

# LANCASTER RADIOLOGY ASSOCIATES, LTD.

## **NUCLEAR MEDICINE**

### **What it is:**

Nuclear medicine differs from other imaging procedures by helping a physician assess how organs and the blood supply of an individual are functioning, as opposed to providing purely anatomical diagnostics. Nuclear medicine uses radiation to detect subtle abnormalities that often cannot be identified through conventional radiography, and often allow diseases and cancer to be detected much earlier than through traditional diagnostics. Although there are many uses for nuclear medicine, common applications include screening for bone metastases and tumor burden in cancer patients, reversible or irreversible coronary artery disease in cardiac patients, lung disease in patients suspected of having pulmonary emboli, and renovascular disease in hypertensive patients.

### **What you need to know:**

Patients that undergo a nuclear medicine procedure will receive a dose of radiation through injection into their bloodstream. This is called a tracer. It is generally accepted that any radiation dose, however small, presents a risk. The radiation doses delivered to a patient in a nuclear medicine investigation, however, are similar or less than those that a patient would receive during a Diagnostic Radiology (X-Ray) procedure, except the dose is delivered internally rather than externally.

### **How to prepare:**

#### **BILIARY SCAN OR MECKELS SCAN:**

- Do not eat or drink for 4 hours before the scan, and do not take any pain medication 4 hours prior to exam. Allow approximately 1 hour for the examination.

#### **BONE SCAN:**

- No restrictions, but do wear comfortable clothing. Allow 15 minutes for injection. You will return 2 1/2 hours to 3 1/2 hours later for imaging. Allow 1 hour for the examination.

#### **CAPTOPRIL RENAL SCAN (2 Day Exam):**

- Certain blood pressure medications may need to be stopped for this procedure—discuss this with your doctor or nuclear medicine technologist. Allow 1 hour on day one for the examination. Allow 2 hours on day two for the examination.

#### **CARDIOLITE STRESS TEST / PERSANTINE STRESS TEST:**

- Eat a light breakfast. Do not consume any form of caffeine for 24 hours (including coffee, tea, chocolate, cola beverages). Wear comfortable clothing and rubber soled shoes. It is helpful for women to wear a blouse that opens in the front. Questions about medications you are taking should be directed to your cardiologist. Allow 2 hours for the examination. You will then need to return 2 hours after the initial scan for 1 1/2 hours.

#### **GASTRIC EMPTYING SCAN:**

- Do not eat or drink for 4 hours before the scan. Allow 2 hours for the examination.

THYROID SCAN / THYROID UPTAKE AND SCAN (2 Day Exam):

- Certain medications need to be stopped for this procedure. This can be discussed with your doctor or nuclear medicine technologist.