

Radionuclide Radiology Imaging Guidelines

Investigation	Referral Information
Head and Neck	
Dacrosclintigram	To assess lacrimal drainage in epiphora
CSF Leak	Repeated meningitis or orthostatic hypotension. (Please discuss with Department on 4133 as complex arrangements are required)
Sialogram	Xerostomia assessment
Thyroid scan (Tc)	Thyrotoxicosis, assessment for hot or cold nodules Assessment of ectopic thyroid tissue in the neck
Thyroid scan (I-123)	Assessment of distant ectopic thyroid tissue Assessment of retrosternal goitre Assessment of metastatic thyroid carcinoma
Perchlorate discharge test	Suspected Pendred's syndrome
DaTSCAN	Assessment of suspected Parkinsonian syndromes
Parathyroid localisation (Dual tracer)	Biochemically confirmed primary hyperparathyroidism for pre-operative localisation
Respiratory	
VQ scan	Assessment of pulmonary embolism where CTPA is not possible (impaired renal function, contrast allergy etc) Assessment for chronic pulmonary embolic disease
Half dose perfusion only study	Assessment of suspected pulmonary embolism in pregnant patients with bilateral negative Doppler US
Perfusion study	Regional perfusion assessment for lung volume reduction surgery, bullectomy etc.
Aspiration study	To confirm milk aspiration in infants
Cardiac	
Stress / rest perfusion ('Myoview')	Assessment of suspected myocardial ischaemia. Includes ejection fraction and wall motion analysis

Myocardial resting redistribution (Thallium)	Assessment of suspected hibernating myocardium
MUGA ('MyoLVEF')	Assessment of ejection fraction, particularly with use of cardiotoxic drugs such as Herceptin or cardiomyopathies
Cardiac denervation (MIBG)	Chronic cardiac ischaemia assessment Occasionally for subclassification of abnormal DaTSCAN results

Gastrointestinal

Swallow with sucralfate	Identification of mucosal inflammation due to reflux where endoscopy is not possible
Meckel's diverticulum	Identification of ectopic gastric mucosa
HIDA	For suspected biliary dyskinesia Assessment of suspected sphincter of Oddi dysfunction post cholecystectomy Assessment of suspected bile leak Assessment of suspected biliary atresia
MIBG	Assessment of neural crest tumours such as pheochromocytoma Assessment of disease extent / staging, and response to treatment Assessment for 131I-MIBG therapy
Octreotide	Assessment of carcinoid tumours Assessment of therapy response
Spleen scan (denatured red cells)	Identification of accessory splenic tissue / splenosis
GI bleed (red cells)	Identification of slow active bleeding
GI bleed (colloid)	Identification of slow intermittent bleeding
Hepatic haemangioma	Confirm a hepatic haemangioma where CT and US are inconclusive and MRI is not possible
Dynamic liver scan	Assessment of suspected post prandial mesenteric hypertension
Gastric emptying	Assessment of suspected delayed gastric emptying in solid and / or liquid phase
SeHCAT	Assessment of suspected bile salt malreabsorption
Small bowel study	Typically following gastric emptying study for determination of small bowel transit time

Renal

MAG3 renogram	Assessment of suspected dilated or obstructed renal tracts Assessment of suspected ureteric leak Pre- or post-surgical drainage assessment Drainage and split function assessment
Captopril renogram	Detection of functionally significant renal artery stenosis where MRI is not possible
DMSA	Evaluation of cortical scarring Split function assessment Assessment of suspected dromedary hump or focal mass
Indirect micturating cystogram	With MAG3 renogram to evaluate suspected VUR
GFR calculation	Accurate GFR calculation for drug therapy purposes, monitoring or renal donor selection Transplant assessment

Skeletal

Bone scan (+/- SPECT or SPECT-CT)	Assessment of metastatic or primary bone malignancy Evaluation of bone and joint pain Evaluation of indeterminate bone lesions Evaluation of benign osseous processes such as Paget's
3 phase bone scan (+/- SPECT or SPECT-CT)	Assessment of suspected prosthetic complication Evaluation of bone or joint infection Evaluation of stress fractures or stress reaction Evaluation of bone or joint infection

Infection / Inflammation

Tc-HMPAO White cell scan	Pyrexia of unknown origin (consider FDG PET-CT) Inflammatory bowel disease
In-HMPAO white cell scan	Suspected prosthetic infection (after positive bone scan, typically with concurrent marrow scan) Reactivated osteomyelitis

Haematology

Red cell and plasma volume	For assessment of primary vs secondary polycythaemia
Platelet sequestration	Thrombocytopaenic patients considered for splenectomy

Miscellaneous

Gallium scan	PCP in immunocompromised patients with a normal plain film Active vs inactive fibrotic lung disease Assessment of sarcoidosis <i>Please discuss as FDG PET-CT may be more helpful in many situations)</i>
Lymphoscintigraphy	Assessment of swollen upper or lower limbs in suspected primary or secondary lymphoedema
Marrow scan	Assessment of marrow redistribution in suspected prosthetic infections (typically with concurrent white cell scan after a positive bone scan)
Sentinel node study	Assessment of the location of the sentinel node in pre-operative assessment, typically breast cancer, melanoma and squamous cell carcinoma indications

PET-CT

FDG	Oncologic, inflammatory and vasculitis indications. Please click here for current national guidance
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