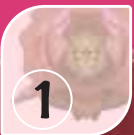
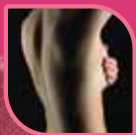


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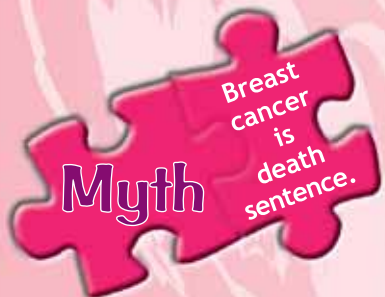
Learning the facts about breast cancer could save your life

Breast Book



Breast Cancer

the top most common frequent cancer
in Singapore females is breast cancer¹.



- Breast cancer is the top cause of cancer deaths amongst women¹
- Each year, over 1,400 new cases are diagnosed¹
- Over 300 women die of breast cancer yearly¹
- The incidence of breast cancer is highest in women aged 50-65 years²

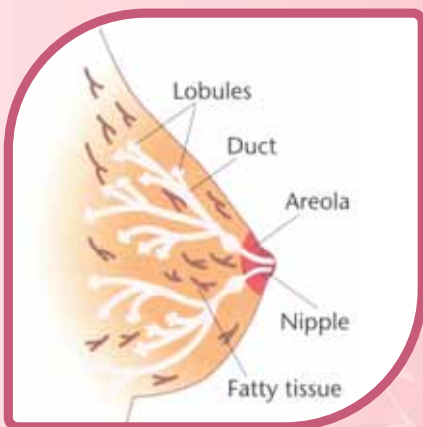
*Be breast aware.
Know the signs of breast cancer.
Examine your breasts regularly and see
a doctor immediately if you
notice changes.*



1. Singapore Cancer Registry Report No. 7 "Trends in Cancer Incidence in Singapore, 1968-2007"

2. Singapore Cancer Registry Interim Annual Registry Report "Trends in Cancer Incidence in Singapore, 2005-2009"

THE *Breast*



The breast is largely made up of fat and breast tissue. Breast tissue comprises lobes containing lobules that produce milk, and linking ducts that carry the milk to the nipple during breastfeeding. There are five to ten ductal systems in each breast, each with its own opening at the nipple.

The breast also contains nerves, blood vessels and lymph ducts (that carry lymph, a colourless fluid), and connective tissue that helps hold everything in place. The lymph ducts lead to bean-shaped lymph nodes found around the armpit, above the collarbone and in the chest.

Lymph nodes and ducts are part of the lymphatic system which help the body to fight infection.

The main chest muscle lies under each breast and covers the ribs.

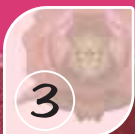
Myth

If I have bigger breasts, I have a higher chance of getting breast cancer.

Truth

This has not been proven by research. Someone who is well-endowed has an equal chance of getting breast cancer as one who has smaller breasts. Being overweight, however, does increase your risk.





TYPES OF *Breast Cancer*

Breast cancer occurs when breast cells divide and grow without control, sometimes invading surrounding tissue. In some cases, the cancer may grow very slowly while in others, it develops more rapidly. Most breast cancers start in ducts while a small number start in the lobules.

Non-invasive Breast Cancer

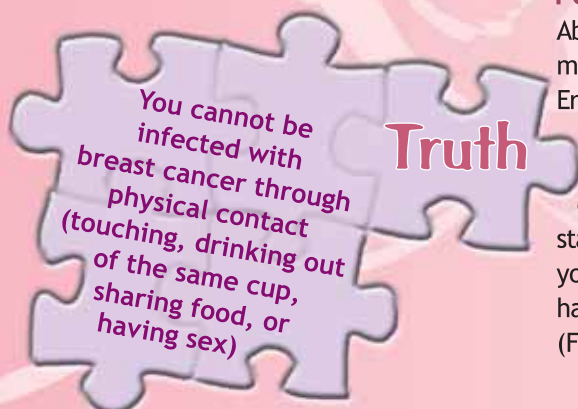
Cancer that is confined to the ducts (Ductal Carcinoma In Situ or DCIS) or lobules (Lobular Carcinoma In Situ or LCIS). DCIS is considered a precancerous condition while LCIS is a risk factor for invasive cancer.

Invasive Breast Cancer

Cancer that has spread beyond the ducts or lobules to the surrounding breast tissue. Generally most treatable in the early stage when the tumour is relatively small and has not spread to the lymph nodes.

