



All about Chennai

Breast Cancer

- a Handbook



INDEX

➤ An Introduction to Breast Cancer	3
➤ Symptoms of Breast Cancer	4
➤ Diagnosing Breast Cancer	5
➤ Treatment Breast Cancer	6
➤ Overview of Prevention	9

An Introduction to Breast Cancer [Carcinoma Of The Breast]

Definition: A malignant form of cancer that develops in the breast tissue.

Causes, incidence, and risk factors:

The most common type of breast cancer begins in the lining of the ducts and is called ductal carcinoma. Another type, called lobular carcinoma, arises in the lobules. For most types of breast cancer the cause is unknown. Recently two genes, BRC1 and BRC2 have been implicated in a familial type of breast cancer. A number of other predisposing factors have been identified including obesity, early menarche and delayed or absent child bearing. Breast cancer may occur in men as well as women, but is much more common in women.

The risk increases exponentially after the age 30. The average age of women diagnosed with breast cancer is 60 years. In general, the rate of breast cancer is lower in underdeveloped countries than the western countries. Other risk factors include:

- having a family history of breast cancer, particularly in mother or siblings.
- a past medical history of breast cancer, ovarian cancer, uterine cancer, or colon cancer.
- early menarche (start of menstruation before the age of 12) and/or late menopause (after the age of 55).
- no pregnancies or a first pregnancy after the age of 30.
- radiation exposure.
- post-menopausal estrogen therapy and oral contraceptive use (such as estrogens and progestin oral contraceptives) were considered possible risk factors, but the majority of recent studies do not confirm such risks.

Research suggests that a person's diet may affect the chances of getting some types of cancer. Breast cancer appears to be more likely to develop in women whose diet is very high in fat. Older women who are overweight also seem to have a greater risk. Some scientists believe that a low-fat diet, eating well-balanced meals with plenty of fruits and vegetables, and maintaining ideal weight can lower a woman's risk. There are also studies that suggest a slightly higher risk of breast cancer among women who drink alcohol. The risk appears to go up with the amount of alcohol consumed. So women who drink should do so in moderation.

The possible link between diet and breast cancer is still under study.

Symptoms of Breast Cancer

The common symptoms of Breast Cancer are:

- Breast lump or breast mass noted upon Breast Self Exam (BSE)
- usually painless, firm to hard, with irregular borders
- lump or mass in the armpit
- a change in the size or shape of the breast
- abnormal nipple discharge usually bloody or clear-to-yellow fluid may look like pus (purulent)
- change in the color or feel of the skin of the breast, nipple, or areola: dimpled, puckered, or scaly, retraction of the nipple, "orange peel" appearance of the skin of the breast
- redness
- accentuated veins on breast surface
- eventually (with late disease) skin ulceration
- change in appearance or sensation of the nipple pulled in (retraction), enlargement or itching
- breast discomfort on one side only
- breast enlargement on one side only
- bone pain (due to spread of the cancer to the bones)
- weight loss
- swelling of arm
- breast pain
- breast enlargement with above symptoms in males.

Diagnosing Breast Cancer

After clinically examining you, if the doctor feels that you might have breast cancer, he asks for the following tests:

Mammography may help identify the breast mass.

Ultrasonography can show whether the lump is solid or filled with fluid.

Thermography may also help identify the mass.

Needle aspiration or needle biopsy of the mass will either yield fluid indicating a cyst or it will indicate a solid mass which may or may not be cancer.

Needle biopsy removes cells directly from the mass for evaluation (can be done in conjunction with the needle aspiration procedure). The material removed will be sent to a lab.

Surgical biopsy removes a portion of the mass for further evaluation. Incision biopsy involves surgical removal of a portion of the mass for evaluation. Excision biopsy involves surgical removal of the entire mass for evaluation.

Biopsy is the investigation, which confirms the presence of breast cancer. Recent advancements in medical imaging allows the detection of cancers as small as 1mm, when it can be cured completely.

Breast Cancer

Treatment Overview:

The choice of the initial treatment is based upon the extent and aggressiveness of the disease. Currently breast cancer is viewed as a systemic disease that requires both local and systemic treatment. Local treatment may include lumpectomy, mastectomy (partial, total, or radical with axillary dissection) and radiation therapy - all directed at the breast and immediately surrounding the tissue.

Systemic treatment includes chemotherapy and hormonal therapy, which circulate drugs and hormones throughout the entire body in an attempt to eliminate cancer cells that may be present in distant parts of the body. Most women receive a combination of treatments including surgery, radiation, chemotherapy, and/or hormonal therapy. Current recommendations for potentially curable breast cancer usually suggest that the best primary treatment is partial mastectomy plus axillary dissection and radiation therapy.

MEDICATIONS:

Chemotherapy may be used as additional, systemic treatment in patients with curable breast cancer. Hormonal adjunctive therapy includes the use of antiestrogen drugs (such as tamoxifen), which may be prescribed for individuals found to have estrogen-dependent cancers.

SURGERY:

Lumpectomy (surgical removal of the lump) with radiation may be considered for individuals with stage 1 disease. However, axillary dissection is still recommended with the surgery.

LIFESTYLE CHANGES.

Complications

Even with aggressive and appropriate treatments, breast cancer often metastasizes to distant sites such as the lungs, liver, and bones. The local recurrence rate is about 5% after total mastectomy and axillary dissection when the nodes are found not to be involved. The local recurrence rate is 25% in those with similar treatment found to have nodal involvement.

