

PATIENT INFORMATION ON BREAST CANCER

1. The condition:

The breast is a glandular tissue (can secrete substances). Around the breast are lymph nodes. These are part of the lymphatic system. Lymphatic vessels run from the limbs towards the heart, usually beside veins. They carry fluid called lymph, which is a collection of dead cells, waste material and leakage from ordinary blood vessels. At various points along a lymphatic vessel lie lymph nodes. These are usually small - 5mm or less in most places. Lymph nodes are scattered at various points around the body, but the most important ones for breast disease are in the armpit. Cancer cells travel along lymphatic vessels and collect in lymph nodes. In breast cancer, the lymph nodes of the armpit are usually the first site of spread.

2. Types of breast cancer:

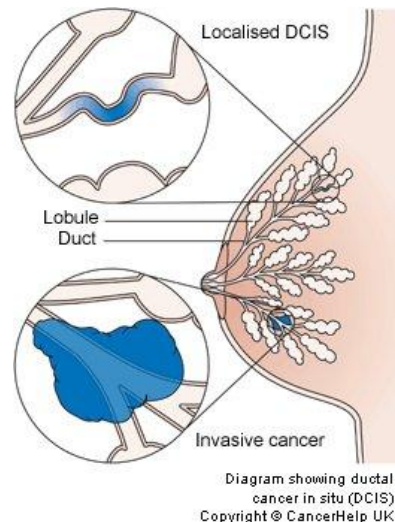
There are several types of breast cancer, but some of them are quite rare. In some cases a single breast tumor can be a combination of these types or be a mixture of invasive and in situ cancer. (only common types are described here)

- a. **Ductal carcinoma in situ:** Ductal carcinoma in situ (DCIS; also known as *intraductal carcinoma*)

is the most common type of non-invasive breast cancer. DCIS means that the cancer cells are inside the ducts but have not spread through the walls of the ducts into the surrounding breast tissue. Nearly all women diagnosed at this early stage of breast cancer can be cured. A mammogram is often the best way to find DCIS early.

- b. **Invasive (or infiltrating) ductal carcinoma**

This is the most common type of breast cancer. DCIS may progress to this stage if untreated. Invasive (or infiltrating) ductal carcinoma (IDC) starts in a milk duct of the breast, breaks through the wall of the duct, and grows into the fatty tissue of the breast. At this point, it may be able to spread (metastasize) to other parts of the body through the lymphatic system and bloodstream.



- c. **Invasive (or infiltrating) lobular carcinoma**

Invasive lobular carcinoma (ILC) starts in the milk-producing glands (lobules). Like IDC, it can spread (metastasize) to other parts of the body. Invasive lobular carcinoma may be harder to detect by a mammogram than invasive ductal carcinoma.

3. How is the treatment planned?

Treatment of breast cancer is mostly based on the stage of the disease and it is a complex process decision involving many factors. Early stages (**stage 1& 2**) easier to treat with better cure rates than advanced stages. These are mainly treated with surgery. Advanced stage (**stage 3**) mostly needs chemotherapy before surgery. **Stage 4** may not benefit from surgery at all. Your cancer surgeon will plan your treatment according to your stage and other factors.

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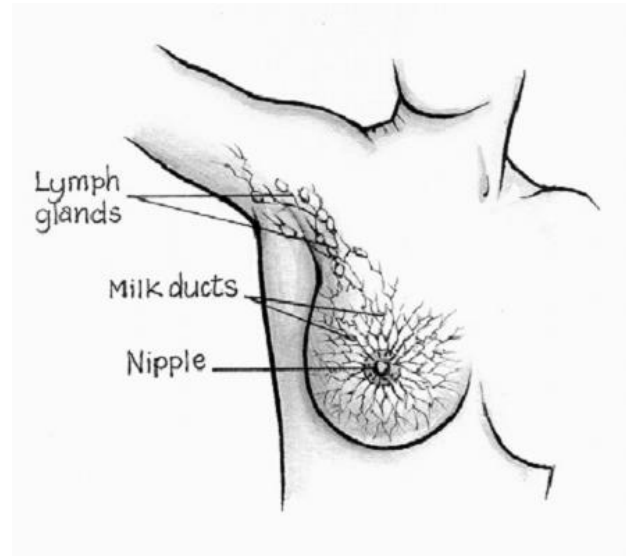
(Dedicated to Keyhole Surgery for Cancer)

4. What are the types of breast surgery in cancer?

It is important to understand that breast surgery for cancer is not cosmetic surgery. The appearance of the breast after surgery will be different from that before surgery. The survival rates for women who have mastectomy (all of the breast removed) are the same as for women who have breast-conserving surgery (when feasible) accompanied by radiotherapy, and each form of treatment has its advantages.

- **Wide local excision (WLE)**

The removal of a lump in the breast and the tissue around it. This is performed when there is DCIS. If the lump cannot be felt, a marking wire may need to be placed before surgery. This is usually done in the X-Ray department using ultrasound or mammogram. An imprint cytology or frozen section may also be performed in order to confirm complete resection. Further treatment may be required based on final pathology report.



