

What is a Nuclear Medicine Scan?

A **nuclear medicine (NM)** scan is a diagnostic exam that provides your doctor with important information about organ function. In nuclear medicine imaging radiopharmaceuticals (radioactive medicine or tracers) are taken orally, by intravenous injection or inhalation. Special cameras then capture and form images from the radiation emitted by the radiopharmaceuticals in the body. This process is different from diagnostic X-rays which pass external radiation through the body to form the images. NM scans determine the presence of disease based on biological and anatomical changes, i.e. how an organ functions, and what it looks like. Nuclear Medicine scans allow us to evaluate the function of a number of organs including the thyroid gland, lungs, heart, stomach, kidneys, and gallbladder. Further, NM scans allow us to monitor certain types of cancer, detect a number of bone and joint abnormalities such as fractures, arthritis or tumors, and evaluate certain neurological diseases, infection and blood volume.



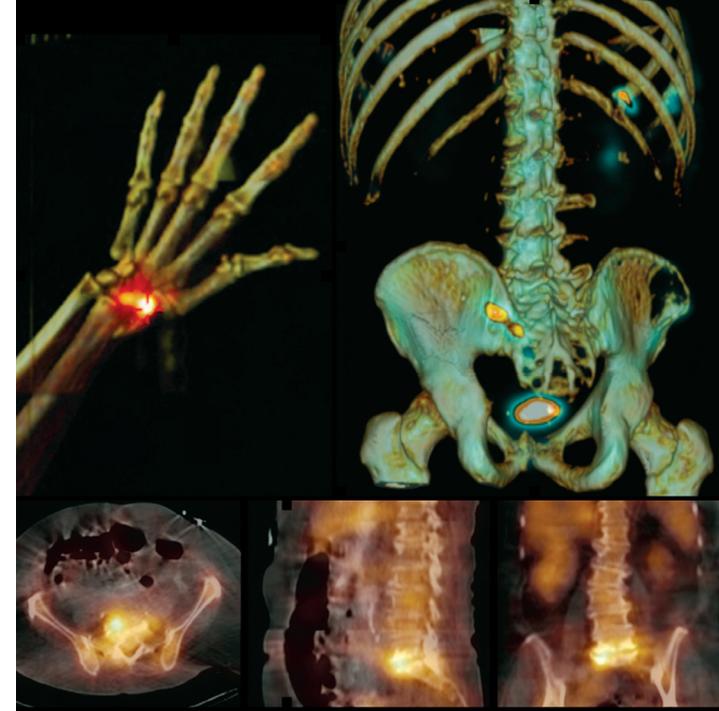
Westchester Medical Center is the Hudson Valley region's leading advanced care and referral hospital, serving over 3.5 million people. From the latest technology and life-saving procedures, to nationally recognized doctors, nurses and staff, we are here for you. Located in Valhalla, New York, Westchester Medical Center is the Hudson Valley region's advanced medical care and referral hospital, serving more than 3.5 million people. Each year, more than 120,000 patients receive care at Westchester Medical Center in every clinical specialty through our main hospital, our Maria Fareri Children's Hospital – the only all-specialty children's hospital in the region - and our Behavioral Health Center. Westchester Medical Center's services are also accessible to residents of New York City and portions of Fairfield County, Connecticut.

Westchester Medical Center Department of Nuclear Medicine

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Nuclear Medicine

What is a SPECT-CT?

SPECT (Single photon emission computed tomography) is a sophisticated type of NM scanning technology that utilizes computer processing to provide three dimensional (3D) NM imaging. SPECT-CT imaging combines SPECT imaging with CT technology. Westchester Medical Center's advanced SPECT-CT scanner produces state-of-the-art high resolution detailed 3D nuclear medicine imaging along with enhanced localization of abnormalities. This allows for biological functions to be precisely placed over anatomical layout.

How should I prepare for my Nuclear Medicine Scan?

Preparation for a nuclear medicine procedure depends on the type of exam you are having. Accurate test results depend on proper preparation for your scan. Below are general guidelines for different types of exams. Specific instructions for your scan will be provided to you when you schedule your appointment. Also, when scheduling your exam, be sure to alert us if you have any allergies or special medical problems or needs.

- The radioactive medicine or tracer is made precisely for the time of your exam, so it is very important that you be on time for your appointment.
- Your doctor will give you instructions about eating, drinking, or taking medications prior to your exam. Please provide a complete list of your medications to your doctor.
- If you have diabetes, check with your doctor for specific instructions about eating and taking medications on the day of your exam.
- Wear loose, comfortable clothing to the exam.
- If you are claustrophobic or worried about lying still during the exam, please discuss this with your doctor ahead of time. Your doctor may order medication to help you to relax during the procedure.
- If there is any chance that you may be pregnant or if you are breast feeding, talk to your doctor before scheduling the exam.

What can I expect during the NM Scan?

Nuclear medicine scans are safe procedures. Prior to the exam, a small amount of radioactive medicine, also known as tracer, will be administered usually by intravenous injection, but sometimes by mouth or by inhalation. After allowing time for the tracer to distribute throughout your body, special cameras are utilized to acquire images. Depending upon the type of exam your doctor has ordered, you may come in first for the administration of the radioactive tracer, and then return later for the actual exam. Sometimes the entire procedure may be done during one visit. There are also some exams that require multiple visits in a day or over a few days. When it is time to acquire the images with the camera, you will lie on an exam table. It is important to be able to lie still. The technologist will be with you during the exam, to assist in making you comfortable.

How long will the NM scan take?

Image acquisition times vary from approximately 30 minutes to 2 hours depending upon what your doctor has ordered.

Are there any restrictions following my NM Scan?

Usually, there are no restrictions following diagnostic nuclear medicine scans. If you care for infants or young children, please tell the technologist PRIOR to your scan so that the technologist or nuclear medicine physician can provide you with aftercare instructions tailored to your individual needs. Also, if you took medication to help you relax, you will need someone else to drive you home.

How do I find out the results of my NM scan?

Your NM scan will be interpreted by a Nuclear Medicine Radiologist. The Radiologist evaluates your exam results and dictates a diagnostic report which is sent to your doctor. Your doctor will discuss the results with you.

Safety Considerations

Westchester Medical Center adheres to the strictest radiation safety standards. The smallest amount of radioactive material possible is utilized to perform the scan. Women who are or may be pregnant or are breastfeeding must inform the technologist prior to receiving any radiopharmaceuticals.

Types of NM Scans offered at Westchester Medical Center (WMC)

Bone Scan

Hepatobiliary Scan

Thyroid Scan

Parathyroid Scan

MIBG

Octreotide

Lung Scan

Renal Scans

Lymphoscintigraphy

Gastric Emptying Scans

Neurologic Scans

Blood Volume Analysis

Infection Studies

Cisternogram