Expectations (prognosis)

The clinical stage of breast cancer is the best indicator for prognosis (probable outcome). Five-year survival rates for individuals with breast cancer who receive appropriate treatment are approximately:

85%	for	stage	1
66%	for	stage	2
41%	for	stage	3
10%	for stage 4		

When the axillary lymph nodes are involved, the survival rate drops to approximately 40 to 50% at 5 years and probably less than 25% at 10 years.

Calling your health care provider

Call for an appointment with your health care provider if:

- if you are a woman, 40 years or older, and have not had a baseline mammogram performed.
- if you are a woman, 35 years or older, and have a mother or sister with breast cancer, or a past medical history of prior breast cancer, uterine cancer, endometrial cancer, ovarian cancer, or colon cancer
- if you are a woman, 20 years or older and are unfamiliar with how to perform a breast self-examination.

symptoms of breast cancer occur.

- if you are a woman, 40 years or older, and have not had a baseline mammogram performed.
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Nipple retraction



Benign breast lesion



Recurrent Ca Breast



Skin tethering due to Ca Breast



Skin tethering due to Ca Breast



peau-de-orange (like the orange peel) appearance



Advanced Ca Breast



Ca of the left Breast



Skin changes due to radiotherapy.



Ca of the male breast.

Overview of Prevention

Prevention

Doctors cannot always explain why one person gets cancer and another does not. However, scientists have studied general patterns of cancer in the population to learn what things around us and what things we do in our lives may increase our chance of developing cancer.

Anything that increases a person's chance of developing a disease is called a risk factor; anything that decreases a person's chance of developing a disease is called a protective factor. Some of the risk factors for cancer can be avoided, but many cannot. For example, although you can choose to quit smoking, you cannot choose which genes you have inherited from your parents. Both smoking and inheriting specific genes could be considered risk factors for certain kinds of cancer, but only smoking can be avoided. Prevention means avoiding the risk factors and increasing the protective factors that can be controlled so that the chance of developing cancer decreases.

Although many risk factors can be avoided, it is important to keep in mind that avoiding risk factors does not guarantee that you will not get cancer. Also, most people with a particular risk factor for cancer do not actually get the disease. Some people are more sensitive than others to factors that can cause cancer. Talk to your doctor about methods of preventing cancer that might be effective for you.

Purpose of this summary

The purpose of this summary on breast cancer prevention are to:

- give information on breast cancer and how often it occurs
- describe breast cancer prevention methods
- give current facts about which people or groups of people would most likely be helped by following breast cancer prevention methods.

You can talk to your doctor or health care professional about cancer prevention methods and whether they would be likely to help you.

BREAST CANCER

The breast consists of lobes, lobules, and bulbs that are connected by ducts. The breast also contains blood and lymph vessels. These lymph vessels lead to structures that are called lymph nodes. Clusters of lymph nodes are found under the arm, above the collarbone, in the chest, and in other parts of the body. Together, the lymph vessels and lymph nodes make up the lymphatic system, which circulates a fluid called lymph throughout the body. Lymph contains cells that help fight infection and disease. When breast cancer spreads outside the breast, cancer cells are most often found under the arm in the lymph nodes. In

many cases, if the cancer has reached the lymph nodes, cancer cells may have also spread to other parts of the body via the lymphatic system or through the blood stream.

Breast cancer prevention

Breast cancer can sometimes be associated with known risk factors for the disease. Many risk factors are modifiable though not all can be avoided.

Tamoxifen for Prevention of Breast Cancer

Tamoxifen is a drug that blocks the effect of estrogen on breast cancer cells. A large study has shown that tamoxifen lowers the risk of getting breast cancer in women who are at elevated risk of getting breast cancer. However, tamoxifen may also increase the risk of getting some other serious diseases, including endometrial cancer, stroke, and blood clots in veins and in the lungs. Women who are concerned that they may be at an increased risk of developing breast cancer should talk with their doctor about whether to take tamoxifen to prevent breast cancer. It is important to consider both the benefits and risks of taking tamoxifen.

Radiation

Studies have shown that reducing the number of chest x-rays, especially at a young age, decreases the risk of breast cancer. A small number of breast cancer cases can be linked to radiation exposure.

Hormonal Factors

Hormones produced by the ovaries appear to increase a woman's risk for developing breast cancer. The removal of one or both ovaries reduces the risk. The use of drugs that suppress the production of estrogen may inhibit tumor cell growth. The use of hormone replacement therapy may be associated with an increased risk of developing breast cancer. The use of oral contraceptives may also be associated with a slight increase in breast cancer risk.

Beginning to menstruate at an older age and having a full-term pregnancy reduces breast cancer risk. Also, a woman who has her first child before the age of 20 experiences a greater decrease in breast cancer risk than a woman who has never had children or who has her first child after the age of 35. Beginning menopause at a later age increases a woman's risk of developing breast cancer.

Diet and Lifestyle

Diet is being studied as a risk factor for breast cancer. Studies show that in populations that consume a high-fat diet, women are more likely to die of breast cancer than women in populations that consume a low-fat diet. It is not known if a diet low in fat will prevent breast cancer. Studies also show that certain vitamins may decrease a woman's risk of breast cancer, especially premenopausal

women at high risk. Exercise, especially in young women, may decrease hormone levels and contribute to a decreased breast cancer risk. Studies suggest that the consumption of alcohol is associated with a slight increase in the risk of developing breast cancer. Postmenopausal weight gain, especially after natural menopause and/or after age 60, may increase breast cancer risk.

Genetics

Women who inherit specific genes are at a greater risk for developing breast cancer. Research is underway to develop methods of identifying high-risk genes.

Prophylactic Mastectomy

Following cancer risk assessment and counseling, the removal of both breasts may reduce the risk of breast cancer in women with a family history of breast cancer.