



Breast Cancer Surgery

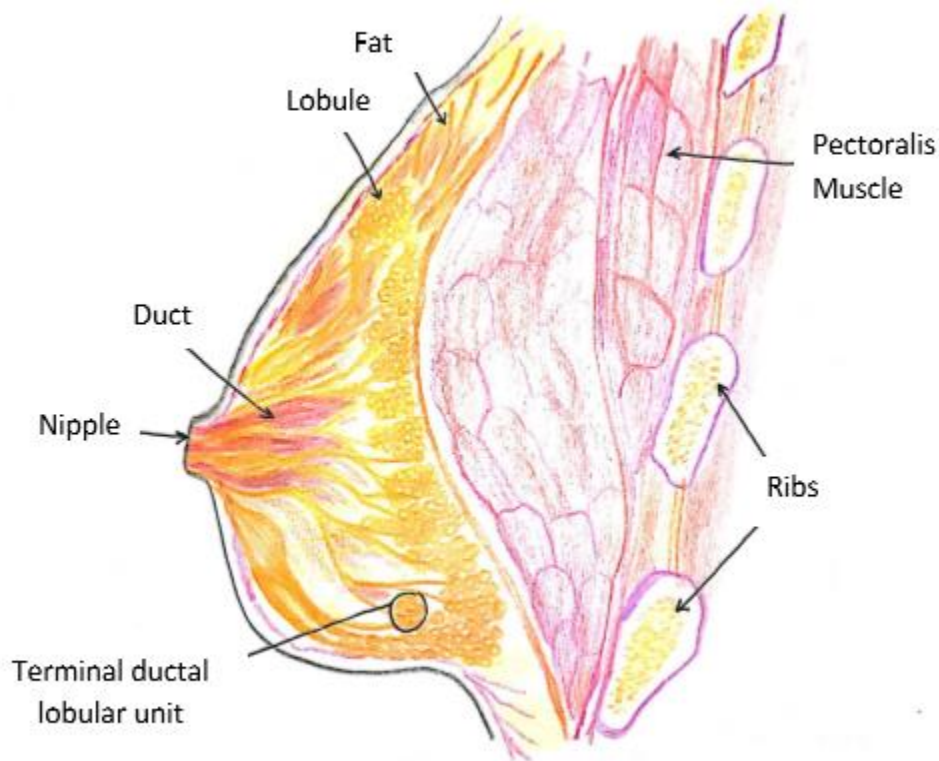
Information and advice for
patients

CSTH professorial surgical unit

What is the breast?

Breast is the milk producing gland in female (present in a rudimentary form in males) that provide nutrition for the newborns. It is composed of milk producing glands which are surrounded by supporting fat and other tissues.

Milk producing sacs (lobules) are connected to the tube (duct) system that drains milk through the nipple.



What are the abnormal conditions of the breast?

There are cancerous and non-cancerous breast diseases. Among them, non-cancerous diseases are the most common. E.g. breast abscess, fibro adenoma, cysts (fluid filled collections) etc.

Breast cancer is the commonest cancer among women in the world and one of the commonest causes for cancer related deaths in women. Although 1 in 8 women are diagnosed with breast cancer during their lifetime, there is a good chance of recovery if it is detected at an early stage. A breast cancer may show one or more of following symptoms.

- Lump in the breast or/and armpit
- Change in size and shape of the breast
- Unusual discharge from the nipple
- Dimpling on the skin of your breast
- A rash around your nipple
- change of appearance of the nipple
- rarely, breast pain

How are breast cancers treated?

Different treatment modalities are available for the management of breast cancer.

- Surgery
- Chemotherapy (use of medications to kill cancer cells)
- Radiotherapy (use of radiation against cancer cells)
- Hormone therapy (Use of medications to suppress cancer cell growth)
- Biological therapy (Use of medications that target molecules which are involved in cancer growth)
- Other aspects
 - Genetic counseling for cancer with suspected genetic background
 - Fertility counseling

Combination of above therapies will be used depending on your disease condition. Once your initial work up is completed, the decision will be made to proceed with the surgery or to give other treatment modality (e.g. chemotherapy) before the surgery. In very advanced disease or in elderly unfit patients, surgery may not be an option.

Breast cancer surgery

Breast cancer surgery includes 3 aspects.

- Surgical removal of the breast cancer
- Surgery for the lymph nodes in the armpit
- Surgery for breast reconstruction

➤ Surgical removal of the breast cancer

There are 2 types of surgical procedures.

Breast conserving surgery (BCS)

BCS removes the cancer with a cuff of a surrounding normal tissue while leaving as much normal breast as possible. You will require radiotherapy to the breast after BCS.

