Neuroendocrine Tumor Imaging

An Introductory Guide For Patients And Their Families
Why has my doctor ordered a neuroendocrine tumor imaging test?

Your doctor has ordered that you have a nuclear medicine test to better understand your medical condition. The test your doctor has ordered for you is an Octreoscan™ imaging agent study. This type of nuclear medicine test is used to look for and locate neuroendocrine tumors in the body. The test can also help doctors determine whether the cancer has spread to other areas and recommend treatments.

How does this test work?

You will be given a small amount of radioactive material — called a tracer — that is usually injected into a vein in your arm or hand. The tracer quickly moves to and collects in specific organs where it sends signals, or gamma rays. The medicine used in this exam is designed to bind to neuroendocrine tumors that have certain proteins called somatostatin receptors on the surface of the cancer cells.

The neuroendocrine system is made up of the nervous system and the hormones and the glands that make and release them into the bloodstream. Neuroendocrine tumors are a rare, generally slow growing type of cancer.

A special camera (called a gamma camera) can detect the energy emitted by the tracer and identify the sites in your body where the drug has accumulated. These areas will appear on the scan and help your doctor to evaluate your medical condition.
What will the exam be like?

The test is done in a hospital or outpatient clinic that offers this type of imaging. Typically, a technologist with special training in nuclear medicine will conduct the test and monitor you throughout your exam.

Do I need to prepare for the test?

Diet. There are no dietary restrictions prior to this test.

Water. Unless your doctor tells you otherwise, you should drink extra water the day before your exam and for two days after. The more often you urinate, the faster you remove the excess materials not used by your body for the scan. Usually in patients with good kidney function, most of the radioactivity (85 percent) will be removed from the body within 24 hours.

Medications. Tell your doctor about any medications you are taking, including octreotide acetate, over-the-counter medications and supplements. He or she may decide to temporarily discontinue certain medications before the exam.

You may be asked to take a mild laxative before your scan. This can help the doctor see your abdomen more clearly.

Are there any concerns with this test?

Don’t let the words “nuclear” or “radioactivity” scare you. These tests are designed to expose you to the least amount of radiation possible. The drug that will be used during this procedure is prepared with exceptional care and has been approved by the U.S. Food and Drug Administration. However, there is always a chance that you may have a reaction to the drug. It is important to tell your doctor or the person conducting the exam of any unusual reactions or feelings that you may have during or after the exam.

Important Risk Information

Be sure to talk with your doctor before having this test if you:

- Have serious kidney problems
- Receive nutritional fluids through a tube in your vein (called total parenteral nutrition)
- Take octreotide acetate (Sandostatin®)
- Are being tested for a possible tumor in your pancreas
- Are pregnant, trying to become pregnant or breast feeding

Side effects are rare (seen in less than 1% of the patients studied) and may include: dizziness, fever, flush, headache, low blood pressure, changes in liver enzymes, joint pain, nausea, sweating and weakness. A very small number of patients have reported a slow heartbeat or reduced hematocrit and hemoglobin levels.

The safety and effectiveness of this procedure have not been determined in patients under 18 years old.
What can I expect?

There are several parts to this test. Here is a basic description of what you can expect.

**Injection.** During your first appointment, the technologist will insert a tube called an intravenous (IV) line into a vein in your arm or hand. You may feel a slight prick and a small amount of tracer will be injected. The technologist will also explain the test, answer questions and give you instructions for taking a laxative (usually the evening before your second scan). You may be in normal contact with your family and friends after the injection. Also, you may eat, drink, bathe and use the toilet without any special precautions.

**Waiting period.** The tracer will be allowed to circulate for four to 24 hours before your first scan is performed. During this time, the drug will collect in the area or areas of interest to your doctor. You will be told when to return for your scan. Use the space on the back of this brochure to write down the dates, times and location.

**Scans.** After the waiting period, you will return to be scanned up to three times. The technologist will ask you to lie on your back on the exam table. A gamma camera will move over and around you to take the images. A number of pictures will be taken at different locations on your body. Scan times are usually at four hours, 24 hours and possibly 48 hours after your injection. This timing may vary. Each scan may take up to one hour or longer to perform.

During the test, you will need to remain as still as possible. This will help prevent the images from blurring, which can make it difficult for the doctor.

How long does the test take?

The entire test may take place over several days. Ask your doctor or the technologist performing the exam to discuss your specific exam timing.

Is there anything special I need to do after the test?

The radioactive tracer usually does not stay in the body for very long. Before your test, ask your doctor for specific instructions regarding resuming normal activities.

How do I get the results of this test?

When the testing is over, a doctor trained in nuclear medicine or radiology will review the images and send a written report to your doctor. Your doctor will then discuss the results with you. Be sure to ask your doctor what the test results mean and what you should do next.

Talking with your health team

Be sure to talk with your health team if you have any concerns. Here are some questions you might want to ask your doctor:

- Why is this test being ordered?
- How many different scans/appointments will I have?
- Should I do anything to prepare?
- Is it safe?
- Will this test be covered by my health insurance?
- When will I get the results?
- When can I resume normal activities?
Your examination has been scheduled for:

Location: ________________________________
Phone: _________________________________
Floor: _______________  Room: ____________
Doctor: _________________________________
Injection date: ___________  Time: __________
First scan date: ___________  Time: __________
Second scan date: ___________  Time: __________
Third scan date: ___________  Time: __________

Remember
Unless otherwise instructed by your physician, you should drink extra amounts of water the day before your appointment and for two days after the procedure.

Attention
If you are pregnant or trying to get pregnant, or if you are breast feeding, notify your doctor before having this procedure.

An educational service from Curium.

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