The breast, milk ducts and lymph glands

- **Breast Conservation Surgery**

The removal of the tumor as well as some of the breast tissue around it and the lining over the chest muscles below. Usually some of the lymph nodes under the arm are taken out and tested for possible spread of cancer. An imprint cytology or frozen section may also be performed in order to confirm complete resection.

- **Total or simple mastectomy**

The removal of the whole breast. This is performed mainly for sarcomas or phyllodes tumor of breast. These are rare tumors.

- **Modified radical mastectomy**

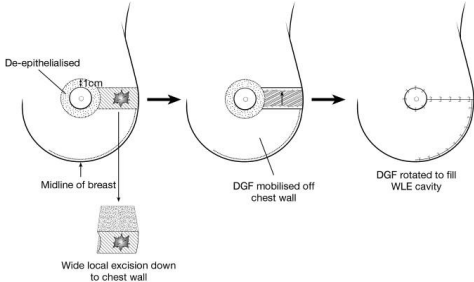
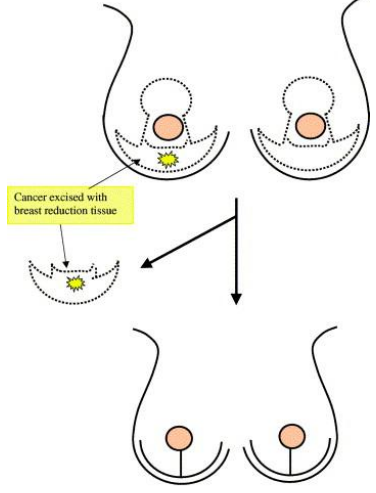
The removal of the breast, many of the lymph nodes under the arm, the lining over the chest muscles, and sometimes part of the chest wall muscles.

- **Radical mastectomy**

The removal of the breast, chest muscles, and all of the lymph nodes under the arm. It is used only when the tumour has spread to the chest muscles and the wound may burst open.

5. Reconstruction of breast:

- **Oncoplastic surgery:**

Rotation mammoplasty:	Bilateral mammoplasty:
<p data-bbox="313 846 833 957">This involves rotation of the breast tissue in order to fill the gap from where the tissue has been removed.</p>  <p>The diagram illustrates the three stages of rotation mammoplasty. Stage 1: A breast with a tumor (yellow star) and a de-epithelialized area (shaded) is shown. A wide local excision is performed down to the chest wall, creating a gap. Stage 2: The Double Free Flap (DGF) is mobilized off the chest wall. Stage 3: The DGF is rotated to fill the Wide Local Excision (WLE) cavity. Labels include: De-epithelialised, Tumor, Midline of breast, Wide local excision down to chest wall, DGF mobilised off chest wall, and DGF rotated to fill WLE cavity.</p>	<p data-bbox="865 846 1344 957">This involves resection of tumor along with reconstruction of same breast. The size of the opposite breast is reduced to</p>  <p>The diagram shows a bilateral procedure. The top part shows two breasts with a tumor (yellow star) on the left. A yellow box indicates 'Cancer excised with breast reduction tissue'. The middle part shows the resulting breast reduction on both sides. The bottom part shows the final result: 'Breast reduction completed. The exact pattern of scars depend on technique used'. The final result shows two breasts of similar size and shape, with scars that match the original breast.</p>

- **Other reconstructive options:** Breast reconstruction involves the use of prostheses (artificial breast tissue) or tissue from other parts of the body. The type of prosthesis can be either silicone filled but are usually saline filled implants. Soft tissue may be taken from the back or abdomen depending on body shape and size.

6. What are the benefits of having this procedure?

The aim of the surgery is to get rid of the tumour so that it cannot spread. It is generally considered that surgery is effective for early & localized breast cancer. You need to discuss your options very carefully with your doctor so that you can make the best decision for your situation.

7. What if I don't have this procedure?

If you choose not to have surgery, you may be shortening your life expectancy. The tumor may also grow outside the breast and spread to other parts of the body. This can cause significant pain and discomfort.

8. Comparison between breast conserving surgery & mastectomy for early cancers:

	Breast conserving treatment that includes radiation therapy	Mastectomy
Effectiveness	Breast conserving treatment with radiation therapy is as effective as mastectomy.	Mastectomy is as effective as breast conserving treatment that includes radiation therapy.
Tumour size and position	If the tumour is small then your surgeon will probably recommend that you choose between breast conserving treatment and mastectomy.	If the tumour is large or involves the nipple or there is more than one tumour your surgeon will probably recommend mastectomy.
Radiation therapy	Radiation therapy is necessary each weekday for about six weeks.	Usually no radiation therapy is necessary.
Changes to your body appearance	A small amount of your breast will be removed. Partial prostheses are available.	Your whole breast will be removed. Prostheses and/or reconstruction are available.
Fear of the cancer returning	Some women feel concerned about getting cancer in the remaining part of the breast and in other parts of their body. Breast conserving treatment that includes radiation therapy is as effective as mastectomy in treating early breast cancer.	It is very unlikely that the cancer will come back in the breast area after a mastectomy. It is no 'safer' to have a mastectomy than breast conserving treatment.

