

[Home](#) > [Navigating Cancer Care](#) > [Diagnosing Cancer](#) > [Tests and Procedures](#) > [Biopsy](#)

Printed January 29, 2015 from <http://www.cancer.net/navigating-cancer-care/diagnosing-cancer/tests-and-procedures/biopsy>

Biopsy [1]

This section has been reviewed and approved by the [Cancer.Net Editorial Board](#) [2], 03/2013

 [Listen to the Cancer.Net Podcast: Biopsy - What to Expect](#)[3], adapted from this feature

A biopsy is a medical procedure that, for most types of cancer, is the only way to make a definitive cancer diagnosis, as it provides the most accurate analysis of tissue. Often, doctors will recommend a biopsy after a physical examination or imaging study, such as an x-ray, has identified a possible tumor. During the biopsy, the doctor removes a small amount of tissue so it can be examined under a microscope by a pathologist (a doctor who specializes in interpreting laboratory tests and evaluating cells, tissues, and organs to diagnose disease). Based on this analysis, the pathologist determines whether the tissue that was removed contains a tumor and whether this tumor is benign (noncancerous) or malignant (cancerous, meaning that it can spread to other parts of the body).

About the procedure

Depending on the part of the body under examination, whether it is the skin, an area just below the skin, or an internal organ, a biopsy can be a simple outpatient surgical procedure performed in a doctor's office or an invasive surgery requiring hospitalization.

The types of biopsies include:

Fine needle aspiration biopsy. A fine needle biopsy may be the first type of biopsy done on smaller tumors that the doctor can feel through the skin. The doctor uses a very thin, hollow needle attached to a syringe to collect a small amount of fluid and cells from the suspicious area for examination and further testing.

Core needle biopsy. This process is very similar to a fine needle biopsy, but the size of the needle used in a core needle biopsy is larger. The larger needle is used to extract a cylinder of tissue, which provides more tissue for the pathologist to analyze.

Vacuum-assisted biopsy. This type of biopsy uses vacuum pressure (suction) to collect a tissue sample through a specially designed hollow needle. This gives the doctor the ability to collect multiple or larger samples from the same biopsy site without having to insert the needle more than once.

Image-guided biopsy. An image-guided biopsy is a procedure in which the doctor uses imaging technology, such as ultrasound [4], fluoroscopy, computed tomography (CT) scan [5], x-ray, or magnetic resonance imaging (MRI) scan [6], to determine the exact location of the tissue that needs to be removed for analysis. A needle is used to obtain a sample of the tissue; it may be a fine needle, core needle, or vacuum-assisted needle. An image-guided biopsy may be used when a tumor appears on an imaging scan but cannot be felt by the doctor or when the area is located deeper inside the body. The type of imaging technology used depends on the location of the suspected cancer site and other factors.

Surgical biopsy. Unlike the needle methods described above, a surgical biopsy involves a surgeon making an incision (cut) in the skin and removing some or all of the suspicious tissue. It is often used after a needle biopsy shows cancer cells, or it can be used as the first method to obtain tissue for diagnosis. Learn more about what to expect from cancer surgery [7].

There are two main categories of surgical biopsies:

- An incisional biopsy removes a piece of the suspicious area for examination. An incisional biopsy may be used for soft tissue tumors, such as those that begin in muscle or fat, to distinguish between benign lumps and cancerous tumors called sarcomas [8].
- An excisional biopsy removes the entire lump. This type of biopsy, which was more common prior to the development of fine needle aspiration, may be used for enlarged lymph nodes or breast lumps or in situations where the lump is small enough to be completely and easily removed during one procedure.

Endoscopic biopsy. Endoscopes are thin, lighted, flexible tubes with cameras that doctors use to view the inside of the body, including the bladder, abdomen, joints, or gastrointestinal (GI) tract. Endoscopes can be inserted through the mouth or through a tiny surgical incision. Using an endoscope, the doctor can see any abnormal areas and pinch off tiny samples of the tissue using forceps that are part of the endoscope. Find out more about the different endoscopic techniques [9].

Bone marrow biopsy. This is a procedure that removes a small, solid piece of bone marrow tissue for examination to determine whether a person has a blood disorder or blood cancer, such as leukemia or multiple myeloma. Bone marrow is the soft, spongy tissue in the inner part of the large bones and is where a person's blood cells are made. During this procedure, the patient is given an anesthetic to numb the area, and some people may be consciously sedated (aware of the procedure but not able to feel any pain). The doctor then guides a special needle into the marrow of a bone, often the back of the hip bone, and gathers a sample. A core biopsy of the bone may also be performed at the same time to find out if a cancer that originated in another part of the body has spread to the bone marrow. Learn more about what to expect during a bone marrow biopsy [10].

