

Neuroendocrine Tumor - Diagnosis [1]

This section has been reviewed and approved by the [Cancer.Net Editorial Board \[2\]](#), 04/2014

ON THIS PAGE: You will find a list of the common tests, procedures, and scans that doctors can use to find out what's wrong and identify the cause of the problem. To see other pages, use the menu on the side of your screen.

Doctors use many tests to diagnose a tumor, determine whether it is cancerous, and if so, find out if it has spread to another part of the body, called metastasis. Some tests may also determine which treatments may be the most effective. For most types of tumors, a biopsy is the only way to make a definitive diagnosis of cancer. If a biopsy is not possible, the doctor may suggest other tests that will help make a diagnosis. Imaging tests may be used to find out whether a cancerous tumor has spread. This list describes options for diagnosing this type of tumor, and not all tests listed will be used for every person. Your doctor may consider these factors when choosing a diagnostic test:

- Age and medical condition
- Type of tumor suspected
- Signs and symptoms
- Previous test results

In addition to a physical examination, the following tests may be used to diagnose a neuroendocrine tumor:

Blood/urine tests. The doctor may need samples of the patient's blood and urine to check for abnormal levels of hormones and other substances. Urine tests check for increased levels of adrenaline in the body. Large amounts of adrenaline can be a sign of pheochromocytoma. The glucagon stimulation test and clonidine (Catapres) suppression test are blood tests that measure adrenaline levels over a period of time for people who sometimes have symptoms of

pheochromocytoma. During the glucagon stimulation test, glucagon, a hormone produced by the pancreas that helps the body process carbohydrates, is injected into a vein, and blood samples are drawn at specific times to measure the adrenaline levels. During the clonidine suppression test, a tablet of the drug clonidine is swallowed, and blood samples are taken at regular intervals over the next three hours. Clonidine is used to lower adrenaline levels in the blood, so if these levels do not decrease during testing, it may be a sign of a tumor. Blood pressure and heart rate are also carefully monitored during these tests.

X-ray. An x-ray is a way to create a picture of the structures inside of the body, using a small amount of radiation.

[Computed tomography \(CT or CAT\) scan](#) [3]. A CT scan creates a three-dimensional picture of the inside of the body with an x-ray machine. A computer then combines these images into a detailed, cross-sectional view that shows any abnormalities or tumor. A CT scan can also be used to measure a tumor's size. Sometimes, a special dye called a contrast medium is given before the scan to provide better detail on the image. This dye can be injected into a patient's vein or given as a pill to swallow.

[Magnetic resonance imaging \(MRI\)](#) [4]. An MRI uses magnetic fields, not x-rays, to produce detailed images of the body. MRI can also be used to measure a tumor's size. A special dye called a contrast medium is given before the scan to create a clearer picture. This dye can be injected into a patient's vein or given as a pill to swallow.

[Biopsy](#) [5]. A biopsy is the removal of a small amount of tissue for examination under a microscope. Other tests can suggest that cancer is present, but only a biopsy can make a definite diagnosis. The sample removed during the biopsy is analyzed by a pathologist. A pathologist is a doctor who specializes in interpreting laboratory tests and evaluating cells, tissues, and organs to diagnose disease.

Molecular testing of the tumor. Your doctor may recommend running laboratory tests on a tumor sample to identify specific genes, proteins, and other factors unique to the tumor. Results of these tests will help decide whether your treatment options include a type of treatment called targeted therapy. See the [Treatment Options](#) [6] section for more information.

After diagnostic tests are done, your doctor will review all of the results with you. If the diagnosis is a cancerous neuroendocrine tumor, these results also help the doctor describe it; this is called staging.

The next section helps explain the different stages for this type of tumor. Use the menu on the side of your screen to select Stages, or you can select another section, to continue reading this guide.

- [1] <http://www.cancer.net/cancer-types/neuroendocrine-tumor/diagnosis>
- [2] <http://www.cancer.net/about-us>
- [3] <http://www.cancer.net/node/24486>
- [4] <http://www.cancer.net/node/24578>
- [5] <http://www.cancer.net/node/24406>
- [6] <http://www.cancer.net/node/19443>