Metastatic Breast Cancer

Cancer that has spread outside the breast to other parts of the body. If cancer cells are detected in the lymph nodes under the arm, it may mean that it has spread to other lymph nodes and organs such as the bones, liver or lungs.



ErbB2 (HER2/neu) Positive Breast Cancer

About 20% to 30% of breast cancers have too much of a growth promoting protein called ErbB2 (HER2/neu)¹. This type of breast cancer grows faster and spread faster than other cancer cells, and they need to be treated differently as they tend to respond poorly to standard chemotherapy.^{2,3} It is important for you to know ErbB2 (HER2/neu) status by having IHC(Immunohistochemistry) or FISH (Fluorescence In Situ Hybridization) test.

1. Reese DM, Slamon DJ. HER-2/neu signal transduction in human breast and ovarian cancer. *Stem Cells* 1997; 15 (1): 1-8

2. Pegram MD, Pauletti G, Slamon DJ. HER-2/neu as a predictive marker of response to breast cancer therapy. *Breast Cancer Res Treat* 1998; 52 (1-3): 65-77

3. Does the cancer have genes that are not normal? (HER-2 status). *Breastcancer.org* Web site. Available at: http://www.breastcancer.org/her2_status.html. Accessed May 9, 2008.

RISK FACTORS FOR

Breast Cancer

Gender

Being female and having breasts is the highest risk factor. However, 1% of breast cancer occurs in males

Age

A woman's risk of getting breast cancer increases with age. As women get older, it becomes more likely that abnormal changes will take place in their cells



Family History

If your mother, sister or daughter has or had breast cancer, you are at higher risk of developing it yourself. Family history of breast cancer can be due to factors such as lifestyle or associated with specific genetic mutations. So far, researchers have found two genes - BRCA1 and BRCA2 - that, if defective, can increase susceptibility to the disease.

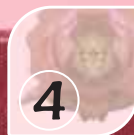
Hormones

If you begin to menstruate early (before 12), menopause late (after age 55), have your first child after 30 or have no children at all, you are at higher risk of developing breast cancer.

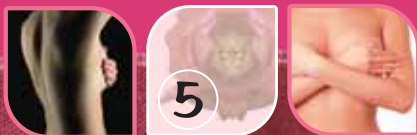
These factors are believed to be linked to the female hormone oestrogen. Breast cancer has also been associated with the prolonged use (5 years or more) of hormone replacement therapy after menopause.

Diet

Several studies have suggested that eating a diet high in fat may increase the risk of breast cancer while others have not found this to be so. However, it is still best to limit fat intakes as a high-fat diet can result in other cancers and heart disease. In addition, chemicals called phytoestrogens (plant hormones), found in a variety of vegetables and soya, may protect against developing breast cancer as well as slow down its growth.



4



RISK FACTORS FOR

Breast

Lack of physical activity

Exercise may lower breast cancer risk by delaying the onset of menstruation, reducing the frequency of regular periods and helping to maintain a healthy weight. Each of these can help decrease the total amount of oestrogen a woman is exposed to in her lifetime.

Low to moderate levels of physical activity may enhance the immune system's ability to kill cancer cells or slow their growth rate.

Alcohol

Several studies link alcohol intake on a regular basis with an increased risk of breast cancer. Alcohol may increase risk by altering the way a woman's body metabolises oestrogen. This may cause blood oestrogen levels to rise, which may in turn increase the risk of breast cancer.

Previous history of breast cancer and benign breast disease

Women who have had breast cancer or benign breast disease such as hyperplasia have a higher risk of getting breast cancer.

Four in five women diagnosed with breast cancer have no known risk factors. So it is important that every woman screens herself regularly for breast cancer and practises a healthy lifestyle.

Myth

Deodorants, anti-perspirants or wearing bras cause cancer.

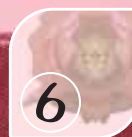
Truth

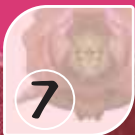
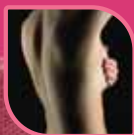
To date, there is no scientific data to support these claims.

SYMPTOMS OF *Breast Cancer*

In early stages of breast cancer, there is usually no pain and there may be no symptoms at all. As the cancer grows, the following symptoms could appear:

Consult a doctor if you notice any of these changes.





