

## Referral information for general nuclear medicine procedures

The table below lists the referral criteria for Nuclear Medicine procedures performed within MFT. For criteria outside of these guidelines, please contact the respective department to speak with a Nuclear Medicine Practitioner. All imaging examination may also require an additional low-dose CT study to be performed to aid localisation of abnormal findings. This would add 1-2 mSv to the overall exposure and is authorised locally under protocol or by a Practitioner after review of the images. The effective doses are quoted in mSv, for comparison the average UK annual background level of radiation is 2.4 mSv.

Procedure	Referral Indications	Patient Preparation	Effective Dose
<b>Skeletal</b>			
Bone scan	Primary or metastatic tumours Trauma Avascular necrosis Infection or inflammation following prosthesis Arthritis/facet joint disease	Good hydration	2.9 mSv
Bone marrow scan	Differentiate between bone marrow and bone activity for patients with suspected infection	None	2.0 mSv
<b>Brain</b>			
Brain scan (DaTScan)	Differential diagnosis of movement disorders Differential diagnosis of dementia Assessment of PD disease severity	Thyroid blockade >1 hour prior to injection List of medications needs to be provided	4.6 mSv
Brain perfusion scan	Evaluation of suspected dementia Evaluation of cerebrovascular disease Presurgical lateralisation and localisation of epileptic foci	None	7.0 mSv

<b>Renal</b>			
Renogram	Assessment of outflow obstruction Urinary tract infection Renovascular disorders Evaluation of renal failure Renal transplant evaluation	Good hydration	0.7 mSv
Renal DMSA scan	Assessment of cortical scarring Divided renal function Detection of ectopic kidney Evaluation of renal transplant	None	0.7 mSv
GFR estimation	To evaluate renal function Assessment of potential live kidney donors Calculations of dose in chemotherapy	None	0.05 mSv
<b>Pulmonary</b>			
Lung ventilation and perfusion scan	Diagnosis of pulmonary embolism Assessment of regional ventilation and perfusion	None A recent chest X-Ray (within 7 days) must be made available.	1.0-2.0 mSv
<b>Cardiac</b>			
MUGA	Assessment of left ventricular function before chemotherapy Monitoring cardiac effects of chemotherapy Evaluation of patients with dyspnoea who are poor echocardiography subjects	None	5.6 mSv
Cardiac amyloid scan	To identify myocardial uptake in patients with suspected cardiac amyloidosis	None	5.6 mSv
<b>Miscellaneous</b>			
Lacrimal scan	Investigate level of impaired drainage in patients with epiphora	None	0.04 mSv

Salivary gland study	Evaluation of patients with persistent dry mouth Evaluate salivary gland function	None	1.0 mSv
Lymphatic drainage study	Evaluate of lymphatic drainage in patients with lymphoedema	None	0.09 mSv
<b>Endocrine</b>			
Parathyroid scan	Suspected parathyroid adenoma	None	8.1 mSv
Thyroid uptake scan	Goitre and evaluation of palpable nodules Hyperthyroidism Thyroiditis	Thyroid medication should be stopped a number of weeks prior to tracer injection, contact the department for further information. No contrast CT scans within 6 weeks	1.0 mSv
<b>Hepatobiliary and splenic</b>			
Liver and spleen scan (colloid or denatured red cell scan)	Suspected splenunculi	None	0.7 mSv
Hepatobiliary function scan (HIDA)	Assessment of functional biliary pain, acute/chronic cholecystitis, biliary patency and gallbladder dysfunction	Nil by mouth for 6 hours	2.0 mSv
<b>Oncology</b>			
Octreotide scan	Localisation of neuroendocrine tumours or metastatic disease	Stop any somatostatin analogue treatments or non-radioactive octreotide therapy	6.0 mSv
MIBG scan	Localisation of neuroendocrine tumours or metastatic disease	Contact department for details of medication to be stopped prior to imaging	5.0 mSv

<b>Gastrointestinal</b>			
Gastric emptying study	Suspected gastroparesis in diabetic patients After gastric surgery When taking medication that affects gastric motility	Nil by mouth for 4 hours (inc. smoking) Certain drugs stopped two days prior to scan, contact the department.	0.9 mSv
Meckel's diverticulum scan	Meckel's diverticulum Suspected ectopic gastric mucosa in children with bowel duplication	Nil by mouth for 4-6 hours Infants may require sedation and nursing support	5.0 mSv
Bile acid absorption study (SeHCAT)	Suspected bile salt malabsorption	Contact department for details of medication to be stopped prior to imaging	0.3 mSv
Gastrointestinal bleed scan	Evaluation of upper and lower gastrointestinal bleeding	Contraindicated in patients receiving blood products	4 mSv
<b>Infection</b>			
Labelled white-cell scan	Inflammatory bowel disease Infected joint after prosthesis	None	2.2 mSv
<b>Therapy</b>			
Thyroid thyrotoxicosis therapy (I-131)	Treatment of an overactive thyroid or subclinical hyperthyroidism	Thyroid function altering medication should be stopped prior to treatment, contact the department for more information. Pregnancy is an absolute contraindication.	