

## YOUR GUIDE TO...

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# Breast Cancer

- **Classification of Breast Cancer**
- **Treatment Options**
- **Follow-up**
- **Patient Resources**

## Patient Resources

### **National Cancer Centre**

Cancer Helpline

Tel: 6225 5565

[www.nccs.com.sg](http://www.nccs.com.sg)

### **Breast Cancer Foundation**

Tel: 6356 0123

[www.bcf.org.sg](http://www.bcf.org.sg)

### **Singapore Cancer Society**

Tel: 6221 9578

[www.cancer.org.sg](http://www.cancer.org.sg)

This pamphlet contains general information and advice regarding your condition and is designed to provide you with a guide on how best to safeguard your health. However, it is not intended to contain exhaustive instructions. In specific cases you may receive different/additional instructions from your doctor. You are advised to follow any specific written or oral instructions given to you by your doctor or healthcare worker. Please seek clarification if in doubt.

## Classification of Breast Cancer

Breast cancer is the abnormal growth of the cells that line the ducts and lobes of the breast. The most common types of breast cancers are:

- **Ductal carcinoma in situ (DCIS):** This is a condition also called Stage 0 breast cancer. It is noninvasive and is confined to the ducts.
- **Infiltrating (invasive) ductal carcinoma (IDC):** This cancer starts in a milk duct, breaks through the wall of the duct and invades the fatty tissue of the breast. It can spread to other parts of the body.
- **Infiltrating (invasive) lobular carcinoma (ILC):** This cancer starts in the milk glands (lobules) and can spread to other parts of the body.

### **Tumour properties**

- Tests are done on the tumour cells to guide treatment and it can predict patient outcome
- Estrogen receptor (ER) and Progesterone Receptor (PR) status (type of hormone receptors in breast cancer cells).
- Human epidermal growth factor type 2 receptor (HER2) or cerbB2 status

### **Spread of cancer**

- Nodal status - the presence of cancer cells in glands or lymph nodes in the armpit on the same side (which means tumour has spread via the lymphatic system to lymph nodes in the armpit); if present, how many.
- Metastasis - the spread of cancer into other distant tissues, most common sites are the lungs, bones, or liver.

## STAGE OF BREAST CANCER

This determined by the tumour type and size, lymph node spread as well as distant spread.

### STAGE 0 BREAST CANCER (DCIS)

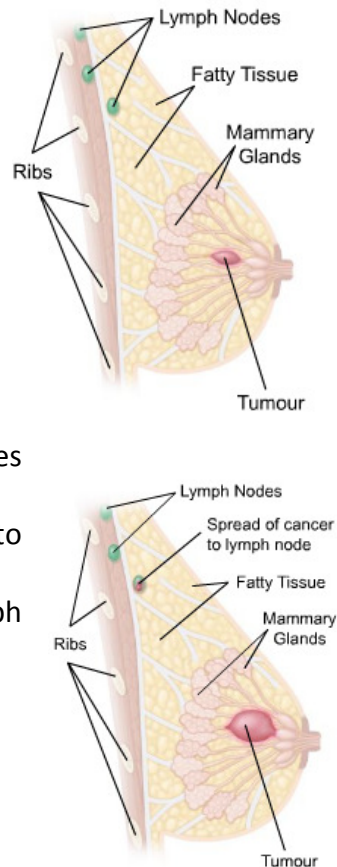
Ductal carcinoma in-situ (DCIS) is an early noninvasive condition in which cancer cells are found in the lining of a breast duct, and have not spread outside the duct to other tissues in the breast.