The medical team

Because there are different types of biopsies, members of the medical team involved in the procedure may vary.

Most incisional and excisional biopsies are performed by surgeons. Less invasive biopsies, such as fine needle aspirations and endoscopic biopsies, can be performed by a surgeon, radiologist (a doctor who specializes in obtaining and interpreting medical images for diagnosis), oncologist (a doctor who specializes in treating people with cancer), gastroenterologist (a doctor who specializes in the function and disorders of the gastrointestinal tract, including the stomach, intestines, and associated organs), pathologist, or other specialist.

Preparing for the procedure

Preparation for a biopsy depends on the type of biopsy you will have. For example, little preparation is needed for a fine needle biopsy that is performed in a doctor's office, while an incisional or excisional biopsy, which involves surgery, will require more extensive preparation. In some cases, you will need to take off all or most of your clothing and will be given a gown to wear.

Ask your doctor or nurse whether you can eat or drink anything before your biopsy and whether you should take your regular medications that day. In addition, tell your doctor about all medications and supplements you are taking, as well as any drug allergies or other medical conditions you may have.

A doctor or nurse will explain the procedure to you, and you will be asked to sign a consent form that states you understand the benefits and risks of the biopsy and agree to have the test done. Talk with your doctor about any concerns you may have.

During the procedure

Depending on the part of your body where the biopsy will be performed, you may be lying on your stomach or your back or sitting up during the procedure. You may be asked to hold your breath while a biopsy needle is inserted, and you will need to be still for the duration of the procedure.

You may feel some amount of pain or discomfort during the biopsy, including slight, stinging pain when a local anesthetic is injected by needle to numb the area, pressure and dull pain when the biopsy needle is inserted, discomfort from lying still for an extended time, and soreness after the procedure at the biopsy site. If a general anesthetic is used, you will not feel pain during the procedure because you will not be aware of the procedure.

After the procedure

Your recovery period will depend on the type of biopsy performed. The least invasive procedures require no recovery time so you will be able to go back to your normal activities immediately after the procedure. If you have a surgical biopsy, you will be observed after the procedure, and you may need to stay in the hospital to recover.

After a biopsy, talk with your doctor or nurse about taking care of the area where the biopsy was performed. In addition, be aware of any symptoms that indicate a complication from the procedure. Contact your doctor if you experience signs of infection, severe pain, fever, or bleeding.

Getting your results

The amount of time it will take for you to receive the results of the biopsy will depend on what the pathologist sees in the tissue sample. A straightforward, uncomplicated result can be given within two to three days after the biopsy, while a more complicated result can take up to seven to 10 days due to the need for additional testing on the tissue. Talk with your doctor about how you will receive the results of your biopsy and who will explain these results to you.

Questions to ask your doctor

Before having a biopsy, consider asking your doctor the following questions:

- What will happen during the biopsy?
 - Who will perform the biopsy?
 - How long will the procedure take?
 - Will it be painful?
 - Will I be given local or general anesthesia?
 - Is there a risk of infection, bleeding, or other side effects after the biopsy?
 - What are the risks of not having the test?
 - Will the biopsy leave a scar on my body?
 - Will I need to stay in the hospital after the biopsy?
 - Will I need to avoid any activities after the biopsy?
 - Will I need to have someone drive me home after the biopsy?
 - When will I learn the results of the biopsy? How will they be communicated to me?
 - Who will explain the results to me?
 - Will I need to undergo any additional tests or procedures?
-
- How do I need to prepare for the biopsy? Are there any restrictions on what I may eat or drink the day before?

More Information

[Tests and Procedures \[11\]](#)

[After a Biopsy: Making a Diagnosis \[12\]](#)

[Understanding a Pathology Report \[13\]](#)

The Oncology Team [14]

Links:

[1] <http://www.cancer.net/navigating-cancer-care/diagnosing-cancer/tests-and-procedures/biopsy>

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

[3] <http://www.cancer.net/biopsy-what-expect>

[4] <http://www.cancer.net/node/24714>

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

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

[7] <http://www.cancer.net/node/24462>

[8] <http://www.cancer.net/node/19604>

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

[10] <http://www.cancer.net/node/24409>

[11] <http://www.cancer.net/node/24959>

[12] <http://www.cancer.net/node/24371>

[13] <http://www.cancer.net/node/24715>

[14] <http://www.cancer.net/node/24957>