Types of Breast Biopsies

**Fine needle aspiration biopsy**
The doctor uses a very thin needle attached to a syringe to withdraw a small amount of tissue from the suspicious area to see if it is a cyst (a fluid-filled sac) or a solid growth (mass or tumor). If the lump goes away after it is drained, it usually means it was a cyst and not cancerous.

- The needle used for FNAB is thinner than those used for blood tests.
- If the lump to be biopsied can be felt, the doctor locates the suspicious area and guides the needle. If the lump can't be felt, the doctor may use ultrasound to guide the needle.
- The doctor may or may not numb the area. Because such a thin needle is used, getting the medicine may hurt more than the biopsy itself.
- A pathologist will examine the biopsied tissue or fluid under a microscope.
- A FNAB can sometimes miss cancer if the needle does not get a tissue sample from the correct area. If it does not give a clear diagnosis, or your doctor is still suspicious, a second biopsy or a different type of biopsy should be done.

**Core needle biopsy**
A core needle biopsy (CNB) is very similar to a FNAB:

- A slightly larger, hollow needle is used to withdraw small cylinders (or cores) of tissue from the abnormal area.
- CNB is most often done with local anesthesia in the doctor’s office. This means you will be awake and the breast will be numbed.
- The needle is put in three to six times to get different samples, or cores.
- This takes longer than the FNAB, but it is more likely to give a definite result because more tissue is taken to be examined.
- CNB can cause some bruising, but usually does not leave scars inside or outside the breast.
- The doctor usually guides the needle into the abnormal area while feeling the lump. If the abnormal area is too small to be felt, a radiologist or other doctor may use a stereotactic instrument or ultrasound to guide the needle to the target area.
Vacuum-assisted core biopsy
The Mammotome® is one type of vacuum-assisted core biopsy (VACB).
- The skin is numbed and a small cut is made. A hollow probe is put in into the abnormal area of breast tissue. A cylinder of tissue is pulled into the probe and a rotating knife cuts the tissue sample from the rest of the breast.
- This allows more tissue to be removed through a single small opening than a standard core biopsy. No stitches are needed, and there is very little scarring.
- VACB is done in an outpatient setting.

Stereotactic core needle biopsy
Stereotactic biopsies are used to biopsy a suspicious solid mass, an area of abnormal tissue change, or an area of distortion in the structure of breast tissue.
- A tissue sample is taken from a lump that cannot be felt during a breast exam, but can be seen on a mammogram or an ultrasound.
- It is a non-surgical way to get a tissue sample to make a conclusive diagnosis.
- Uses x-ray equipment and a computer to analyze the images to find the lump the needle must target. The computer pinpoints exactly where in the abnormal area the needle tip needs to go by using mammograms taken from two angles.
- The physician, usually a surgeon or radiologist, may implant a small marker at the biopsy site so they can see where the biopsy was done.

Surgical (excisional) biopsy
- Used to remove all or part of the lump so it can be examined under the microscope.
- Removes the entire mass or abnormal area, as well as a surrounding margin of normal-looking breast tissue.
- In rare cases this type of biopsy can be done in the doctor's office, but it is more often done in the hospital's outpatient department under a local anesthesia.

Wire or needle localization
- May be used if there is a small lump that is hard to find by touch, or if an area looks suspicious on the x-ray, but cannot be felt.
- After the area is numbed with local anesthetic, a thin, hollow needle is put into the breast and x-ray views are used to guide the needle to the suspicious area.
- A very thin wire is put in through the center of the needle. A small hook at the end of the wire keeps it in place. The hollow needle is removed and the wire is left to guide the surgeon to the abnormal area.
- While the patient is in the operating room, the lump, with the wire intact, is sent to radiology for a follow-up image on the mammogram to validate that it was removed entirely and margins are clear.
- If the radiologist does not see the entire lump or clear margins, the surgeon removes more tissue for imaging. This process is repeated until the surgeon and radiologist agree the entire lump is removed.