FACT SHEET: BREAST CANCER

What is breast cancer?
Breast cancer is cancer that forms in tissues of the breast, usually in the ducts or lobules (glands that make milk). It can occur in males, though male breast cancer is rare.

Breast cancer is categorized into stages, with Stage 0 being non-invasive cancer (the cancer cells are contained in the part of the breast in which it started). Stages I-IV all describe invasive cancer; a Stage I tumor is less than 2 centimeters and no lymph nodes are involved, while a Stage IV tumor includes metastatic cancer that has spread beyond the breast, underarm, and internal mammary lymph nodes. Generally, Stages 0, I, and II are considered early stage breast cancer, Stages II and III are considered later stage, and Stage IV is considered advanced stage.

How common is breast cancer?
It is estimated that in 2008 there will be 182,460 new cases of breast cancer in females, and 1,990 new cases in males. It is also estimated that there will be 40,480 deaths of females, and 450 deaths of males from breast cancer in 2008.

Who is at risk for breast cancer?
Though no one is sure of the exact causes of breast cancer, there are known risk factors for the disease. However, not everyone who has one or more risk factors gets breast cancer, and many women who do get breast cancer have no risk factors. Here are the main risk factors to be aware of:

- Gender: Being female is the main risk factor for developing breast cancer. Men can develop breast cancer, but the disease is about 100 times more common among women.
- Age: The risk of developing breast cancer increases as you get older. About 2 out of 3 women with invasive breast cancer are 55 or older when diagnosed.
- Family history: The risk of breast cancer is higher among women whose close blood relative have or have had breast cancer. Having a mother, sister, or daughter with this disease increases a women’s risk 10-fold. It is important to note that a women’s father’s family history must also be taken into account, not just her mother’s family history. In addition, there are some inheritable genetic mutations associated with about 5% to 10% of breast cancer cases.
- Certain hormones: Using birth control or postmenopausal hormone therapy can slightly increase one’s chances of developing breast cancer.
- Race: White women are more likely than African-American women to develop breast cancer. However, African-American women tend to have more aggressive tumors, so they are more likely to die of breast cancer.
Benign breast growths: Certain types of benign breast growths, particularly excessive growth in the ducts or lobules of breast tissue, can increase a woman’s chance of getting breast cancer up to 5 times the normal risk.

Certain lifestyle aspects have also been linked to breast cancer, such as smoking, alcohol consumption, obesity, and lack of exercise.

**What are the symptoms of breast cancer?**
Often, mammograms can detect breast cancer before any symptoms appear. However, mammograms do not detect all breast cancers, and therefore women should be aware of the following symptoms of breast cancer:

- A new mass or lump: This is the most common sign of breast cancer, and can be detected through breast self-exams. It is important that any new breast mass or lump be checked by a health care professional.
- Swelling of all or part of the breast
- Skin irritation or dimpling
- Breast or nipple pain
- Nipples that begin to turn inwards
- Redness, scaliness, or thickening of the nipple or breast
- A nipple discharge other than breast milk

Occasionally, a swollen lymph node can be a sign of breast cancer, even before the tumor in the breast is large enough to be felt. If your symptoms suggest breast cancer, see your doctor as soon as possible.

**How are breast cancer screens done and who should be screened?**
There are three screening tests that are routinely done for breast cancer. Starting in their 20s, women should do a breast self-exam once a month. If you notice any suspicious changes, such as the development of a lump, you should see your doctor as soon as possible. Furthermore, women in their 20s and 30s should have a clinical breast exam (done by a health care professional) at least once every 3 years, while women in their 40s and older should have a clinical breast exam every year.

Women 40 and older should have a yearly mammography (an x-ray of the breasts) for as long as they are in good health.
How is breast cancer treated?
There are a number of ways to treat breast cancer:

- **Surgery:** Surgery for breast cancer can either be breast-conserving (a lumpectomy or partial mastectomy) or remove the entire breast (mastectomy). Breast reconstruction surgery is often available after a mastectomy.
- **Chemotherapy:** Cancer-killing drugs are given either intravenously or in pill form. It can be done in conjunction with surgery or on its own.
- **Radiation therapy:** Treatment with high-energy rays or particles that is used to kill any remaining cancer cells after breast-conserving surgery. It can also be used after a mastectomy when the tumor is larger than 5 cm, or when cancer is found in the lymph nodes.
- **Hormone therapy:** Because estrogen has been found to promote the growth of most breast tumors, drugs can be given that either block the production of estrogen or block its effects. This therapy is usually used in conjunction with another therapy, to lower the risk of recurrence after surgery.
- **Targeted therapies:** Newer drugs can specifically target the gene changes in cells that cause cancer, by acting either on the HER2/neu protein or the tumor’s blood vessels. At this time, this treatment is almost always used in conjunction with chemotherapy.

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