Survival benefit after BCS together with radiotherapy for early breast cancer is equivalent to mastectomy (complete removal of breast).

Contraindications for BCS include:

- Spread of the cancer over a large area of the breast (multicentric disease)
- Widespread of suspicious calcium deposits in the breast

- Contraindications for radiotherapy e.g. pregnancy, previous chest wall radiation
- Diffusely positive margins after BCS

Mastectomy

This is the complete removal of the breast. Indications include:

- Presence of contraindications for BCS
- Your choice for mastectomy over BCS
- Inflammatory type of breast cancer

Very advanced disease of the cancer is a contraindication for surgery.

➤ **Surgery for the lymph nodes in the armpit**

Most of the lymph fluid from breast tissues drain to lymph nodes in the armpit. Therefore removal of them is needed to minimize regional spread and decide on further treatments.

There are 2 types of procedures.

Sampling of lymph nodes in armpit (Sentinel lymph node biopsy)

Performed when your armpit does not contain suspicious lymph nodes. The first Lymph nodes that drain the breast

are identified using a drug that emits small amount of radiation (harmless) and/ or a dye.

Complete lymph node removal (level II clearance)

Performed when clinical assessment or a scan detects enlarged lymph nodes in your armpit. Presence of cancer cells within the lymph nodes should be proven with needle aspiration prior to the procedure.

This is also performed when above mentioned sampling procedure shows lymph nodes containing cancer cells.

➤ Surgery for breast reconstruction

Breast reconstruction is a surgery which is done to make a new breast shape in your affected breast. This can be done at the same time of the breast surgery (mastectomy) or later. This is done either using tissues from another part of your body or inserting a breast implant. This is an option for women receiving surgery for breast cancer. The doctor will discuss with you about this procedure further at the clinic before the surgery.

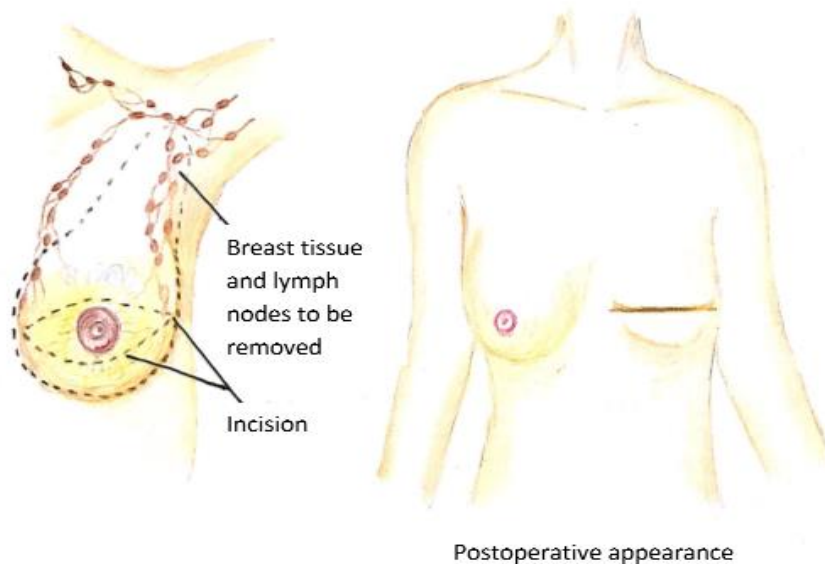
Mastectomy procedure

Surgery is done under general anesthesia (medications are given to put you in to a deep sleep).

If sentinel lymph node biopsy (see above) is planned, the dye is injected around the nipple and breast massaging is performed for few minutes to enhance lymph drainage to armpit. The armpit is explored and stained lymph nodes are removed. They are sent to the lab for a quick assessment to decide on complete removal of armpit lymph nodes.

An elliptical shaped incision will be made on your breast including your nipple for the mastectomy procedure. Then your skin is separated from your breast tissue. Your breast will be removed with the cancer and the elliptical segment of the skin including nipple, leaving the chest wall area flat. Removed specimen will be sent for assessment by a pathologist.

If the complete removal of your armpit lymph nodes are decided, it is done through the same skin incision. The surgeon will make sure not to damage the important blood vessels and nerves that lie within the armpit.



If immediate reconstruction procedure is planned, it will be performed using your own body tissues or a synthetic implant. Otherwise, upper and lower skin edges are sutured to close the wound. A surgical site drain will be applied temporarily to minimize abnormal collection of fluid at surgical site.

What are the benefits of the surgery?

Surgery is usually the treatment of choice for breast cancer patients. It will remove the cancer as well as lymph nodes minimizing spread of the disease. You will have a higher survival benefit with breast cancer surgery compared to the other modalities alone.

