



## *X-Plain* *Breast Cancer Surgery* **Reference Summary**

### **Introduction**

Breast lumps are a common condition that affects millions of women every year. Breast lumps may be cancerous. Breast cancer occurs in approximately one in every 8 to 9 women.

Your doctor may have recommended the surgical removal of a breast cancer. The decision whether or not to have breast surgery is also yours.

This reference summary will review benefits and risks of the different breast operations.

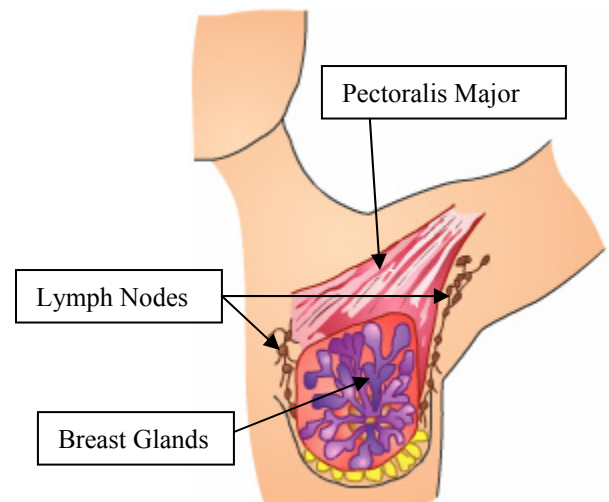
### **Anatomy**

The breast is the gland responsible for making, storing, and delivering milk. The milk is made and stored in the glands inside the breast tissue. From the glands, milk flows through special ducts to the outside passing through the nipple area.

The breast rests on a chest muscle called the “pectoralis major.” A nerve that controls the shoulder muscle passes near the chest muscle. Nerves going to the arm pass in the axilla or armpit region. Important arteries and veins accompany these nerves.

The underarm region contains many lymph nodes. Lymph nodes are specialized structures that allow excess fluid to drain back from the breast area and the arm to the blood stream.

Lymph nodes play an important role in fighting infection. Breast cancer could spread to other parts of the body through lymph nodes.



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## Symptoms And Their Causes

Nobody knows for sure the causes of breast cancer. Genetic malfunction may be responsible for some cases. In addition, breast cancer tends to occur in families.

## Treatment of Cancerous Lumps

When a breast lump is determined to be cancerous, the treatment may include one or a combination of the following:

- Surgical treatment
- Radiation therapy
- Chemotherapy
- Hormonal therapy

The treatment recommended by your doctor depends on the type of cancer as well as on your age and medical condition.

Your doctor will help you determine the treatment suitable for you.

## Surgical Treatment

Most breast cancers are taken out surgically. The extent of the operation depends on the size of the tumor and whether or not the lymph nodes in the axilla are involved.

Breast cancer operations have two main goals. The first is to take the whole tumor out without leaving any tumor behind in the breast area.

The second goal is to check the lymph nodes of the axilla to make sure that the tumor has not spread to them. If it is spread to the lymph nodes, the surgeon may want to determine how many lymph nodes are involved with the tumor.

Since taking a lot of axilla lymph nodes out surgically can lead to swelling of the arm, known as lymphedema, new techniques are being developed to take out only a few important lymph nodes.

Several hours before the surgery, the surgeon injects either a special blue dye or a safe radioactive dye close to the tumor. During the surgery, the surgeon takes the cancer out and is able to find the lymph nodes that have picked up the dye. The first lymph node to pick up the dye is known as the "sentinel node."



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A lumpectomy is an operation aimed at taking only the cancerous lump, with some biopsies of the lymph nodes of the axilla. Radiation therapy is usually given after this type of operation.

A partial, or segmental, mastectomy takes more of the breast than a lumpectomy. Part of the covering of the underlying muscle may also be taken out. Radiation therapy is usually needed after this type of operation. Again, some of the lymph nodes are taken out to check if the cancer has spread.

A total or simple mastectomy aims at taking the whole breast out, along with some of the lymph nodes in the axilla.

A modified radical mastectomy aims at removing the breast, some of the underlying covering of the muscles, and possibly part of the muscle. Some of the lymph nodes of the axilla are also taken out during this type of operation.

A radical mastectomy aims at removing the breast, the underlying muscles and all of the lymph nodes of the axilla; this operation is rarely done.

Depending on which surgery is done one or two incisions are made. After the operation is completed the skin is closed. In cases of extensive surgeries, a drain may be put to drain excess fluid after the operation. This is taken out one to few days after the surgery.

### **Risks and Complications**

This surgery is very safe. However, there are several possible risks and complications. These are unlikely, but possible. You need to know about them just in case they happen. By being informed, you may be able to help your doctor detect complications early.

The risks and complications include those related to anesthesia and those related to any type of surgery. Risks of general anesthesia include nausea, vomiting, urinary retention, cut lips, chipped teeth, sore throat, and headache. More serious risks of general anesthesia include heart attacks, strokes, and pneumonia.



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Your anesthesiologist will discuss these risks with you and ask you if you are allergic to certain medications.

Blood clots in the legs can occur due to inactivity during and after the surgery. These usually show up a few days after surgery. They cause the leg to swell and hurt. Blood clots can become dislodged from the leg and go to the lungs where they will cause shortness of breath, chest pain and possibly death. It is extremely important to let your doctors know if any of these symptoms occur. Sometimes the shortness of breath can happen without warning.

Getting out of bed shortly after surgery may help decrease the risk of blood clots in the legs.

Some of the risks are seen in any type of surgery. These include:

- Infection, deep or at the skin level. Treating deep infections may require long-term antibiotics and possibly surgery.
- Bleeding, either during or after the operation. This may require a blood transfusion, or another operation.
- Fluid may collect under the skin, which is known as “seroma.” This fluid may need to be taken out with a needle or another operation. A seroma could cause the incision to open up.
- Skin scar.

Other risks and complications are related specifically to this surgery. These, again, are very rare. However, it is important to know about them. The more extensive the surgery is, the higher the risks are.

Even the simplest operation may leave the breast disfigured.

Nerves running through the axilla may be injured causing shoulder or arm weakness or paralysis, loss of sensation, or arm pain. However, it is rare for this to happen.

When underarm lymph nodes are removed, the involved arm may swell. Occasionally an elastic arm stocking, or other methods, might be needed to reduce the swelling.



After the operation, some patients feel depressed because of the diagnosis and because of the possible disfigurement. Although this is normal, you should let your doctor know about these feelings. Breast reconstruction is available and helpful.

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## After The Surgery

After the operation is done, the patient is transferred to the recovery room and then to a regular room. You will go home in few days depending on how you are doing.

Depending on the pathology reports from the surgery as well as other tests, further treatment may be needed. This could include:

- Radiation therapy
- Chemotherapy
- Hormonal therapy

Make sure to contact your doctor in case of any new symptoms, such as fever, wound drainage, severe pain, weakness, swelling or infection.

## Summary

Breast cancer is a common condition that affects about 11% of women. Doctors usually recommend surgery to remove breast cancer.

Breast surgery is very safe. Risks and complications are very rare. Knowing about them will help you detect and treat them early if they happen.



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