

Fact Sheet

Breast Cancer

- Approximately 192,370 new cases of invasive breast cancer will be diagnosed in 2009
- The overall survival rate for women with breast cancer is 88 percent after five years and; women who survive breast cancer for five years after treatment have a relatively low risk of the disease recurring
- Breast cancer incidence generally increases with age. The majority of advanced breast cancer cases are found in women over age 50. Only 5% of all breast cancer cases occur in women under 40 years old
- About 20-30 percent of women diagnosed with breast cancer have a family history of the disease

Tamoxifen

- Tamoxifen is the most commonly used hormone therapy for the treatment of breast cancer. It blocks the effects of estrogen which influences the growth and development of many breast tumors
- About 500,000 women take tamoxifen to treat and prevent the recurrence of estrogen-receptor positive breast cancer, with 80,000 new patients starting the treatment each year
- The most common side effects of tamoxifen include menopausal symptoms and non-cancerous changes in the uterus; in some women it may increase the risk of blood clots or endometrial cancer
- Tamoxifen is the first choice for pre-menopausal women and is prescribed for many post-menopausal women with breast cancer
- Tamoxifen reduces the risk of breast cancer recurrence by 40-50 percent in post-menopausal women with hormone sensitive tumors and by 30 to 50 percent in pre-menopausal women with hormone sensitive tumors

CYP2D6 Inhibitors

- Tamoxifen is converted to its active form (known as endoxifen) by the liver enzyme cytochrome P450 2D6 (CYP2D6). Drugs that inhibit CYP2D6 enzyme activity reduce the amount of endoxifen produced in the body
- Some popular antidepressants including Paxil®, Prozac® and Zoloft® are moderate to potent CYP2D6 inhibitors
- According to the American Society for Clinical Oncology (ASCO), up to 28 percent of women prescribed tamoxifen are also taking an antidepressant to treat depression and/or to reduce hot flashes, a common side-effect of the drug
- In a 2006 Dartmouth-Hitchcock Medical Center study of breast cancer patients, more than one in 10 had major depression