

## BREAST CANCER: FACTS WOMEN SHOULD CARE

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*Breast cancer is one of the most common cancers among women worldwide. Risk factors for the disease include aging, early menarche, late menopause, nulliparities, family history, obesity, high fat diet, use of contraceptives, exposure to radiation and viral infections. Multiparity and lactation after pregnancy have protective effects. The chances of cure in women depend largely on early diagnosis. Surgery followed by radiotherapy is the usual treatment for breast cancer. Chemotherapy, generally, is an adjunct to surgery. Consciousness and knowledge of women leading to early diagnosis of breast cancer is the key solution of this global problem.*

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**B**reast cancer originates primarily in the breast epithelial glands. The neoplastic (cancer) condition is characterized by deregulated proliferation of the affected cells. This results in invasion of the disease to surrounding tissues and its migration to other organs.

Breast cancer is the most prevalent cancer among women worldwide. It is the leading cause of deaths in women<sup>1</sup>. The incidences of breast cancer are rising in every country of the world. Globally one out of every three women cancer patients will be diagnosed with breast cancer. The incidence rate is maximum in North America where lifestyle, intake of high fat diet, consumption of alcohol account for the high incidence rate. The American Cancer Society estimates that approximately 2,15,990 women in the United States will be diagnosed with invasive breast cancer in 2004.

In India the incidence rate (80,000 new cases every year), though gradually increasing, is much lower than that in the Western countries. According to Indian Council of Medical Research (ICMR) report of 2002, in females the percent incidence (23.13%) is highest in Bangalore. Among the Kolkata residents the percent incidence is reported as 22.7%<sup>2</sup>. The incidence rate varies between urban and rural

Indian women. For example, the incidence in Mumbai is about 27 new cases per 100,000 women per year while in rural Maharashtra it is only 8 per 100,000. Women of high socioeconomic status are at high risk for breast cancer than the women of lower status. High socioeconomic status involves risk factors like no full term pregnancy, late age at first childbirth, fewer children and shorter duration (less than 3 months) of breastfeeding. Male breast cancer is less common and accounts for only 1% of all cancers around the world and 0.13% of all cancers in India<sup>3</sup>.

### **The Structure and Function**

The human breast (Fig. 1) is composed of three types of cells called as epithelial, endothelial and adipose. The epithelial component (superficial layer) of the breast is embedded in the stroma (the tissue that forms the ground substance, framework or matrix of an organ) and forms a branching ductal structure. This is originated from the nipple and repeatedly bifurcates in lobules, alveoli (small sac like dialation) and end buds (ovoid or spherical structures located at the termination of a nerve fiber and disperse in the skin or mucous membrane). The epithelial cells produce milk and deliver it to the nipple. Though a variety of biological factors like progesterone, prolactin, epidermal growth factors (EGFs), insulin are responsible for normal development of the mammary (breast) glands, estrogen is mainly involved in breast maintenance and development.

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