

Department of Nuclear Medicine

List Of Services

I. Nuclear Imaging Procedures	
Adrenomedullary Scintigraphy (MIBG)	<ul style="list-style-type: none"> • Detection, localization, staging and follow-up of neuroendocrine tumors and their metastases, in particular phaeochromocytomas, neuroblastomas, ganglioneuroblastomas, ganglioneuromas, paragangliomas, carcinoid tumors, medullary thyroid carcinomas, Merkel cell tumors, MEN2 syndromes • Evaluation of tumor response to therapy by measuring the intensity of mIBG uptake and the number of focal mIBG uptake sites • Confirmation of suspected tumors derived from neuroendocrine tissue.
Bone Scintigraphy	<ul style="list-style-type: none"> • Skeletal metastatic disease and staging (e.g., neuroblastoma or cancers of the prostate, breast, lung, or kidney) • Primary bone tumors (benign and malignant) • Occult or stress fractures and shin splints • Osteomyelitis • Avascular necrosis • Arthritides • Complex regional pain syndrome (formerly called reflex sympathetic dystrophy) • Bone infarction • Bone graft viability • Bone pain that is otherwise unexplained • Evaluation of distribution of osteoblastic activity before radionuclide therapy • Accidental and nonaccidental trauma • Further evaluation of skeletal abnormalities incidentally found on other types of imaging studies • Prosthetic hardware complications • Heterotopic ossification • Paget's disease • Fibrous dysplasia • Hypertrophic osteoarthropathy • Bone manifestations of sickle cell disease • Temporomandibular joint disorders

Brain SPECT	<ul style="list-style-type: none"> • Aid in the diagnosis and differential diagnosis of suspected dementia • Detection of seizure focus • Assessment of brain death • Evaluation suspected brain trauma • Neuropsychological disorders: mood disorders, evaluation subtyping, attention deficit disorder • Substance abuse • Infection/ inflammation • Alzheimer's disease
Dynamic Lymphoscintigraphy	<ul style="list-style-type: none"> • Bilateral or unilateral lymphadema
Gastro Esophageal Reflux Scintigraphy	<ul style="list-style-type: none"> • may give unique and useful physiologic information in patients whose history, signs or symptoms suggest possible incompetence of the gastroesophageal sphincter associated with acute or chronic reflux of gastric contents into the esophagus.
Gallium-67 Scintigraphy	<ul style="list-style-type: none"> • For localization of infection or for tumor localization especially for patients with malignant lymphoma.
Gastrointestinal Bleed Scintigraphy (RBC Tagging)	<ul style="list-style-type: none"> • Demonstrate the presence and site of acute gastrointestinal bleeding.
Heat Damaged Spleen Imaging Scintigraphy	<ul style="list-style-type: none"> • In children to rule out congenital asplenia or polysplenia • In adults whose thrombocytopenia has been treated previously with splenectomy • For characterizing an incidentally noted mass as functional splenic tissue
Hepatobiliary Scintigraphy	<ul style="list-style-type: none"> • Acute cholecystitis • Biliary system patency • Bile leakage • Neonatal hyperbilirubinemia (biliary atresia vs. neonatal hepatitis "syndrome") • Assessment of biliary enteric bypass (e.g., Kasai procedure)
Liver / Spleen Scintigraphy	<ul style="list-style-type: none"> • Assessing the size, shape, and position of the liver and spleen. • Detecting, measuring, and monitoring masses of the liver and/or spleen. • Differentiating hepatic hemangiomas and focal nodular hyperplasia from other liver lesions. (99mTc-labeled red blood cell scanning)

