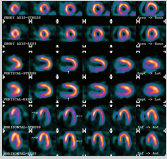


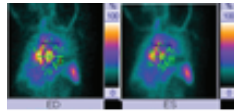
## Myocardial Perfusion Scan



- Presence, location, extent and severity of ischemia & scarring
- Determination of physiological significance of anatomical lesion detected by coronary angiography
- Myocardial viability
- Monitoring response of coronary revascularization

## Multi-Gated Acquisition (MUGA) Scan

- Left ventricle ejection fraction (EF) calculation
- Wall motion abnormality of left ventricle
- Pre and post cardiotoxic chemotherapy cardiac assessment.



Item	Value
EF [%]	56.6
EDC[count]	18869
ED Area [pixel]	322
ESC [count]	8307
ES Area [pixel]	146
BGC(Ave.) [count]	18.7
TES[msec]	286

## Other SPECT-CT Scans

- Colloid Scan for Accessory Spleen
- Meckel's Scan
- Gastric Emptying Studies
- Octreotide Scan
- I-131 MIBG Scan

## Dr. Hamid Naseer

Consultant Nuclear Medicine & PET

M.B; B.S, M.Sc. (Nuclear Medicine)  
FCPS (Nuclear Medicine)  
Diploma in Biomedical Ethics  
Fellowship in Nuclear Medicine



Worked as Consultant at Institute of Nuclear Medicine and Oncology Lahore (INMOL), Pakistan, Chief Project Coordinator in various IAEA Projects, Visiting Nuclear Medicine Consultant Social Security Hospital and Faculty Member of Allied Health Sciences in The University of Lahore.

# Department of Nuclear Medicine

## Opening Hours

Mon to Thu	8am - 5pm
Friday	8am - 12pm 2pm - 5pm

## Services

- PET-CT Scan
- SPECT-CT Scan
- Radioactive Iodine Therapy

For appointments, please contact:

**Pantai Jerudong Specialist Centre**  
Jerudong, BG3122, Brunei Darussalam

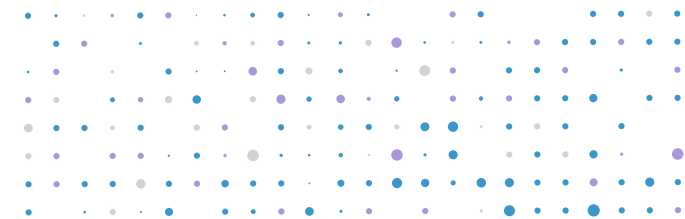
T +673 261 3333 (ext. 1040)  
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[www.pjscbrunei.com](http://www.pjscbrunei.com)



## SPECT-CT Scan

### Information leaflet



# SPECT-CT: Single Photon Emission Computed Tomography with Computed Tomography

## What is Nuclear Medicine?

Nuclear medicine is the branch of medicine in which radioactive materials (also called radioisotopes, radiopharmaceutical or radiotracer) are administered to patients for diagnosis and treatment of cancer and non-cancerous diseases.

## What is SPECT-CT Scan?

A SPECT scan is a nuclear imaging test where patient is injected radiotracers and images are taken to see how the radiotracer is taken up by cells of various organs of your body. The SPECT imaging provides information about the function of an organ, and CT images provide information about the structure of an organ. Then, the SPECT and CT images are combined to get complete information.

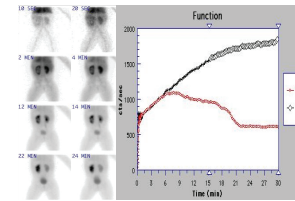
SPECT-CT machine has 2 heads of gamma camera and donut shaped CT machine. Patient will pass through these while lying down on the bed. Exact duration of study depends on the type of test but on average 20 to 40 minutes time is required for the scan part. Patient must stay still throughout the scan in order to produce diagnostic images.

## Who does the SPECT-CT Scan?

The scan is done by the Nuclear Medicine Technologist and result are interpreted by Nuclear Medicine Physician qualified for hybrid imaging. Result will be communicated to your doctor.

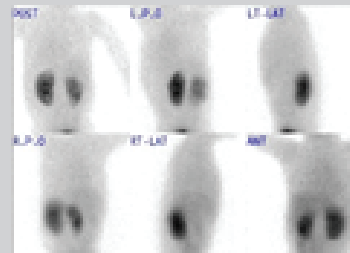
## Dynamic Renal Scan

- Relative renal functions
- GFR / ERPF estimation
- Out flow obstruction
- Renovascular HTN
- Pre-surgical quantitation
- Renal transplant assessment



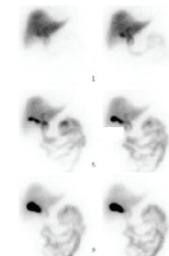
## Static Renal Scan

- Detection of focal renal parenchymal abnormalities
- Detection of renal scarring
- Ectopic kidney localization
- Document horse-shoe kidney



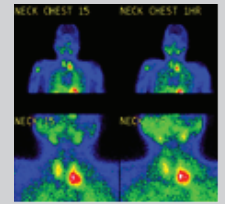
## Hepatobiliary Scan

- Acute Cholecystitis
- Chronic Cholecystitis
- Common bile duct obstruction
- Biliary atresia.
- Post biliary surgery – leak detection



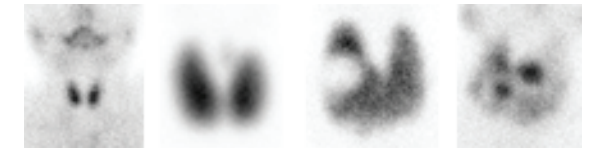
## Parathyroid Scan

- Localize parathyroid adenoma
- Detection of recurrent or ectopic parathyroid in previously treated patient
- Before re-exploration of neck for parathyroid adenoma



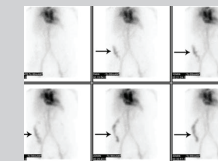
## Thyroid Scan

- Thyroid function & position
- Evaluation of functional status of thyroid nodules
- Evaluation of neck masses
- Differentiate between thyroiditis and hyperthyroidism
- Quantitative thyroid uptake
- Detection of ectopic thyroid tissues such as substernal or sublingual locations
- Prior to RAI treatment for hyperthyroidism



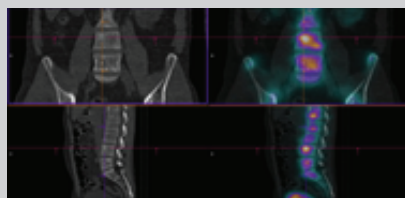
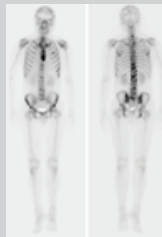
## GI Bleed Study

- To localise occult lower GI bleed



## Bone Scan

- Bone metastasis workup
- Skeletal Neoplasms
- Stress Fracture
- Skeletal Trauma
- Arthritis
- AVN, graft viability
- Osteomyelitis Vs Cellulitis
- Loosening of metallic prosthesis
- Unexplained bone pains



## I-131 Whole Body Scan

- Residual thyroid remnant in neck
- Distant metastasis of DTC

