



BREAST CANCER

WHAT IS BREAST CANCER?

Cancer represents an uncontrolled increase in certain cells in your body that can cause harm, disease or death by interfering with normal organ functions and/or the functioning of neighbouring organs; and also by spreading to the rest of the body. Cancer can develop in any part of the body. Malignancies may include carcinomas, sarcomas, melanomas, lymphomas and malignant germ cell tumours.

Breast cancer represents a cancer that originates within the breast and which then spreads to the lymph nodes in the armpit or in the neck, and may spread to other organs (typically the lungs, bone and brain).

Breast cancer spreading to other parts of the body is called "metastatic breast cancer". A common misconception is that metastatic breast cancer in the lung is now a "lung cancer". Lung cancer is a completely different cancer that starts out primarily in the lung.

HOW COMMON IS BREAST CANCER?

Breast cancer is the most common cancer among women (except for skin cancers), with a lifetime risk of approximately 13%, which means that one out of every 8 women will be diagnosed with breast cancer in her lifetime. It is the second most common cause of cancer-related death in women worldwide - only lung cancer kills more women on an annual basis.

However, despite the high incidence of breast cancer it is responsible for the death of only 1 out of 38 women worldwide (2.6%). This is the result of effective screening, early diagnosis and successful treatment of most breast cancers. Breast cancer in men is uncommon, accounting for less than 1% of all male cancers and less than 0.1% of cancer-related death in men.

DETERMINING MY RISK

Screening for breast cancer is very important for early detection of the disease. Early/small breast cancers are generally much easier to treat than advanced tumours. The various screening methods and protocols depend largely on a patient risk assessment, as conducted by an expert counsellor or other health care worker with experience in breast cancer management.

"Average" risk individuals include women with no personal history of previous breast cancer, no family history of breast cancer, no known genetic abnormalities, and no history of chest radiation therapy before the age of 30.

"High" risk individuals are those women with previous breast cancer, a positive family history for breast and other cancers (especially family members with early onset breast cancer), patients with known breast cancer gene mutations and women who may have had chest irradiation at a young age.

Genetic testing for breast cancer gene mutations (*BRCA1* and *BRCA2*) is now readily available in South Africa, but should always be guided by proper genetic counselling.

WARNING SIGNS

The most important things to look out for are:

- A palpable lump in the breast or under the arm (in the armpit/axilla),
- Swelling and redness, ulcer-forming lesions or dimpling of the breast skin and
- Retraction of the nipple with or without a fluid discharge (especially when blood-stained).

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Please note that these symptoms can also be caused by diseases other than breast cancer. It is therefore important to consult with your doctor when you become aware of any of these.

SHOULD I GO FOR A MAMMOGRAM?

Yes, most certainly. Mammograms and breast sonar examination is important for the early detection of breast cancers. The frequency of radiological screening will be determined by your risk for breast cancer (as mentioned above). This needs to be discussed with your family practitioner, and the guidance of genetic counsellors is required whenever a high risk for breast cancer is considered.

DIAGNOSIS

The diagnosis of breast cancer is most often confirmed by a pathologist on a biopsy sample. These biopsies may either be fine needle aspiration samples (by which the diagnosis is made on the microscopic appearance of single cancer cells or small groups of cells); or core biopsy samples (by which larger pieces of tissue are represented).

The pathology laboratory will confirm the diagnosis of cancer, but will also report on the type of cancer and other factors important to determine prognosis and treatment, such as the extent of invasion, the grade of the lesion (grades 1 – 3), the presence of cancer cells in the blood vessels, and the hormone receptor status of the cancer cells (oestrogen, progesterone and HER2/neu).

MANAGING BREAST CANCER

The management of breast cancer is a team effort. Typically the multidisciplinary team will include surgeons and oncologists, with the help of pathologists and radiologists. The management team will use all available information to determine the stage of the tumour, which indicates how far the tumour may have spread. This is crucial information for further decision making.

It is important to determine whether or not the tumour is localised to the breast, if there is some form of regional involvement of lymph nodes, and whether or not the cancer has spread to the rest of the body including the lungs, skeleton and brain.

TREATMENT

The treatment of breast cancer can be complicated, but the options typically include surgery, chemotherapy and radiation therapy. Usually a combination of these modalities is utilised based on the consensus of the multidisciplinary management team. Treatment plans are custom-made for each patient.

Lately there has been a shift in favour of breast conservation surgery and reconstructive surgery as part of the treatment of breast cancer. In addition many patients with high grade cancers are treated with chemotherapy prior to any surgery (so-called "neoadjuvant" chemotherapy) – many of these aggressive cancers respond very well to the use of aggressive chemotherapy, which may simplify subsequent surgery.

In some cases of early breast cancer, molecular tests (such as MammaPrint or Oncotype DX) can be utilised to determine the need for chemotherapy. These tests assess the risk that a tumour will spread to other parts of the body.

In summary, breast cancer is common worldwide and also in the South African population (in both men and women). One has to be aware of the danger signs of breast cancer, and it is important to consult your doctor when any of the danger signs are present. Your risk of breast cancer is determined by a family history of breast cancer, previous breast cancer and other factors; this is best explored in consultation with a breast cancer/genetics counsellor, and genetic testing if indicated. Mammograms and breast sonars are crucial for detection of early breast cancer. The diagnosis is made by a pathologist during microscopic examination of a biopsy sample. Treatment of breast cancer should ideally be determined by a multidisciplinary team.