### STAGE I BREAST CANCER

- Tumours are 0-2 cm
- No lymph node involved or small clusters of cancer cells (from 0.2 mm - 2 mm)

### STAGE II BREAST CANCER

- Tumours are 0-2 cm with small clusters of cancer cells in lymph nodes (from 0.2 mm - 2 mm)
- Tumours 2-5 cm with movable or up to 3 lymph nodes involved
- Tumours more than 5 cm but no lymph node involved



### STAGE III BREAST CANCER

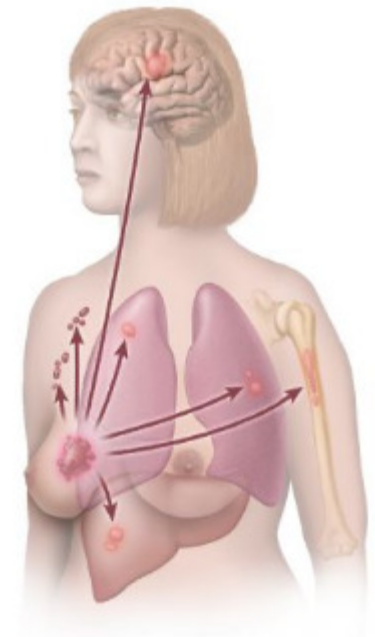
- Tumours are more than 5 cm with lymph node involved
- Tumours 0-5 cm with 4-9 involved or fixed lymph node involved
- Tumours that have involved the skin and/or chest wall
- Tumours with more than 9 lymph nodes involved

### STAGE IV BREAST CANCER

Advanced cancer in which the cancer cells have spread (metastasized) to other parts of the body, most often the lungs, bones, or liver.

#### *Treatment:*

- The goal in stage IV disease is to stabilize the disease.
- Systemic therapy (treatment that goes throughout the entire body) such as chemotherapy and targeted therapies may be used.
- Hormone therapy is used for ER-positive tumours
- Tumour may be treated with radiation therapy.
- Tumour is surgically removed where possible, especially in cases where symptoms must be alleviated.



# Treatment Options

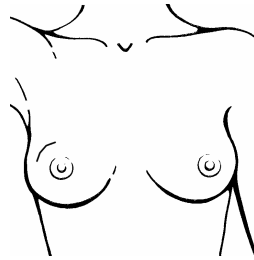
The current treatment of breast cancer involves combination therapies which include surgical treatment of the breast and the axillary lymph nodes as well as other therapies.

## 1. SURGERY

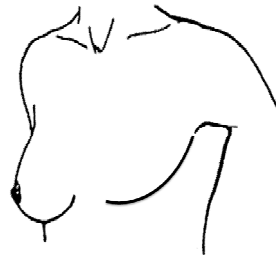
This is considered in 2 parts:

### a. Breast:

- Lumpectomy - removal of the tumour with a margin of normal tissue. Generally smaller breast tumours can be managed with a lumpectomy, in which case the tumour is removed but the rest of the breast is left intact. This is usually followed with radiotherapy of the remaining breast.



- Mastectomy- removal of the whole breast. Patients with tumours that are larger, around the nipple, multi-centric tumours (i.e., multiple tumours in different parts of the breast) will need a mastectomy; or when radiotherapy is contraindicated.



### b. Axillary lymph nodes:

- Sentinel lymph node biopsy (SLNB) - a surgery that takes out lymph node tissue to look for cancer. Patients with invasive tumours less than 5 cm and no palpable lymph

nodes may have sentinel lymph node biopsy. This requires an injection of a blue dye or special tracer substance before surgery. If cancer is found in the sentinel lymph node at the time of surgery, more surgery will be needed to remove additional the lymph nodes in the armpit (axillary clearance). SLNB is also performed for patients with DCIS undergoing mastectomy.

- Axillary clearance – a more extensive surgery where additional lymph are removed from the armpit.

### c. Breast reconstruction

This may be considered for patients undergoing mastectomy:

- Immediate breast reconstruction - done in the same sitting with the mastectomy
- Delayed breast reconstruction - done after initial mastectomy and completion of other treatments such as chemotherapy and radiotherapy

### Common side effects may include:

- Pain after the operation. This is well managed with painkillers
- Seroma (tissue fluid) collection beneath the skin
- Wound infection
- Tightness or discomfort over the chest that resolve over time
- Stiffness of the shoulder which will recover with physiotherapy
- Lymphoedema: a build-up of lymphatic fluid that may cause swelling often in the arm on the same side as the affected breast. This may occur in patients with axillary surgery.

