine at MIOT is equipped with the state-of-the-art radionuclide therapy ward for providing ‘Targeted Radionuclide therapy’ for certain cancers.

Targeted Radionuclide Therapy is rapidly evolving and has entered into the armamentarium of cancer treatment. It provides specific and better tumor targeting and lesser treatment related toxicity. It is a treatment that , on occasions can be given along with conventional chemotherapy / external beam radiotherapy.

It aims at a particular molecular target and kills cancer cells with high energy radiation of particles such as Alpha, Beta or Gamma. These particles emit radionuclides targeting specific peptides, receptors antibodies etc.

Following are the Radionuclide Therapies available in MIOT.

S.No	Radionuclide	Therapies	For the following cancers
1	¹³¹ I	Radioiodine ablation, high dose and low dose therapy	Thyroid cancer - Remanant ablation & Metastatic diseases and Benign thyroid disorders
2	¹⁷⁷ Lu / ²²⁵ Ac	DOTA-TATE (PRRT) therapy	Metastatic neuro endocrine tumors
3	¹⁷⁷ Lu / ²²⁵ Ac	PSMA therapy	Metastatic prostate cancer
4	⁹⁰ Y Microsphere ¹³¹ I Lipidol	TARE (Transarterial Radionuclide Embolisation)	Primary and Benign liver cancer
5	⁸⁹ Sr-cl ³² P ¹⁵³ Sm-EDTMP ¹⁷⁷ Lu-EDTMP ¹⁷⁷ Lu-Zoledronate	Bone pain palliation	Metastatic breast, prostate and other cancers.
6	¹⁶⁹ Er ¹⁸⁶ Re ³² P ⁹⁰ Y	Radio synovectomy	Rheumatoid arthritis, Arthropathia psoriatica poly-arthritis, Pigmented villonodular synovitis and Hemophilic arthritis
7	¹³¹ I- mIBG	MIBG therapy	Phaeochromocytoma & Paraganglioma



MIOT Tumour Borad

35 member Tumour Borad with organ specific specialists to chart out the most effective and customised treatment course for each patient. They take on board the concerned specialist's indepth understanding of the affected organ, general health of the patient, cosmetic & re-construction requirements etc.

Diagnosis to rehabilitation - Under one roof

We are one of the few centres in India offering complete care from diagnosis to treatment and rehabilitation in a single facility. We fight alongside our patients with the world's latest treatments and a wealth of experience and expertise.

World-class imaging & laboratory facilities - For accurate diagnosis

Our imaging and diagnostic facilities includes a state-of-the-art laboratory that is ranked 8th in the world and advanced imaging modalities to deliver speedy and accurate reports.

New-wave treatment with focus on patient comfort

We offer the latest chemotherapeutic drugs and are hence able to anticipate and offset the side effects with pre-medications which make treatment easier. In



surgery, we work with other specialists, including reconstructive surgeons, to preserve as much of the patient's organ as we can while removing the cancerous tissue completely.

Most advanced radiotherapy

MIOT International was among the first hospitals in India to offer the world's most advanced Radiotherapy with TrueBeam STx. Safer, faster and more accurate, TrueBeam STx delivers image-guided, patient friendly treatment in mere minutes.

Team Effort

Patient's health is of paramount importance to us and they deserve the most advanced cancer care technology. With our well-trained teams, the latest in cancer detection systems and an ambience of compassion and care, MIOT Institute of Cancer Cure is the best ally for patients fighting against cancer.

For any enquires or appointments, please call 044 4200 2288

or email us at onco@miotinternational.com / nuclearmedicine@miotinternational.com



MIOT Telemedicine Services

For appointments, visit www.miotinternational.com



VOICE CALL



VIDEO CALL



EMAIL



MIOT Hospitals: 4/112, Mount Poonamallee Road,
Manapakkam, Chennai - 600 089. Tel: +91 44 4200 2288
Email: chief@miotinternational.com | www.miotinternational.com