CT and Ultrasound Guided Procedures

Preprocedure Patient Information

What is a needle biopsy?

A needle biopsy is a medical test that can identify the cause of an abnormal lump or mass in your body by removing small samples of tissue through a needle. Needle biopsies are minimal invasive procedures that are done without an overnight hospital stay. The most common sites that are biopsied include breast, thyroid, kidney, lung, lymph nodes, liver and/or abdominal masses.

Why am I having this procedure?

Your physician has requested a needle biopsy to be performed on you because an unexplained lump or abnormal mass has been discovered either by physical examination and/or radiologic studies, including X-ray, CT scan, MRI or ultrasound.

What are the benefits and risks of this procedure?

The benefits include:

- **Needle biopsies are a reliable method of obtaining tissue samples that can help diagnose the cause of abnormal mass/tissue**
- **Needle biopsies are less invasive than open and closed surgical biopsies, both of which involve a larger incision in the skin and general anesthesia**
- **Generally, the procedure is not painful, and accurate results are obtained in 90 to 95 percent of cases even though the sample is smaller than a surgical biopsy**
- **Recovery time is brief, and patients can soon resume their usual activities**

A needle biopsy is fairly safe due to the use of a small needle, although it is not without risk. Complications may occur but are infrequent. Whenever the skin is penetrated, the possible risks include:

- **Swelling/bruising at the biopsy site**
- **Bleeding**
- **The chance of infection requiring antibiotic treatment, which is less than one in 1,000 cases**

Lung and chest biopsies have the following additional risks associated with needle biopsies:

- **Coughing up blood (hemoptysis)**
- **Collapsed lung (pneumothorax); if the lung collapses, a small chest tube may need to be inserted to reinflate the lung**

How does the procedure work?

Using the images generated by the CT scanner or ultrasound, our physicians will insert a small needle into the abnormal area and remove sample tissue. These samples will be given to a pathologist who will examine it under the microscope. The pathologist can determine what the abnormal tissue is: a noncancerous tumor, cancer, an infection or a scar.

What will I experience during the procedure?

When you receive the local anesthetic to numb the skin, you will feel a pin prick from the needle. The area will become numb within a short time. You may feel some pressure when the biopsy needle is inserted. You will be given sedation or relaxation medication intravenously during the procedure, if needed. You will be asked to remain still and not to cough during the procedure. You may also be asked to hold your breath multiple times during the biopsy. It is important that you try to maintain the same breath hold each time to insure proper needle placement.

Who interprets the results and how do I get them?

Tissue samples obtained from the biopsy will be sent to the Pathology Lab. The results of the biopsy usually take three to five days and will be sent directly to your referring doctor. You will need to contact your doctor for a follow-up visit to get the results of your biopsy.

For More Information

If you have any questions or concerns regarding the procedure or preparations before your procedure, please call Ginette Concepcion, R.N. at (804) 828-4914 or Dana Wilmoth Britt, N.P. (804) 628-7651.

About the Procedure

Your doctor will instruct you on how to prepare for the procedure and what to expect, including the benefits and risks to you. A member of the radiology health care team will contact you to set up your procedure appointment as well as review your medical history, laboratory tests for blood clotting and current medications, both prescriptions and over-the-counter and herbals. Please be prepared to provide our team with your medication dosages and schedule times.

The week before the procedure

- Stop taking aspirin or aspirin products (Bufferin, Excedrin, Ecotrin), anti-inflammatory medications (Advil, Motrin, Ibuprofen, Naprosyn, Aleve, Indomethacin, etc.) five (5) days prior to your procedure. It is okay to take Tylenol (acetaminophen).
- If you take Coumadin (warfarin) or other blood thinners (Plavix, Enoxaparin, etc.), you will need to consult with your doctor about stopping them prior to your procedure.
- To ensure the safety of your care, if these medications are not stopped prior to your procedure, it will be necessary to reschedule your procedure. If you have questions and/or concerns about your medications, please contact us immediately.

The night before the procedure

- Do not eat or drink anything after midnight.

The day of the procedure

- In the morning, you may take your regular medications (except for those listed above) with a small amount of water.
- Bring any X-rays or radiological studies that were done at another facility with you.
- Once at the medical center, report to the Gateway Building, First Floor Reception. You will need to register at the desk.
- After registering, proceed to the Gateway Building, Third Floor, Cardiovascular Procedure Care Unit, where you will be prepared for your procedure. The nurse will obtain your vital signs and start an IV. The IV line will be placed into a vein so that sedation or relaxation medication may be given intravenously during the procedure, if needed.
- You will need to bring someone with you to drive you home following the procedure.

During the procedure

- You will be transferred to the Ultrasound or CT area where a limited scan will be performed to confirm the location of the abnormal tissue and the safest approach.
- Once the location of the nodule is confirmed, the entry site is marked on the skin. The skin around the insertion site will be scrubbed and disinfected, and a clean and sterile drape will be applied.
- A local anesthesia will be injected to numb the path of the needle. A very small nick is made in the skin at the site where the biopsy needle is to be inserted.
- Using imaging guidance, the physician will insert the needle through the skin, advance it to the site and remove samples of the abnormal tissue. After the sampling, the needle will be removed.
- Once the biopsy is complete, pressure will be applied to the site to stop any bleeding and then covered with a dressing. No sutures are needed.
- The procedure is usually completed within one hour. Afterwards, you will be taken to an observation area for several hours. X-ray(s) or other imaging tests may be performed to monitor for complications.

After the procedure

- You should rest for the remainder of the day and not exert yourself physically. You should also refrain from traveling by airplane the night of and for one full day following your biopsy. (This may be longer after a lung biopsy.) After 24 hours, you may return to normal activities.
- You may experience some soreness at the biopsy site as the local anesthesia fades.
- With lung/chest biopsies, you may cough up a little blood, but this should be minimal. These symptoms will gradually fade over the next 12 to 48 hours. Signs of a collapsed lung include shortness of breath, difficulty in catching your breath, rapid pulse (heart rate), sharp chest or shoulder pain with breathing and/or blueness of the skin. If you experience any of these symptoms, go the nearest Emergency Room and contact your doctor as soon as possible.
- You may call the radiologist at the VCU Medical Center at **804-828-6831** between 8 a.m. and 5 p.m. After 5 p.m. and on weekends, call the Emergency Department's radiologist at **804-828-3656**.