7

OTHER COMMON

Breast Conditions

There are other breast diseases that might mimic the symptoms of breast cancer and so require further tests to diagnose. These include:

Fibrocysts: Fibrocystic change is a very common, benign condition that affects mainly women in the reproductive age group. Fibrocysts are circumscribed by or situated within a conspicuous amount of fibrous connective tissue

Fibroadenomas: Fibroadenomas generally appear among younger women, before the age of 30 years. The benign tumors are characterized by proliferation of both glandular and stromal elements and they are usually mobile within the breast on palpation

Papillomas: Papillomas are small growths that arise from the lining of the breast ducts and are often not more than 0.5-1.0 cm in size. They may cause nipple discharge, which may make it difficult to distinguish papillomas from breast cancer

Phyllodes tumors: Phyllodes tumours tend to grow rapidly to a large size, sometimes up to 8-10 cm in size. They are usually painless but if large, may cause a heavy or aching sensation in the breast

Infections of the breast: Sometimes lumps in the breast may be due to an infection. If there is an infection, the lump is usually very painful and there will be skin changes such as redness and swelling over the lump. Patient may also have a fever

Hyperplasia: Hyperplasia is an increase in the number of breast cells in lobules or ducts. Atypical hyperplasia is the *emergence of* atypical breast cells which is associated with an increased risk of developing breast cancer

Breast calcifications: Breast calcifications are tiny calcium deposits within the breast tissue that appear as white spots on a mammogram. Although breast calcifications are common and noncancerous, certain patterns of calcifications, such as tight clusters with irregular shapes may be indications of pre-cancer or cancer

Myth

An injury to the breast can cause cancer.

PROTECT YOURSELF AGAINST

Breast Cancer

Practise a healthy lifestyle

- Be physically active - at least 150mins a week of moderate intensity physical activity. Can be in 10 mins block throughout the day e.g. taking stairs, brisk walking and jogging etc.
- Maintain a healthy weight.
- Eat a diet that is rich in fruits, vegetable and whole grains, and low in fats with an emphasis on good fats (monounsaturated and polyunsaturated fats) over bad fats (saturated and trans fats).
- Limit alcohol intake to less than one alcoholic drink a day.
- Breastfeed children instead of formula feeding them (if possible).

Beware of breast cancer and its symptoms

Covered in earlier pages.

Truth

A bruise or hit to the breast won't cause cancer. If cancer develops in a spot that has been injured, it is just a coincidence.

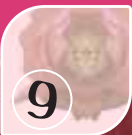
Screen yourself for breast cancer regularly

Early detection offers more treatment options and a better chance of survival and recovery.

Take charge of your own breast health and detect changes in your breast through:

- Breast Self Examination
- Clinical Breast Examination by a healthcare professional
- Mammography





SCREEN YOURSELF
REGULARLY AS
Follows...

	20 - 39 yrs	40 - 49 yrs	50 yrs & above
Do Breast Self Examination (BSE) once every month	✓	✓	✓
Go for a Clinical Breast Examination by a healthcare professional once a year		✓	✓
Go for a mammogram		✓	✓

Myth

As long as I have had a mammogram that did not show any abnormalities, I am safe from breast cancer.

Truth

Cancer can occur at any time. That is why mammograms should be done annually or once in two years, along with monthly Breast Self Examinations and yearly Clinical Breast Examinations so that any changes or abnormalities can be picked up early and checked by a doctor.

HAVING A

Mammogram

- A mammogram is a low-dose X-ray of the breast that can pick up very small breast cancers.
- During mammography screening, the breast is gently flattened between two plates of the X-ray machine for a few seconds, to spread the tissue apart and get a good image of the breast. Some women may find this uncomfortable or painful. Images of the breast are taken and developed by a radiographer (a technician) who then gives the X-ray films to a radiologist (a doctor) to check for abnormalities.
- Mammography is usually not recommended for younger women (below 35) whose breasts tend to be more dense, making it difficult for small changes to be detected. Instead, an ultrasound, which uses high-frequency sound waves, is recommended. During an ultrasound, a gel is put on the breast and a small transducer or microphone is moved over the skin.

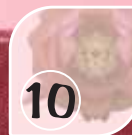
Myth

Radiation from mammography is dangerous.

Truth

The amount of radiation from mammography equipment is actually very low. Do not let fear of exposure to radiation or of pain keep you from getting regular mammograms.

