

CONDITION / CLINICAL PRESENTATION	EXAMINATION TO REQUEST
Cardiac	
Investigation of chest pain or dyspnoea	Tc99m sestamibi myocardial perfusion scan
Diagnose coronary artery disease	Tc99m sestamibi myocardial perfusion scan
Monitor effectiveness of therapy	Tc99m sestamibi myocardial perfusion scan
Select Patients for medical vs surgical therapy	Tc99m sestamibi myocardial perfusion scan
Identify patients at high cardiac risk going to major non cardiac surgery	Tc99m sestamibi myocardial perfusion scan
Monitor effectiveness of therapy for cardiac failure	Gated heart pool scan
Identify right heart failure	Gated heart pool scan
Monitor potential cardiac toxicity from chemotherapy	Gated heart pool scan
Identify shunts and quantify them	QP:QS shunt study (left to right shunt)
Diagnose and characterise acute myocardial infarction	Tc99m sestamibi myocardial perfusion scan or Tc99m pyrophosphate hot spot scan
Assessment of viable myocardium	Resting and redistribution thallium scan
Skeletal/Orthopaedic	
Identify occult bone trauma	Regional bone scan
Detection of stress fractures and shin splints	Regional bone scan
Detection of occult scaphoid fracture	Regional bone scan
Evaluate arthritic changes and extent	Regional bone scan
Diagnose osteomyelitis	Bone and Gallium scan
Assessment of painful joint prostheses	Regional bone scan
Assess mandibular hyperplasia	Regional bone scan with SPECT
Investigate elevated serum ALP	Whole body bone scan
Characterize bone lesions seen on other imaging	Whole body bone scan
Renal	
Detect urinary tract obstruction	Tc99m DTPA scan with Lasix
Diagnose renovascular hypertension	Tc99m DTPA scan with Captopril
Measure total renal function/GFR	TcDTPA scan with GFR
Detect pyelonephritis	Tc99m DMSA
Detect renal scars	Tc99m DMSA
Detect renal transplant rejection	TcDTPA scan
Oncological	
Tumour staging	Bone scan (primary bone cancer, prostate, breast, lung, colon, renal and thyroid cancer, melanoma), PET scan (Lung, Lymphoma)
Identify metastatic sites	Bone scan, PET scan
Monitor response to therapy	Bone scan, PET scan
Pulmonary	
Diagnose pulmonary emboli	V/Q SPECT lung scan
Detect pulmonary complications of AIDS	Gallium scan
Quantify lung ventilation and perfusion for lung reduction surgery	V/Q lung scan
Detect active pulmonary alveolitis/fibrosis/ sarcoid	Gallium scan



CONDITION / CLINICAL PRESENTATION	EXAMINATION TO REQUEST
Endocrine	
Diagnose hyperthyroidism	Tc99m pertechnetate thyroid scan
Assess thyroid nodule function	Tc99m pertechnetate thyroid scan
Hypercalcaemia and primary hyperparathyroidism/parathyroid adenoma localisation	Tc99m sestamibi/technetium pertechnetate thyroid scan
Post thyroid carcinoma assessment	I123 whole body scan
Suspected pheochromocytoma	I123 MIBG
Neurological	
Investigate dementia eg Alzheimers disease	Neurolite brain perfusion scan
Localise seizure foci	Neurolite brain perfusion scan
Gastroenterological	
Detect acute or chronic cholecystitis and acalculous gallbladder disease	Tc99m hepatobiliary scan
Assess post cholecystectomy abdominal pain	Dynamic hepatobiliary scan
Investigate epigastric discomfort and bloating	Gastric emptying study
Assessment of oesophageal function	Oesophageal transit study
Assessment of small bowel function	Small bowel transit study
Constipation	Colonic transit study
Suspected gastro-oesophageal reflux	Gastro-oesophageal reflux or milk Scan
Suspected hepatic haemangioma	Technetium red blood cell liver scan
Other hepatic masses	Liver/spleen scan for assessment of reticular endothelial component or hepatobiliary scan for assessment of hepatocyte components
Investigation of suspected hypersplenism	Liver/spleen sulphur colloid scan
Right iliac foss pain and suspected Meckel's diverticulum	Meckel's diverticular study
Diagnose and assess inflammatory bowel disease	Tc99m labelled white blood cell scan
Lymphatic	
Investigate limb swelling/diagnose lymphoedema	Lymphoscintigraphy
Sentinal node localization	Lymphoscintigraphy
Infection	
Pyrexia of unknown origin	Whole body gallium or WBC scan
Therapy	
Condition	Treatment
Hyperthyroidism	Radionuclide therapy with I131
Multinodular goitre	Radionuclide therapy with I131
Graves' disease	Radionuclide therapy with I131
Thyroid remnant ablation	Radionuclide therapy with I131

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