

Article 0002

What Is A Needle Biopsy?

A needle biopsy performed in the department of radiology is an invasive procedure in which a needle is passed through the skin, using image guidance, into an organ or body space in order to obtain a small amount of tissue for diagnostic purposes.

What Is Unique About Needle Biopsy?

A needle biopsy is performed by experienced interventional radiologists using image guidance which permits precise placement of the needle in the tissue with minimal risk of damage to adjacent organs. Interventional radiologists have appropriate training and experience in performing invasive procedures. Radiological technologists and nurses are also experienced and trained in caring for patients undergoing these procedures. This facility is equipped with all of the necessary imaging equipment needed for these procedures and is capable of obtaining sophisticated pathology and processing of these specimens.

When Should I Have A Needle Biopsy?

A biopsy may be necessary to learn the nature of a newly diagnosed mass lesion. The most common causes of mass lesions include infections and tumors. Also, biopsy is often performed to determine the type and severity of liver and kidney disease.

Is It Safe? Will It Hurt?

Image-guided needle biopsy, when performed by an interventional radiologist with appropriate training and experience, is a safe technique. Like all invasive procedures, complications and side effects may occur. These will be explained to you in detail before you give your consent. The pierce of the needle through the skin may cause some discomfort but this will be minimized as much as possible by the use of local anesthetics (numbing medication) and sedation medication.

How Should I Prepare For The Procedure?

You will be given written instructions at the time the procedure is scheduled. Preparation for needle biopsy includes not eating or drinking eight (8) hours prior to the scheduled procedure. Additional blood tests and imaging examinations (cat scan, MRI, ultrasound) may be needed prior to the biopsy procedure.

What Will Happen During The Procedure?

Image-guided needle biopsy is performed in the radiology department by an interventional Radiologist. Needle biopsy is most often performed with CT guidance, although ultrasound is sometimes used. The radiologist examines the area to be biopsied by looking at the X-ray films. The patient's skin is cleaned with a special solution and sterile drapes are placed over the area to avoid infection. Local anesthetic (numbing medication) is injected into the skin through a tiny needle. Once the area is numb, the radiologist passes a special type of needle through the skin into the area needing to be biopsied. When the needle is in place, it is examined again by the CT Scanner to declare the exact location. Once this is determined as correct the needle is removed. The needle contains a small piece of tissue. This tissue sample is examined by a pathologist before the procedure is complete in order to make sure that an adequate specimen has been obtained.

How Does This Technique Work? What Does The Radiologist See?

The radiologist is able to use ultrasound, CT or X-ray monitors to guide the needle through the skin into the area to be biopsied. The ability to see the structures inside the body during needle passage permits the radiologist to accurately place the needle and avoid adjacent organs. The Pathologist is then able to examine the extracted tissue to determine what type of cells or infectious organisms it contains. In the case of certain diseases or tumors, additional specimens can be obtained in the same manner and studied for their content.

How Will I Learn The Results?

Immediately after the procedure, the radiologist will tell you how the procedure went and whether the biopsy was adequate. However, the final analysis of the biopsy by the pathologist will require additional time and the results will be relayed to you by your physician.

What If I Have Other Questions?

Further information regarding the biopsy can be obtained by calling the interventional radiology office at (423) 431-6976. Your call will be returned and your questions answered.

What Happens After The Biopsy?

After the biopsy, you may feel some mild discomfort and see some bruising around the puncture site. Patients who have had a lung biopsy may cough up some small amounts of blood. Kidney biopsy patients may notice some mildly blood-tinged urine. This is normal, and should not cause you undue concern. Please observe the following guidelines:

1. Return to your normal diet.
2. Refrain from excessive physical activity for 24 hours after the biopsy.
3. Call the Radiology Department and ask to speak to a Radiology Nurse if you have any of the following problems:
 - » a lot of bleeding from the biopsy site
 - » faintness, light-headedness, or passing out
 - » heart pain, chest pain, or palpitations
 - » progressive swelling or formation of a mass that you feel near the biopsy site
 - » increasing pain that is not relieved by Tylenol
 - » any breathing problems

IF YOU HAVE A PROBLEM AFTER 5PM ON WEEKDAYS OR ON WEEKENDS OR HOLIDAYS, PROCEED AS FOLLOWS:

- » Call and ask to speak to the Radiology Nurse, X-ray technologist, or the radiologist on call.
- » If you cannot reach someone and you feel your problem is a medical emergency, go to the nearest emergency room for medical attention or if necessary, call 911.

NOTES:
