

Breast Biopsy

A **Breast Biopsy** is performed to remove some cells ? either surgically or through a less invasive procedure involving a hollow needle ? from a suspicious area in the breast. The cells are then examined under a microscope to determine a diagnosis.

Image-guided biopsy may be performed when the abnormal area in the breast is too small to be felt, making it difficult to locate the lesion by hand. Image-guided needle biopsy is not designed to remove the entire lesion, but most of a very small lesion may be removed in the process of biopsy.

Stereotactic Breast Biopsy

In Stereotactic Breast Biopsy, or Mammographically Guided Breast Biopsy, a special digital mammography machine uses x-rays to help guide the radiologist's instruments to the site of the abnormal growth. With the use of a computer, exact location of a breast mass is pinpointed, and x-rays are then taken from two different angles. Using these computer coordinates, the radiologist inserts the needle through the skin, and then advances it into the lesion and removes tissue samples.

Equipment

The specialized mammography machine used in this procedure is similar to the mammography unit used to produce diagnostic mammograms. Attached to the unit is a device that holds and compresses the breast and positions it so images can be obtained at different angles. Our facilities have a specially designed examination table which will allow you to lie face down with your breast hanging freely through an opening in the table.

How to Prepare for the Exam

You may be asked to remove some or all of your clothing and to wear a gown during the procedure. You may also be asked to remove jewelry, eyeglasses and any metal objects or clothing that might interfere with the x-ray images.

Women should always inform their physicians if there is any possibility that they are pregnant. Some procedures using image-guidance are not typically performed during pregnancy because radiation can

be harmful to the fetus.

You should not wear deodorant, powder, lotion or perfume under your arms or on your breasts on the day of the exam.

Report all medications that you are taking, including herbal supplements, and report allergies you have, especially if they are to anesthesia. Inform your physician about recent illnesses or other medical conditions. Your physician will likely advise you to stop taking aspirin or a blood thinner three days before your procedure.

You may want to have a relative or friend accompany you and drive you home, especially if you will be sedated during the procedure.

How is the Procedure Performed?

Breast biopsies are performed by a specially trained radiologist and done on an outpatient basis. You will either lie down on the table of the stereotactic mammography system. The breast will be compressed and held in position throughout the procedure.

A local anesthetic will be injected into the breast to numb it. Then several stereotactic pairs of x-ray images will be taken.

A very small nick will be made in the skin at the site where the biopsy needle is to be inserted. The radiologist will insert the needle and advance it to the location of the abnormality. X-ray images will be obtained to confirm that the needle tip is actually within the lesion.

Tissue samples will then be removed using one of two methods:

- In a core needle biopsy, the automated mechanism will be activated, moving the needle forward and filling the needle trough, or shallow receptacle, with 'cores' of breast tissue. The outer sheath will instantly move forward to capture the tissue and keep it in the trough. This process will be repeated three to six times.
- With a vacuum-assisted device (VAD), vacuum pressure is used to pull tissue from the

breast through the needle into the sampling chamber. Without withdrawing and reinserting the needle, it will rotate positions and collect additional samples. Typically, eight to ten samples of tissue will be collected from around the lesion.

After sampling, the needle will be removed and a final set of images will be taken.

A smaller marker may be placed at the site so that it can be located in the future if necessary. Once the biopsy is complete, pressure will be applied to stop any bleeding and the opening in the skin will be covered with a dressing. No sutures will be needed.

A mammogram is usually performed to confirm that the marker is in the proper position. The procedure is usually completed within an hour.

What Will I Experience During and After the Procedure?

You will be awake during your biopsy and should have little or no discomfort. Most women report little or no pain and no scarring on the breast. Some women find that the major discomfort of the procedure is from lying on their stomach for the length of the procedure. Discomfort can be reduced by strategically placed cushions.

When you receive the local anesthetic to numb the skin, you will feel a slight pin prick from the needle. You may feel some pressure when the biopsy needle is inserted. The area will become numb within a short time.

You must remain still while the biopsy is performed. As tissue samples are taken, you may hear clicks from the sampling instrument.

If you experience swelling and bruising following your biopsy, you may be instructed to take an over-the-counter pain reliever and to use a cold pack. Temporary bruising is normal.

You should contact your physician if you experience excessive swelling, bleeding, drainage, redness, or heat in the breast. If a marker is left inside the breast to mark the location of the biopsied lesion, it will cause no pain, disfigurement or harm.

When Will I Receive My Results?

A pathologist must examine the removed specimen and make a final diagnosis. Your radiologist or referring physician will share the results with you typically within one week.

Information provided by GE Healthcare, www.gehealthcare.com.