## **Breast Cancer**

Surgery is the standard method of removing primary tumours that cause breast cancer. After removing them, medical treatment is important to prevent them from recurring, particularly in high-risk patients. But the type of treatment a patient should receive depends on different factors including her immune system and the kind of tumour she has. Chemotherapy is commonly used to treat breast cancer after it has developed. Conventional anti-cancer drugs such as Cyclophosphamide, Methotrexate, and Fluorouracil (CMF), anthracycline and newer agents such as taxanes, prevent the cancer cells from splitting up and spreading in the body. Chemotherapy can be conducted alone or with these drugs. Breast cancer is a heterogeneous (different make up) disease. About 25 per cent of breast cancer patients have HER2 receptor positive tumours (tumours that contain a protein that make them more aggressive). People with this kind of tumour usually do not response well to traditional chemotherapy. They fare better with targeted therapy, medication that prevents the growth of cancer cells by interfering with specific, or targeted molecules which make tumours grow. Trastuzumab (Herceptin®) and Lapatinib (Tykerb®) are drugs that fight breast cancers that contain HER2 receptors. Patients who undergo targeted therapy suffer less side effects than those who undergo chemotherapy.

Between 60 and 70 per cent of all breast cancers are caused by oestrogen, the female hormone. One way to stop cancer growth in this group of women is to reduce the oestrogen effect. Hormonal manipulation helps stop cancer growth by preventing the oestrogen from functioning. Tamoxifen has been the "gold" standard hormonal therapy for hormone positive breast cancer patients since the 1970s. However, a third generation of aromatase inhibitors was found recently to be more effective. But the drug can only be used by postmenopausal patients with hormone-receptor positive breast cancer. Patients with hormone positive breast cancers should undergo at least five years of hormonal treatment after definitive surgery.