

## **Gastrointestinal Stromal Tumor - GIST - Diagnosis** [1]

This section has been reviewed and approved by the [Cancer.Net Editorial Board](#) [2], 12/2014

**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, find out if it is cancerous, and if it is, learn whether the tumor 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. 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 the cancer has spread. This list describes options for diagnosing this type of cancer, 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 GISTs or determine the best treatment:

**Computed tomography (CT or CAT) scan** [3]. A CT scan is the most common test used to diagnose GISTs. 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 tumors. A CT scan can also be used to measure the tumor's size or help doctors determine whether the cancer has spread to the liver. 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 liquid to swallow.

**Fecal occult blood test** [4]. This test detects blood that can't be seen in the stool, which can be caused by cancer in the GI tract. A small amount of stool is placed on a plastic slide or special paper and is tested in the doctor's office or a laboratory.

**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. X-rays may be taken of the esophagus and stomach, which are referred to as the upper GI tract. This procedure is also called a barium swallow, because the x-rays are taken after a patient drinks a substance called barium, which outlines the GI tract on the x-ray and helps the doctor see a tumor or other abnormal areas. During a barium enema [5], the doctor looks at the lining of the colon and rectum on an x-ray after the barium has been given through the anus.

**Endoscopy** [6]. This test allows the doctor to see the inside of the stomach. The patient may be sedated, and the doctor inserts a thin, lighted tube called a gastroscope through the mouth, down the esophagus, and into the stomach and small bowel. Sedation is giving medication to become more relaxed, calm, or sleepy. If abnormal areas are found, the doctor can remove a sample of tissue and check it for evidence of cancer (see Biopsy, below). A special type of test called a capsule endoscopy involves swallowing a small camera, which allows very clear viewing of the small intestine. It is rarely used but can be useful when other diagnostic methods have failed to pinpoint the cause of GI bleeding.

**Endoscopic ultrasound.** This test is similar to an endoscopy, but the scope has a small ultrasound probe on the end that uses sound waves to create an image of the stomach or rectum and nearby organs. The ultrasound image helps doctors determine if or how far the cancer has spread into nearby tissues.

**Magnetic resonance imaging (MRI)** [7]. An MRI uses magnetic fields, not x-rays, to produce detailed images of the body. MRI can also be used to measure the 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 liquid to swallow.

**Positron emission tomography (PET) scan** [8]. A PET scan is a way to create pictures of organs and tissues inside the body. A small amount of a radioactive sugar substance is injected into the patient's body. This sugar substance is taken up by cells that use the most energy. Because cancer tends to use energy actively, it absorbs more of the radioactive substance. A scanner then detects this substance to produce images of the inside of the body. PET scans are often used to add to the information gathered from the CT scan, MRI, or physical examination. They may also be used to show early growth of the disease (called PET flare) or to measure how well treatment is working.

**Biopsy** [9]. A biopsy may be recommended if a mass suspected of being a GIST is found. 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 diagnosis. The type of biopsy performed will depend on the location of the tumor. 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. Sometimes, surgery is recommended even if the biopsy results do not indicate cancer, as a biopsy for GIST is not always definitive. In some instances, an entire tissue mass or an organ will be removed to make a diagnosis. However, it is very important that you see a team of medical and surgical oncologists experienced in the treatment of GISTs before a big surgery is performed.

**Molecular testing of the tumor.** Your doctor may suggest running laboratory tests on a tumor sample to identify specific genes, proteins, and other factors unique to the tumor. Studies have shown that depending on the tumor's specific gene mutations, some patients may need higher doses of imatinib to best control the tumor or they might not benefit from taking this drug at all. Testing each patient's tissue for genetic mutations can also help doctors target the specific mutation causing the tumor to grow (see [Treatment Options](#) [10]). This testing is clinically available and also used in research studies. Treatment for a GIST can start before this type of testing is completed, but the results of this test may change the treatment plan after it has begun.

After diagnostic tests are done, your doctor will review all of the results with you. If the diagnosis is a GIST, these results also help the doctor describe the tumor; 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.*

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**Links:**

[1] <http://www.cancer.net/cancer-types/gastrointestinal-stromal-tumor-gist/diagnosis>

[2] <http://www.cancer.net/about-us>

[3] <http://www.cancer.net/node/24486>

[4] <http://www.cancer.net/node/24523>

[5] <http://www.cancer.net/node/24402>

[6] <http://www.cancer.net/node/24511>

[7] <http://www.cancer.net/node/24578>

[8] <http://www.cancer.net/node/24648>

[9] <http://www.cancer.net/node/24406>

[10] <http://www.cancer.net/node/18876>