

Stereotactic breast biopsy uses mammography to help locate a breast abnormality and remove a tissue sample for examination under a microscope. It's less invasive than surgical biopsy, leaves little to no scarring and can be an excellent way to evaluate calcium deposits or tiny masses that are not visible on ultrasound.

### **How should I prepare?**

You should not wear deodorant, powder, lotion or perfume under your arms or on your breasts on the day of the exam. You should inform the technologist or radiologist if there is any possibility that you are pregnant, if you have any allergies, or if you are taking aspirin, blood thinners, or certain herbal supplements that may increase your risk of bleeding.

You will be asked to remove some of your clothes and to wear a gown during the exam. You will also be asked to remove jewelry, eye glasses and any metal objects or clothing that might interfere with the x-ray images.

### **How is the procedure performed?**

You will lie face down on a moveable exam table and the affected breast will be positioned into an opening in the table. The table is raised and the procedure is performed beneath it, while the breast is compressed and held in position.

A local anesthetic will be injected into the skin and more deeply into the breast to numb it. The radiologist then inserts the needle and advances it to the location of the abnormality. Once proper positioning of the needle is confirmed, tissue samples are obtained using a vacuum-powered instrument that uses pressure to pull tissue into the needle. This instrument rotates positions and collects multiple tissue samples through one needle insertion.

If calcium deposits (calcifications) are being sampled, an x-ray of the removed tissue will be obtained to document enough deposits were obtained. Additional sampling may be needed if not enough calcifications are identified initially.

After the sampling is complete, a small marker will be placed at the biopsy site so that it can be located in the future, if necessary. A mammogram will be performed after the biopsy to confirm that the marker is in the proper position.

Once the biopsy is complete, pressure will be applied to stop any bleeding and the opening in the skin is covered with a dressing. No sutures are needed. This procedure is usually completed within 20-45 minutes.

### **What will I experience during and after the procedure?**

You will be awake during your biopsy. Most women report little pain and no scarring on the breast. However, certain patients, including those with dense breast tissue or abnormalities near the chest wall or behind the nipple may be more sensitive during the procedure.

Some women find that the major discomfort of the procedure is from lying on their stomach for the length of the procedure, which can be reduced by strategically placed cushions. Some women may also experience neck and/or back pain as the head is turned to the side when the breast is positioned for the biopsy.

When you receive the local anesthetic to numb the skin, you will feel a pin prick from the needle followed by a mild stinging sensation from the local anesthetic. You will likely feel some pressure when the biopsy needle is inserted and during tissue sampling, which is normal. The area will become numb within a few seconds.

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. Biopsy markers are MRI compatible and will not cause metal detectors to alarm.

## Who interprets the results and how do I get them?

A pathologist examines the removed specimen and makes a final diagnosis within a few days. The radiologist will call you with the results and follow-up recommendations. Breast biopsy procedures will occasionally miss a lesion or underestimate the extent of disease present. If the diagnosis remains uncertain after a technically successful procedure, surgical biopsy may be necessary.

## What are the risks?

- There is a risk of bleeding and forming a hematoma (a collection of blood at the biopsy site).
- An occasional patient has significant pain, which can be controlled by non-prescription pain medication.
- Any procedure where the skin is penetrated carries a risk of infection. The chance of infection requiring antibiotic treatment appears to be less than one in 1,000.
- There is a small chance that this procedure will not provide the final answer to explain the imaging abnormality.
- Although radiation is used, the radiation dose is very low and the benefit of an accurate diagnosis far outweighs any radiation risk.

## What are the limitations?

There are some instances in which stereotactic biopsy may not be possible, including if:

- The target abnormality is located near the chest wall or directly behind the nipple.
- The mammogram shows only a vague change in tissue density but no definite mass or nodule. The finding may be too subtle to identify at the time of biopsy.
- The breast is too thin.
- The target is composed of diffuse calcium deposits scattered throughout the breast, which on occasion are difficult to target.

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