

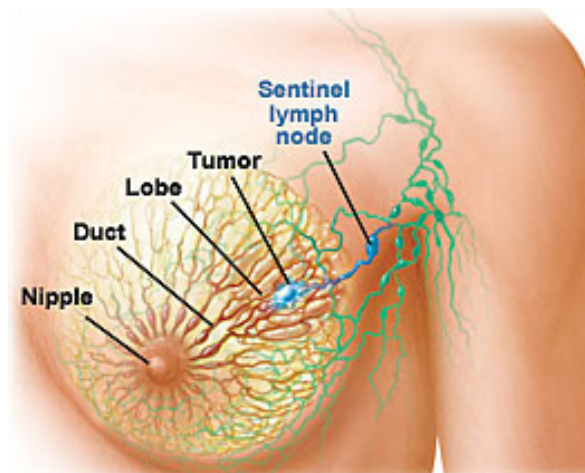
Breast Cancer

Fact Sheet

What is Breast Cancer?

Breast cancer develops in the milk-producing glands of the breast or in the passages (ducts) that deliver milk to the nipples. Breast cancer is broadly categorised into four stages:

- **Stage 1:** The cancer is confined to a woman's breast only (early stage)
- **Stage 2:** The cancer has spread to nearby structures – i.e. under-arm lymph nodes (locally advanced)
- **Stage 3:** The cancer has spread to the underlying tissues of the chest wall (locally advanced)
- **Stage 4:** The cancer has spread to other parts of a woman's body (metastatic or advanced)



The likely outcome of the disease (prognosis) and treatment of breast cancer is influenced by the stage of the disease (how far the cancer has spread) when first diagnosed.

There are several types of breast cancers which grow at different rates, and respond differently to treatments; which means that malignant tissue should always undergo a number of tests to determine the type of tumour (e.g. oestrogen-receptor status (ER), or Human Epidermal Growth Factor Receptor-2 status).

Prevalence and Incidence

- Breast cancer constitutes 42% of all cancer cases among women in Lebanon.¹

- Nearly 50% of breast cancer cases in Lebanon are diagnosed among women under the age of 50.¹
- The incidence of breast cancer in Lebanon is rising, with 76 new cases per 100,000 women of all ages emerging annually.¹
- Breast cancer is the leading cause of cancer deaths worldwide in women under the age of 55² and more than one million women are diagnosed with breast cancer each year.³
- Eight to nine percent of women will develop breast cancer during their lifetime, making it the second most common cancer in the world.³
- A World Health Organization report suggested that, in 2005, there were 502,000 deaths from breast cancer worldwide.⁴

Risk factors

Likely risk factors include³:

- Age – 78% of all breast cancer patients are aged 50 or above, though in Lebanon 50% of cases occur among women under 50¹
- Family history of breast cancer
- A history of benign breast diseases
- Increased levels of, or prolonged exposure to hormones, for example through a long menstrual life, late menopause or hormone replacement therapy in post-menopausal women⁵
- No children (null parity) or a late first pregnancy
- Lifestyle factors including exposure to ionizing radiation, a high alcohol consumption and consumption of a high-fat diet⁶

Symptoms

In the early stages of breast cancer, there may not be any symptoms. This is why it is so important for women to follow screening recommendations. However, as the cancer grows in size, a woman may notice a number of symptoms including³:

- A hard lump developing in the breast or armpit – typically painless and occurring on one side only
- A change in the size or shape of the breast
- Changes in the skin such as dimpling, scaling or redness
- Changes in the nipple such as the secretion of an unusual discharge or a rash appearing around the nipple area

“Doctors recommend that women conduct monthly breast self-examination. Annual mammograms are

recommended as of the age of 40 as well, and as of the age of 35 for women with a family history of breast cancer.” *Lebanese Society of Medical Oncology*

Treatment and management of breast cancer

“Patients who are diagnosed through screening by mammogram during early stage of breast cancer and not presenting with lesions have a percentage of survival or cure of more than 90%”. Prof. A. Shamseddine- President of the Lebanese Society of Medical Oncology

Treatment options for breast cancer include:

- **Primary Systemic Therapy (Neo-adjuvant Therapy):** Depending on the type, spread and size of the tumour at initial diagnosis, this type of therapy can be used to reduce the size of the tumour, prior to surgical removal of the tumour. This therapy better allows breast-conserving surgical treatment, and identifies the sensitivity of the tumour to the medication used, which can guide further treatment after surgery.
- **Surgery:** The type of surgical procedure performed depends on the stage of the disease, the type of tumour, the age and general health of the patient, as well as the patient’s and physician’s preferences. The surgeon may remove the tumour (lumpectomy), a portion of the breast with lymph nodes (modified radical mastectomy), or the entire breast itself (mastectomy). Surgery is usually accompanied by adjuvant (post-surgery) therapies such as radiation, hormonal or chemotherapy to help improve the patient’s chance of survival.
- **Radiation Therapy:** Radiation therapy exposes the tumour to high-energy X-rays that destroy cancerous cells. It is often used as post-surgery therapy in an effort to kill any remaining undetectable cancer cells that may have invaded areas nearby the original site of the tumour.
- **Hormonal Therapy:** The female hormone, oestrogen, promotes tumour growth. Anti-oestrogen treatments such as tamoxifen block the growth-promoting effects of oestrogen and can be used as both post-surgery treatment or for women with breast cancer that has spread.
- **Chemotherapy:** Chemotherapeutic drugs are used in both early-stage and advanced disease. A number of different chemotherapeutic drugs are used alone or in combination for the treatment of breast cancer, including anthracyclines, taxanes or alkylating agents.
 - Recent advances in treatment options have also produced certain types of chemotherapy treatments that can be taken orally, such as capecitabine. As an oral tablet, capecitabine offers women a more convenient treatment option than traditional intravenous (i.v.) therapy, and because capecitabine is only active at the site of the tumour, women taking it do not experience hair loss, a common adverse event associated with i.v. chemotherapy.

- **New Therapies:** Biologically engineered, monoclonal antibodies (MAb) offer new treatment options for breast cancer.
 - For the 20–30 percent of breast tumours that are HER2-positive, trastuzumab is the only approved monoclonal antibody therapy that specifically targets HER2, inhibiting tumour growth, leading to tumour cell death. Tumors should be tested for HER2 status at the time of initial diagnosis to determine if the patient may benefit from trastuzumab therapy.
 - New developments also include anti-angiogenic drugs, such as bevacizumab, which works by starving tumours of blood supply that is critical to their growth and spread throughout the body. By inhibiting angiogenesis, or the growth of new blood vessels within and around a tumour, the outcome for patients with breast cancer can be improved. In March 2007, bevacizumab was approved by the European Commission for the first line treatment of women with metastatic breast cancer in combination with paclitaxel.

References

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