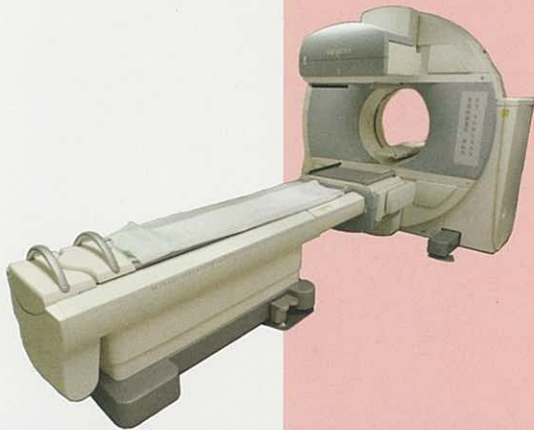


## Procedure

After the injection of radiopharmaceutical, patient needs to wait for the uptake of the isotope, time ranging from half hour to several hours. By the time of scanning, the machine will be in close proximity to the patient, in order to get optimal image.

e.g. Procedure for Myocardial Perfusion Scan:

1. Injection of Isotope (Tc99m MIBI).
2. 60 min uptake time.
3. 15 min scan time (Resting Scan).
4. Stress test (Exercise / Pharmaceutical).
5. Second injection of Isotope (Tc99m MIBI).
6. 60 min uptake time.
7. 15 min scan time (Stress Scan).



Gamma Camera



St. Teresa's Hospital Scanning Department

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# St. Teresa's Hospital Scanning Department

Nuclear Medicine (NM)

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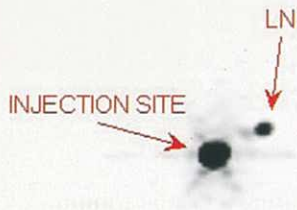


## What is Nuclear Medicine (NM)?

Nuclear Medicine is a specialty which uses very small amount of radiopharmaceuticals to diagnose or treat disease(s). Radiopharmaceuticals are so called "magic bullet" that are isotopes being attracted to specific organs, bones, or tissues. A gamma camera is used to detect the gamma rays that are emitted by the radiopharmaceuticals. These cameras work in conjunction with computers to transform such emissions into images and data which provide information about the area of body being imaged.

### Why is nuclear medicine useful ?

Nuclear medicine imaging is unique in providing functional information of the pathophysiologic process of different organs, in contrast to other modalities of diagnostic radiology which is based upon anatomy. It is a way to gather medical information that may otherwise be unavailable, require surgery, or necessitates more expensive or invasive diagnostic tests. Besides, it often identifies abnormalities at very early stage in the progression of a disease. The early detection allows a disease to be treated early in its course when there may be a more favorable prognosis.



Sentinel Lymph Node

### Is there any side effects or complications ?

The amount of radiation received from a nuclear medicine procedure is comparable to that of a diagnostic x-ray examination. There is no side effect of the radiopharmaceuticals. After the examination, patient can perform their usual work and resume normal diet. Patient is encouraged to drink plenty of water after the examination to facilitate the excretion of radioactivity. Breast-feeding mother is requested to stop breast-feeding within 48hours after the examination.

### Preparation

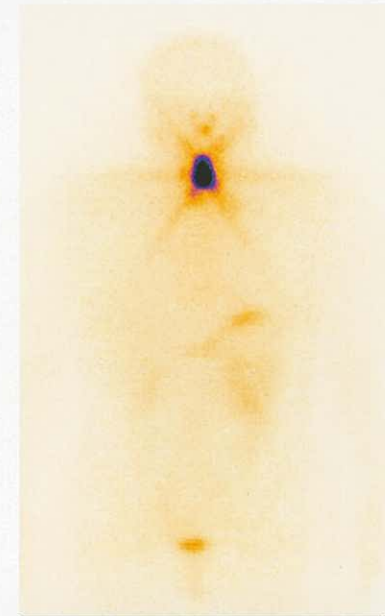
Different patient preparations are needed depending on the specific system(s) or organ(s) to be examined. Some general guidelines include:

- Sedation may be needed in some children to avoid movement during preparation and scanning.
- Pregnancy is a relative contraindicated. Please consult our staff if you maybe pregnant.
- Remove personal possession such as hearing aid, spectacles, removable dentures, hair pins, jewellery, watch, wallet, keys, and mobile phone before entering the scan room because these metallic objects can affect the image quality.

### Specific Scan Preparation

e.g Myocardial Perfusion Scan

- Fasting 4 hours before examination but water is allowed.
- Female patient should not be pregnant.
- Ingestion of all foods and beverages containing caffeine (tea, coffee) must be stopped for at least 12 hours before the study.
- Patient will need to stop certain cardiac medications according to Physician's instruction.
- Patients taking long-acting aminophylline should discontinue its use 48-72 hours before the study. (Patients taking pentoxifylline [Trental] need not discontinue this medication)



I-131 Whole body