Mastectomy removes all the breast tissues minimizing potential risk of recurrence of cancer. However, BCS with radiotherapy in early breast cancer will have the same effect as discussed earlier. In addition, BCS will preserve your body image as the breast tissues are preserved.

Breast reconstruction minimizes adverse cosmetic effects of mastectomy.

What are the complications of mastectomy?

Even though mastectomy is a commonly performed surgery there are some complications associated with it.

➤ **Specific complications**

- Seroma formation – Collection of fluid in the surgical site is called a seroma. It is quite common after a breast surgery and a drain is kept temporarily to drain the fluid out. Rarely this fluid collection may get infected.
- Lymphedema of same side upper limb – This is the swelling of the affected upper limb due to lymph node removal. Preventive measures are important than treatment (discussed below).
- Shoulder joint stiffness – this can be minimized by shoulder exercises postoperatively.
- Damage to the surrounding structures especially during armpit lymph node removal - this including damage to important vessels (e.g. axillary vein) and nerves that supply muscles for upper limb

functions (e.g. long thoracic nerve thoracodorsal nerve) and arm pit sensation (intercostobrachial nerve)

➤ **General complications**

- Bleeding
- Surgical site infection – The risk is <2 %. This is treated with antibiotics.
- Blood clot formation of deep veins of the lower limbs– You will be advised to wear support stocking to help prevent this.

Preparing for the surgery

The aims of your initial clinic visits are:

- To diagnose your breast condition
- To decide on management of your breast condition
- To assess and prepare for breast cancer surgery if indicated

You will be asked for symptoms, medical history, allergies and will be carried out breast examination at the clinic. Make sure that you bring the records of your other clinic follow ups, medications and previous surgical notes, if any.

They will further carry out mammogram (x-ray image of the breast) and/ or ultrasound scan of the breast. If a lump is found, a sample (core needle biopsy) will be taken as outpatient after numbing the area

with local anesthetic injection. Above assessment will detect whether you have a breast cancer or not. After making the diagnosis of breast cancer, the management will be decided upon the facts we have discussed above by a group of specialists including a surgeon, radiologist, pathologist and oncologist (Multidisciplinary team).

If the decision is taken to perform a breast surgery, you will be assessed for fitness for surgery with relevant clinical assessment and tests. You will be seen by an anesthetist before your procedure. You will be advised about the alteration of your routine medications if needed.

Once the preoperative assessment is satisfactory, a routine date for surgery will be reserved and you will be asked to provide an informed written consent.

You will be admitted one day prior, to hospital for further preparation. You are supposed to bring white colour, loose-fitting and comfortable clothes for the surgery and investigation reports done so far. Leave your valuables with your guardian.

You will be asked to stay fasting for solids for 6 hours and clear fluid for 2 hours prior to surgery.

The day of your surgery

You need to be dressed up with white color clothes and will be taken to the theatre. The operation is usually performed under general anesthesia (drugs are given to put you in to a deep sleep). The operation usually takes 1-2 hours but can vary.

Your recovery

After completing your surgery, you will be taken to the recovery room. Then you will be transferred back to the ward after confirming your vital parameters (e.g. Blood pressure, pulse rate) are satisfactory and you are adequately conscious.

You will have a temporary surgical site drain (a plastic tube) in place and it will be removed in few days postoperatively.

You will be provided with pain killers as needed to keep you comfortable.

You can take meals at ward after full recovery form anesthesia. We encourage you to move and get out of the bed as early as possible depending on your comfort. You will be advised to do some gentle arm exercise to prevent your shoulder from becoming stiff.

Your discharge and follow up

Normally you will be discharged home the next day. If you are being discharged with the drain tube, you will be advised about the tube care and daily measurement of fluid amount. Advices on surgical site care, advices to minimize upper limb swelling, pain medication and follow up plan will be given prior to discharge.

You can have a shower on the second day after your operation. You will be reviewed at the ward in one week time and if non absorbable sutures or clips are used, they will be removed ,10 days after surgery.

Measures to minimize upper limb swelling include:

- Minimize weight gain after surgery
- Do not allow to measure blood pressure or cannulation of the affected side upper limb.
- Take good care of skin (e.g. wear gloves when gardening) and take urgent medical advice if features of infection develop in affected upper limb.
- Perform gentle upper limb exercises.

You will be reviewed at clinic after 3 weeks with the pathology report of your surgery. Further management will be decided with other treatment modalities mentioned above and you will be referred to an oncologist.

Resuming normal activity and returning to work

It is safe to attend to light activities of daily living depending on your comfort at home. However, heavy lifting is not advised for at least 6 weeks. You should be able to return to office work by two weeks if no significant complications develop after surgery.

Contacts

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