Clinical Indications

**Cardiology**

**Myocardial Perfusion Scan** *(Myoview/Thallium)*
- Assessment of Chest Pain
- Detecting the presence, location, and extent of coronary artery disease
- Evaluating the prognostic significance of coronary artery disease
- Detection of silent ischemia
- Preoperative risk stratification for during non-cardiac surgery
- Pre and Post angioplasty / coronary artery bypass assessment and monitoring
- Assessment of functional significance of borderline angiographic lesions
- General and post myocardial infarction stratifying risk of myocardial events
- Assessment of myocardial viability post infarction
- Detecting risk stratification in diabetic patients.
- Assessing myocardial ischemia in patients with a positive or equivocal GXT

**Ventricular Function Study (MUGA)**
- Quantifying parameters of ventricular function (e.g., ejection fraction, wall motion, ventricular volume, cardiac output, diastolic function).
- Assessing cause of congestive heart failure (ischemic vs. nonischemic)
- Monitoring cardiotoxic effects of chemotherapy
- Evaluating the effects of valvular abnormalities
- Cardiomyopathy

**Graded Exercise Test (GXT)**
- Assessment of chest pain in low risk patients
- Assessment of exercise induced arrythmias
- Evaluation of patients with rate-responsive pacemakers

**Ambulatory Blood Pressure Monitor**
- White coat hypertension
- Monitor efficacy of antihypertensive medication
- Assess nocturnal blood pressure pattern
- Assess pulse pressures

**Holter Monitor**
- Syncope
- Arrhythmias / Palpitations
- Response to Medication
- Silent Ischemia

**Loop/Cardiac Event Monitor**
- Infrequent transient symptoms
- Same indications as holter monitor

**Echocardiography**
- Valvular disease (regurgitant lesions and valve gradients)
- Hypertensive heart disease (left ventricular hypertrophy and qualitative diastolic function)
- Murmurs
- Arrhythmias/palpitations
- Coronary artery disease (wall motion abnormalities)
- Assessment of cardiogenic sources of emboli
- Cardiomyopathy eg. Hypertrophic
- Need for antibiotic prophylaxis
- Pulmonary hypertension

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**General Nuclear Medicine**

**Gastrointestinal System**

**Liver/Spleen Scan**
- Hepatomegaly
- Focal nodular hyperplasia
- Budd-Chiari Syndrome
- Hepatic function in acute or chronic liver disease.

**RBC Liver Scan**
- Hepatic hemangiomas
Gastric Emptying Scan
- Rate of emptying and transit to bowel: delay vs. dumping
- Esophageal reflux
- Diabetic gastroparesis

Esophageal Transit Scan
- Transit time through esophagus
- Scleroderma
- Diffuse esophageal spasm

GI Bleed Scan
- Presence and site of active bleeding

Biliary Scan
- Acute vs. chronic cholecystitis
- Gallbladder ejection fraction
- Biliary dyskinesia
- Biliary Obstruction
- Biliary System patency and leakage

Salivary Scan
- Obstruction
- Tumors
- Sjogren's Syndrome

Meckel's Diverticulum
- Ectopic gastric mucosa

Respiratory System
Ventilation / Perfusion Lung Scan
- Assess the probability of acute pulmonary embolism
- Assessment of chronic pulmonary hypertension
- Quantify ventilation and perfusion

Genitourinary System
Renal Scan with GFR
- Function of each kidney
- Renal failure
- Assessment of transplant kidneys

Renal Cortex Scan
- Renal infarction
- Pyelonephritis
- History of reflux assessment of scarring

Renal Scan with Lasix
- Obstruction
- Assess and quantify degree of obstruction

Renal Scan with Captopril
- Renovascular hypertension
- Onset of early hypertension (<30 yrs)

Skeletal System
Bone Scan
- Bone pain
- Occult fractures
- Stress fracture
- Arthritis
- Skeletal metastases
- Elevated alkaline phosphatase
- Primary bone tumor
- Osteomyelitis
- Reflex Sympathetic Dystrophy
- Prosthetic Complication
- Avascular necrosis
- Paget's disease
- Vascularity / viability of bone graft
- Bone infarction in Sickle Cell disease

Gallium Scan
- Osteomyelitis
- Fever of unknown origin
- Occult infection (localizing source of sepsis)
- Postoperative infection

Endocrine System
Thyroid Scan and Uptake
- Size and location of thyroid gland
- Functional status of nodules
- Hyperthyroidism
- Grave's disease
- Toxic nodular goiter
- Dosage for therapy
- Ectopic thyroid tissue
- Congenital hypothyroidism
- Neck or substernal mass
- Evaluation of abnormal bloodwork (T3, T4, TSH)
- Thyroiditis

Parathyroid Scan
Parathyroid adenoma or hyperplasia
Abnormal bloodwork post surgery
Ectopic parathyroid tissue
Hypercalcemia
Increased PTH
Waterloo Nuclear and Radiography

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• Mammography - DR
• Holter Monitor
• Event Loop
• Echo Cardio

* Walk-in ultrasounds are based on availability; walk-ins cut their waiting time with a quick phone call ahead. All other services require appointments (except x-ray).