



## PET/CT

# A POWERFUL TOOL FOR YOU

# AND YOUR PATIENTS

### PET/CT – advancing our specialised imaging service

In keeping with our strong tradition of specialised imaging excellence and provision of state of the art technology, PET/CT imaging is now available at North Shore Radiology & Nuclear Medicine (NSRNM), at North Shore Private Hospital. PET/CT offers physicians and their patients an imaging modality that is superior to conventional imaging in the diagnosis, staging and surveillance (restaging) of many malignancies, resulting in improved management for many cancer patients. In addition to its role in oncology, PET/CT has an important role in the imaging of neurological conditions such as dementia and epilepsy.

### How PET/CT works

PET imaging uses a radiopharmaceutical (tracer) which accumulates within malignant tissues. This tracer is detected by a ring of detectors in the PET camera. The most commonly used PET tracer is FDG (fluorodeoxyglucose) which is derived from glucose. The higher metabolic rate of many cancers causes them to have a high rate of glucose metabolism which is demonstrated on the PET/CT scanner as regions of increased FDG accumulation. This relationship between glucose metabolism and FDG accumulation is also utilised for the assessment of brain metabolism in dementia and epilepsy. In patients with prostate cancer, a different PET agent called PSMA (Prostate Specific Membrane Antigen) binds to the cell membrane of prostate cancer cells, providing a highly sensitive scan for the detection of disease in the prostate and elsewhere in the body. Due to the nature of the tracers used, reactions to PET tracers are virtually non-existent.

Our state of the art PET/CT scanner combines the functional imaging provided by PET, with the detailed anatomical information provided by CT, resulting in a hybrid scanner which can provide highly accurate imaging for many patients in a single imaging procedure.

### The Procedure

Patients referred for PET/CT will be required to spend approximately 2 hours at NSRNM. Patients are first injected with the tracer and images acquired about 1 hour later. The actual scan takes about 20 minutes.

### Our Specialist Nuclear Medicine Physicians – the cross campus advantage

Our Nuclear Medicine Specialists work both at North Shore Private Hospital and Royal North Shore Hospital and have extensive experience and expertise in comprehensive cancer imaging and PET/CT. All of the Specialists are actively involved with the multi-disciplinary teams treating patients across the public/private Royal North Shore campus and provide careful interpretation of images to inform the therapeutic discussions at the multi-disciplinary team meetings. Our images are available across the campus networks and can be accessed instantly for the meeting discussions at both hospitals.

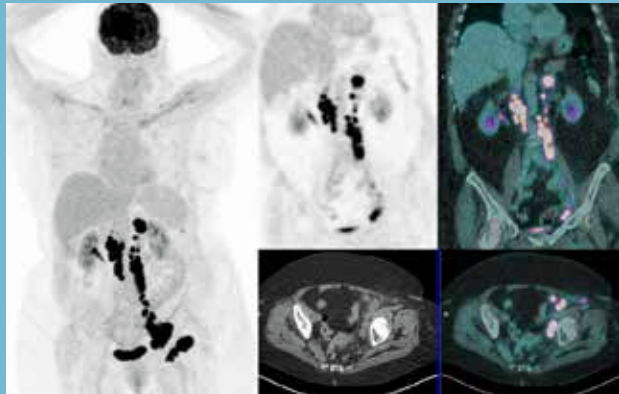


# Our Nuclear Medicine Physician Team



The multi-disciplinary team meetings attended by our Specialist Nuclear Medicine team include:

Head and Neck Oncology  
Lung  
Urology and Prostate  
Breast  
Gynaecology  
Neuro-oncology  
Neuroendocrine Tumour  
Hepatobiliary and Pancreatic  
Upper GIT  
Colorectal  
Endocrine



## Comprehensive and integrated imaging service

North Shore Radiology & Nuclear Medicine is a totally comprehensive and integrated imaging practice, where our Nuclear Medicine Specialists and Radiologists work together as a team to bring the maximum expertise to our patients and their referrers. Patient convenience is maximised by coordinated imaging scheduling should a patient require more than one imaging study