- Numbness over the skin of the chest or upper arm

## 2. CHEMOTHERAPY

- Chemotherapy is treatment with medication that goes throughout the body to kill cancer cells and to improve the chance of cure.
- Chemotherapy is usually given as a combination of drugs to treat breast cancer.
- Many types and dosages of drugs are used depending on the situation.
- Chemotherapy may be used after surgery in an attempt to kill remaining cancer cells. The use of chemotherapy in this setting is called *adjuvant chemotherapy* and is designed to be an outpatient program.
- It may also be used in **Stage III** to downsize the cancer before surgery, known as *neoadjuvant chemotherapy* and **IV Breast Cancer** to treat tumours and manage symptoms known as *palliative chemotherapy*.

### Common side effects may include:

- Tiredness, hair loss, and a low white blood cell count (neutropenia)
- Less common side effects may include nausea, vomiting, diarrhoea, mouth sores, poor appetite, allergic reactions, easy bruising or bleeding, an increased chance of developing infection and decreased sensitivity in the arms and legs (neuropathy)

## 3. RADIATION THERAPY

- Radiation therapy uses high-energy X-rays to destroy cancer cells.

- Treatment is usually done for five days a week for a few minutes a day for approximately 5-6 weeks. Radiation therapy usually begins about 4-6 weeks after surgery or after chemotherapy if chemotherapy is recommended.
- Radiation therapy may be given for advanced cancer to treat the tumour in the breast or distant sites to relieve symptoms.
- Radiation treatments are usually painless.

### Common side effects may include:

- Tiredness
- Red, itchy or flaky skin where the radiation is applied
- Breast swelling and nipple tenderness
- Less common side effects include nausea

## 4. HORMONAL THERAPY

- This is targeted towards preventing estrogen from acting as a tumour growth factor. It acts by either blocking the production of estrogen or the effects of estrogen on cancer cells (receptor blocker).
- It is given for tumours which are ER and/or PR positive and is generally for 5 years.
- The choice of drug is dependent on several patient factors including menstrual status, contraindications of any of the drugs and side effects.

Hormonal treatments include:

- *Estrogen receptor modulators*: E.g., tamoxifen which block estrogen's action at the tumour (in pre and postmenopausal women). Its side effects are well tolerated including hot flushes, weight gain and vaginal

dryness. However, it is associated with a small increased risk of venous thrombotic disease, endometrial hyperplasia and cancer.

- *Aromatase inhibitors*: these block estrogen production by tissue other than the ovaries (in postmenopausal women). This has shown to be good and better than tamoxifen in some cases. It is associated with increased bone fractures in patients with osteoporosis (thin bones).

## 5. TARGETED THERAPY

- This is a type of treatment that uses drugs that attack specific cancer cells without harming normal cells.
- *Trastuzumab (Herceptin)* is a monoclonal antibody that blocks the effects of the growth factor protein HER2 and is given to patients with tumours with HER2 gene over expression. This has cardiac side effects and needs monitoring.

## Follow Up

### Carrying on

- Although cancer is a chronic disease, less than half of all patients will have their cancer recur.
- It is important to continue normal activities after treatment.

### Recurrence

- The risk of breast cancer recurring depends on its initial stage and the effectiveness of its treatment.
- Local recurrences (at or near the original cancer site) often produce the same signs as the initial disease, such as a lump in the breast or armpit.
  - Treatment is usually further surgery (a mastectomy if lumpectomy was done), radiation therapy (if it was not previously given) and appropriate systemic therapy.
- Metastasis (recurrences elsewhere in the body) may appear anywhere and may cause pain at the site of recurrence.
  - Treatment varies and may include chemotherapy, hormone therapy, radiation therapy, psychological support, and sometimes surgery.

### Breast Screening

- Annual mammography is recommended for new and recurrent breast cancer after breast conservation and opposite breast cancer