- Mammography services are available at hospitals, private X-ray centres, selected polyclinics and on NHGD's Mammobus.



10





11

if you have a breast change...



DO NOT PANIC!

MOST BREAST CHANGES ARE NOT BREAST CANCER BUT ALL SHOULD BE CHECKED BY A DOCTOR.

- 1 See a doctor who will examine your breasts, ask questions about your change, and find out about any relevant medical and family history. This will help the doctor determine if your change is normal or if a review at a later date or further tests are required.
- 2 You may be referred to go for a mammogram and/or ultrasound, which will be reviewed by a radiologist.
- 3 If abnormalities are detected by the mammogram or ultrasound, a biopsy will be recommended. A fine needle may be used to obtain some cells or a larger needle to remove tissue from the affected area for examination under a microscope by a pathologist
- 4 If cancer is detected, you will be referred to a breast surgeon.

If you have concerns or questions about the discovery of your breast change, talk to your doctor or seek a second opinion.

TREATMENT FOR

Breast Cancer

To help doctors decide on the best treatment, the stage of the cancer needs to be determined. A scale is used that takes into account the tumour's size, the sort of cells it's made from and whether the cancer has spread or not. One or a combination of therapies may be used which should be discussed with the doctor.

Surgery

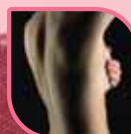
This is the most common treatment for breast cancer and involves two types:

● Lumpectomy

The breast lump and some normal tissues around it are removed, with the breast being preserved. Some lymph nodes may be removed as well. Usually only performed for early breast cancer.

● Mastectomy

Removal of the entire breast, often including the lymph nodes in the armpit and sometimes the chest wall muscles. Required when the cancer is found in numerous parts of the breast or the cancerous area is large.





13

TREATMENT FOR

Breast Cancer

Radiation Therapy or Radiotherapy

High-energy x-rays are directed at the breast, to damage cancer cells and stop them from growing. Radiotherapy is almost always recommended with lumpectomy but not always with mastectomy. Temporary side effects can occur which vary from person to person.

Chemotherapy

Drugs, usually in a combination, are given orally or by injection, to kill cancer cells. The drugs enter the bloodstream and travel through the body, and cause temporary side-effects that can be prevented or reduced with appropriate steps.

Hence, chemotherapy is given in cycles—a treatment period followed by a recovery period, then treatment again and so on.

Hormonal Therapy

This is used to deprive cancer cells of the hormones they need to grow. Hormonal therapy could involve drugs to change the way hormones work or surgery to remove the ovaries that produce female hormones which can affect cancer cells.

Side effects can occur. These depend on the type of drug used and vary among individuals.

Targeted Therapy

Targeted therapy is designed to specifically target cancer cells and not attack normal cells, thereby reducing unwanted side effects of therapy. This class of therapy blocks the growth and spread of cancer cells by acting on specific proteins important in cancer cell growth and even improves response to other cancer therapy combinations.

Myth

Mastectomy (removal of the entire breast) is the only way to get rid of breast cancer.

Truth

Mastectomy is not required for all breast cancers. Thanks to new technology, recent research and improved therapies, those diagnosed with breast cancer have a variety of options, depending on the stage and type of breast cancer.



Remember...

Never be afraid to examine your breasts or to have them examined. Finding out that you do not have breast cancer is more important than the time and effort required for an examination, or any discomfort you may feel.

Protect yourself through early detection.
You will have better treatment options and a better chance of recovery.

Contact Us

For more information on breast cancer and support provided for those affected by breast cancer:

Call Breast Cancer Foundation
6356 0123 (Helpline)

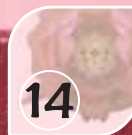
Visit the Breast Cancer Foundation website
www.bcf.org.sg

Email Breast Cancer Foundation
enquiries@bcf.org.sg

For subsidized mammography screening*

Call BreastScreen Singapore
(run by Health Promotion Board)
at 1800 333 3030

* Please note that conditions apply.



14



BUS SERVICES

● **Bus 11**

MRT SERVICES

● **Stadium MRT (Exit B)**



BREAST CANCER
FOUNDATION

5 Stadium Walk, Kallang Leisure Park #04-03/08 Singapore 397693

Tel: 6352 6560 **Fax:** 6352 5808 **Helpline:** 6356 0123

E-mail: enquiries@bcf.org.sg **Website:** www.bcf.org.sg