Lung perfusion Scintigraphy	<ul style="list-style-type: none"> • Diagnosis of pulmonary embolism • Evaluation of regional pulmonary perfusion
Lung ventilation Scintigraphy	<ul style="list-style-type: none"> • Diagnosis of pulmonary embolism • Evaluation of regional ventilation
Meckel's Diverticulum Scintigraphy	<ul style="list-style-type: none"> • to localize ectopic gastric mucosa in a Meckel's diverticulum as the source of unexplained gastrointestinal bleeding
Myocardial perfusion Stress /Rest Protocols Thallium. Technetium Sestamibi	<ul style="list-style-type: none"> • Evaluation of known coronary artery disease; location and extent of ischemia. • Differentiation of scar tissue from viable myocardium. • Evaluation and prognosis post myocardial infarction. • Assessment of medical therapy. • Assessment after percutaneous transluminal coronary angioplasty or coronary artery bypass grafting. • Evaluation of myocardial reserve Preoperative evaluation for major non-cardiac surgery. • Guide to rehabilitation therapy. • Screening high-risk patient population.
Parathyroid Scintigraphy	<ul style="list-style-type: none"> • Parathyroid scintigraphy is performed to detect and localize parathyroid adenomas. • Indicated for the localization of sites of parathyroid hyperactivity in patients with elevated serum calcium and parathyroid hormone levels
Radionuclide Dacryoscintigraphy	<ul style="list-style-type: none"> • Detection of subclinical lacrimal duct obstruction, • Evaluating the success of dacryocystorhinostomy.
Radionuclide Ventriculography or Equilibrium Radionuclide Angiography (MUGA Scan)	<ul style="list-style-type: none"> • For evaluation of the sizes of the different chambers of the heart • For evaluating wall motion and left or right ventricular ejection fraction in patients who are undergoing cardiotoxic drug agents such as in chemotherapy e.g., with doxorubicin or immunotherapy (herceptin)
Renal Cortical Scintigraphy	<ul style="list-style-type: none"> • Acute pyelonephritis • Renal scarring • Relative functioning renal mass • Solitary or ectopic renal tissue (e.g., pelvic kidney) • Horseshoe and pseudohorseshoe kidneys
Renal Scintigraphy, Renal Diuretic Scintigraphy, Captopril Augmented Renal Scintigraphy, In-Vitro Glomerular Filtration Rate (GFR)	<ul style="list-style-type: none"> • Acute and chronic renal failure • Unilateral/bilateral renal disease (space occupying lesions included) • Obstructive uropathy • Renovascular hypertension

	<ul style="list-style-type: none"> • Status post renal transplantation
Salivary Gland Scintigraphy	<ul style="list-style-type: none"> • Obstruction with or without Parenchymal Damage • Diagnosis of Sjogren's Syndrome • Parenchymal Damage After Radioiodine Treatment
Scintimammography	<ul style="list-style-type: none"> • Detection of breast cancer when mammography is doubtful, inadequate or indeterminate. In particular, it may serve as a complementary procedure in patients with doubtful microcalcifications or parenchymal distortions, in the presence of scar tissue in the breast following surgery or biopsy, in mammographically dense breast tissue, and in breasts with implants;
Sentinel Node Lymphoscintigraphy/ Lymph Node Mapping	<ul style="list-style-type: none"> • Helps identify the first few or sentinel lymph nodes that filter lymph fluid from the site of a cancer-those most likely to be affected by cancer.
Testicular Scintigraphy	<ul style="list-style-type: none"> • Assessment of blood flow to the scrotum • To evaluate for emergent causes of acute or subacute scrotal pain • To differentiate suspected testicular torsion from epididymo-orchitis
Thyroid Scintigraphy (Technetium-99m, Iodine-131)	<ul style="list-style-type: none"> • Evaluation of the size and location of thyroid tissue. • Evaluation of hyperthyroidism. • Assessment of the function of thyroid nodules identified on clinical examination or ultrasound or by other diagnostic imaging. • Evaluation of congenital thyroid abnormalities.
Thyroid Uptake (Iodine-131)	<ul style="list-style-type: none"> • Differentiating hyperthyroidism from other forms of thyrotoxicosis • Calculating iodine-131 administered activity for patients to be treated for hyperthyroidism or ablative therapy
Whole body I-131 Scintigraphy	<ul style="list-style-type: none"> • Evaluation for functioning thyroid tissue either recurrent in the thyroid or metastases.

II. Radioimmunoassay/Immunoradiometric Assay
TSH-IRMA
FT4- RIA
FT3-IRMA
ANTI-TPO
ANTI-TG
THYROGLOBULIN

III. Therapeutic Procedures	
Radioactive Iodine-131 Therapy	<ul style="list-style-type: none"> • High dose Well Differentiated Thyroid Cancer • Low dose Hyperthyroidism treatment of Graves' disease toxic multinodular goiter
Bone Pain Palliation Therapy (Strontium-89 or Samarium-153 Ethylenediaminetetrameth- ylenephosphonate (EDTMP))	<ul style="list-style-type: none"> • Indicated for the treatment of bone pain resulting from a metastatic malignancy that has involved multiple skeletal sites and has evoked an osteoblastic response on bone scintigraphy.