9. Are there any additional treatments?

Also known as adjuvant therapy, they are used in some women in addition to surgery. The treatment may be local (radiation) or systemic (whole body eg chemotherapy, hormone therapy). The aim is to treat undetectable tumors before surgery. The treatment of breast cancer depends very much on the type of tumor, the size and stage of the tumor and your age and health. You need to carefully discuss with your doctor, treatments that are best for you.

The following treatments are all used either separately or together in the treatment of breast cancer.

- **Radiotherapy**

Radiotherapy after breast conserving surgery reduces the risk of the cancer coming back in the same breast by 1 to 2% per year. It is also indicated in selected cases after mastectomy. Radiation is used to damage or kill cancer cells. Most women have radiotherapy to the breast find their health is not greatly affected by it. Tiredness is a most common problem.

- **Chemotherapy**

Chemotherapy is most effective if more than one drug is used and is more indicated when tumor is larger than 1 cm or if high risk features are seen by pathologist. The main side effects are nausea, vomiting, hair loss, marked tiredness and mood changes. They do not last for long periods and most can be controlled with good medical care. There are other side effects from chemotherapy, which you need to discuss with your doctor. If you have been treated with chemotherapy before surgery for reducing the size (mainly stage 3) or for conserving the breast, you are expected to complete the course after surgery. The medicines used and their cost varies from case to case.

- **Hormonal Therapy**

Tamoxifen is a drug that works by blocking the effects of oestrogen on cells. It is thought that oestrogen may be causing the cancer to grow. In most cases, the cancer stops growing although it does not kill cancer cells. Newer drugs like Anastrozole work in a different way producing similar results. Their side effects are different.

- **Ovarian treatment**

The purpose of ovarian treatment is to reduce the amount of oestrogen produced by the ovary. It is only useful in women who have not yet reached menopause. Ovarian treatment is performed best performed using laparoscopic surgical removal of the ovaries. Radiation to the ovaries or hormonal injections under skin can have similar effects.

- **Combined treatments**

Overall, the evidence of benefits from using one or more treatments at the same time does not suggest that there is any large benefit to be gained, but there may be some benefit if the cancer cells are hormone sensitive.

10. Recovering from your procedure?

After the operation, you will go back to the ward when you have recovered from the anaesthetic, until you are well enough to go home in about 2 days. If you have any side effects from the anaesthetic, such as headache, nausea, vomiting, tell the nurse looking after you, who will be able to give you some medication to help.

- **Pain**

You can expect to have pain in the operation site. There are a number of ways in managing your pain. You would be given adequate medications to control pain.

- **Diet**

You will have a drip in your arm when you come back from surgery. This will be removed when you are able to take food and fluids by mouth and you are no longer feeling sick. To begin with, you can have small sips of water then slowly take more until you are eating normally.

- **Wounds**

You may have clips, stitches and/or stitches that are dissolvable or a combination of both. Your wound may have a dressing and you will also have a wound drain, which is removed as soon as the drainage has stopped. Continue to keep your wound clean and protected until healed and no seepage is present.

- **Your lungs and blood supply**

It is very important after surgery that you start moving as soon as possible. This is to prevent blood clots forming in your legs and possibly traveling to your lungs. This can be fatal. To help prevent against clots forming in your legs, you may have support stockings (TEDS) on before you go to surgery and these will stay on until you are walking on your own. You may also be put on drugs to thin your blood. Also, you need to do your deep breathing exercises, ten deep breaths every hour, to get the secretions in your lungs moving and help prevent a chest infection. Avoid smoking after surgery as this increases your risk of chest infection which causes coughing - a painful experience after surgery.

- **Exercise**

You will feel tired for sometime after surgery. (You need to take things easy and gradually return to normal duties, as you feel able to.) You should not drive during the first 1-2 weeks and until you have a reasonable range of movement in your shoulder. You will be taught how to

do arm exercises. It is important that you follow these to help you return to a normal range of shoulder movements.

- **Care of arm**

If you have had surgery and/ or radiotherapy to the armpit the arm on the same side needs care to help in the prevention of lymphoedema (swelling in the armpit). You should avoid the following with that arm:

- Blood taking or blood pressure measurement
- Carrying anything heavy
- Tight clothing or jewelry
- Cuts, burns and insect bites
- Injections should be avoided as much as possible.
- And use:
 - Skin cream to keep the arm moist
 - Cooling devices during the hot summer
 - Gloves to wash up
 - Gloves and long sleeved shirt when gardening.

- **Sexuality and self-esteem**

Many women may have problems with their sexuality and self esteem after breast cancer surgery. Your doctor may refer you for psychological counseling before and after your surgery so that you and your partner can work through these problems.

11. Tell your doctor if you have:

- fever and chills.
- pain that is not relieved by prescribed pain killers.
- swelling, tenderness, redness at or around the cut.
- swelling of the arm.
- a cut or infection to the arm on the same side as your treatment