Needle Biopsy Using Imaging Guidance

Patient Education & Preparation Instructions for:
CT- Computed Tomography
U/S - Ultrasonography
X-Ray - Fluoroscopy

What is a Needle Biopsy?
A needle biopsy is a medical procedure in which a sample of tissue is taken from a patient and sent to a laboratory for examination and diagnosis of a medical condition.
A needle biopsy is often performed where there is a lump, tumor, cyst or swelling for which there is no apparent cause. Many different needle biopsy procedures exist depending on the location of the tissue under investigation.

Where is the Procedure Performed?
Someone from registration will direct you to the hospital's Surgery & Outpatient Procedures area, where you will be admitted. The staff there will monitor your vital signs and place an intravenous line (IV). The radiologist will then inform you of the procedure and you will be asked to sign an informed consent. A technologist from the hospital's imaging services department will then bring you to the imaging department for the actual procedure.

How is the Needle Biopsy Procedure Performed?
A radiologist (a doctor who specializes in image interpretation and image-guided procedures) will sterilize and then anesthetize the area. A small incision (usually no larger than 1/4 inch) will then be made so that a needle can be inserted freely through the outer skin. Using a predetermined imaging method, the doctor will guide the specialized needle into the organ or area of concern to remove a small sample of tissues. You can expect three to six samples to be taken, on average.

What Kind of Imaging Methods are Used to Direct the Radiologist?
The radiologist will determine what imaging method to use for your needle-guided biopsy. This decision is based primarily on the location of the lesion and which modality shows the area best. Imaging methods most commonly used to direct the radiologist are:

- **CT/CAT (Computed Tomography)** A method which uses special x-ray equipment to obtain image data from different angles around the body. A computer then processes the information to show cross-sectional images of the body.
- **Ultrasound** A method which uses high-frequency sound waves (not audible to the human ear) to view the body from various different angles in a cross-sectional format.
- **Fluoroscopy** A method which uses special x-ray equipment that allows real-time visualization of moving body structures to be examined.

What Preparation is Necessary?
Discuss with your physician any medication that you may be taking. The doctor will want to stop medications that can contribute to bleeding, such as aspirin, coumadin and nonsteroidal anti-inflammatory medication.
Do not eat or drink after midnight the evening prior to your CT biopsy or fluro exam. You may eat or drink for all ultrasound biopsies except for a liver biopsy.
Arrange for someone to drive you home.
To avoid appointment delays, pre-registration is required prior to your date of service.

How Long will the Procedure Take?
The biopsy generally will take approximately one hour. This may vary depending on the location and how complicated it may be.

What Happens After the Biopsy?
You will be returned to the hospital's Surgery & Outpatient Procedures area to be monitored for any post-procedure complications, such as bleeding or shortness of breath. Generally, you will be released within one to four hours following your procedure, barring no complications. If your biopsy is located within the chest cavity, a post-procedure chest x-ray can be expected. Mild painkillers, such as Tylenol, will control pain quite well. Aspirin or aspirin substitutes (Motrin, Naprosyn) should not be taken for 48 hours after the procedure unless aspirin is prescribed for a cardiac or neurological condition.

What are the Risks?

- There is a small risk of bleeding or infection at the biopsy site; but generally, biopsy procedures are safe.
- Lung biopsies may be complicated by an air leak or partially collapsed lung (pneumothorax). This may also occur with abdominal biopsies near the bases of the lungs. These usually resolve and require only observation.
- Biopsies of the liver may develop bile leakages; but this is quite rare.
- Inflammation of the pancreas (pancreatitis) may occur after biopsies in the area around the pancreas.

What are the Benefits?

- A needle biopsy guided by one of the imaging modalities is far less invasive than an open surgical biopsy and can provide your doctor with the same results.
- A local anesthetic is applied to the skin, as opposed to a general anesthetic needed in an open surgical biopsy.
- Costs are reduced considerably with a needle biopsy compared with an open surgical biopsy.

Who Interprets the Results and How will I Get Them?
The pathologist will prepare a report and consult with your ordering physician. This can take about 24 to 36 hours, on average. Your physician will then discuss the results with you.

Aspirus Riverview Hospital Imaging Services Department 715-421-7430

PRE-REGISTRATION REQUIRED
Stop by the Registration Department in Aspirus Riverview Hospital's Lobby Rotunda
Monday-Thursday 8 am-5:30 pm; Friday 8 am-5 pm; Or call 715-421-7499

Note: You must report to Aspirus Riverview Hospital's Surgery & Outpatient Procedures area one hour prior to your imaging services appointment time.

If you are unable to keep your appointment, please let Aspirus Riverview Hospital's Imaging Services Department know as soon as possible. Should you be admitted to the hospital, please inform your physician about your appointment.

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