Appendix 1: Recommended Reading

Introduction to Breast Cancer[1]

Breast cancer is the most common type of cancer among women in the United States (other than skin cancer). Each year, more than 180,000 women in this country learn they have breast cancer. The National Cancer Institute (NCI) has written this information to help you better understand this disease.

What Is Cancer?

Cancer is a group of many different diseases that have some important things in common. They all arise in cells, the body's basic unit of life. To understand different types of cancer, it is helpful to know about normal cells and what happens when they become cancerous.

The body is made up of many types of cells. Normally, cells grow and divide to produce more cells only when the body needs them. This orderly process helps keep the body healthy. Sometimes cells keep dividing when new cells are not needed. These cells may form a mass of extra tissue called a growth or tumor. Tumors can be benign or malignant.

- Benign tumors are not cancer. They can usually be removed, and in most cases, they don't come back. Most important, the cells in benign tumors do not invade other tissues and do not spread to other parts of the body. Benign breast tumors are not a threat to life.
- Malignant tumors are cancer. Cells in these tumors can invade and damage nearby tissues and organs. Also, cancer cells can break away from a malignant tumor and enter the bloodstream or lymphatic system. That is how breast cancer spreads and forms secondary tumors in other parts of the body. The spread of cancer is called metastasis.

The Breasts

Each breast has 15 to 20 overlapping sections called lobes. Within each lobe are many smaller lobules, which end in dozens of tiny bulbs that can produce milk. The lobes, lobules, and bulbs are all linked by thin tubes called ducts. These ducts lead to the nipple in the center of a dark area of skin called the areola. Fat fills the spaces around the lobules and ducts. There are no muscles in the breast, but muscles lie under each breast and cover the ribs.

Each breast also contains blood vessels and vessels that carry colorless fluid called lymph. The lymph vessels lead to small bean-shaped organs called lymph nodes. Clusters of lymph nodes are found near the breast in the axilla (under the arm), above the collarbone, and in the chest. Lymph nodes are also found in many other parts of the body.

Types of Breast Cancer

The most common type of breast cancer begins in the lining of the ducts and is called ductal carcinoma. Another type, called lobular carcinoma, arises in the lobules.

When breast cancer spreads outside the breast, cancer cells are often found in the lymph nodes under the arm (axillary lymph nodes). If the cancer has reached these nodes, it may mean that cancer cells have spread to other parts of the body — other lymph nodes and other organs, such as the bones, liver, or lungs — via the lymphatic system or the bloodstream.

Cancer that spreads is the same disease and has the same name as the original (primary) cancer. When breast cancer spreads, it is called metastatic breast cancer, even though the secondary tumor is in another organ. Doctors sometimes call this "distant" disease.

Male Breast Cancer

Breast cancer affects more than 1,000 men in this country each year. Although this booklet was written mainly for women, much of the information on symptoms, diagnosis, treatment, and living with the

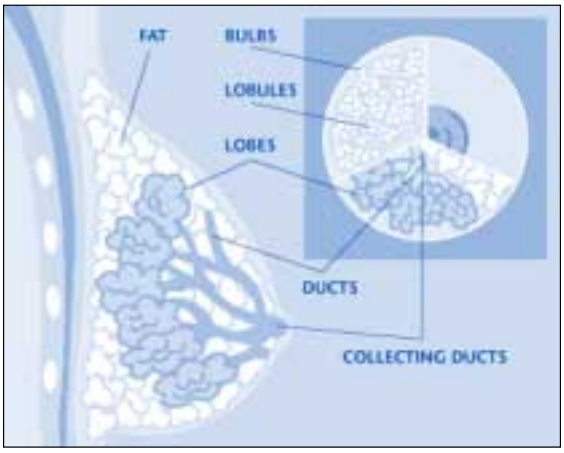

Photo courtesy of National Cancer Institute

[1] Adapted from: National Cancer Institute: *What you need to know about…* Bethesda, MD. NCI, 1999. Available on the internet at http://cancernet.nci.nih.gov/wyntk_pubs/breast.htm

APPENDIX 1

Recommended Reading and Key Cancer Resources

disease applies to men as well. (The Early Detection section does not apply to men. Experts do not recommend routine screening for men.)

Risk Factors for Breast Cancer

A risk factor is anything that increases a person's chance of developing a disease such as cancer.

> In most cases, doctors cannot explain why a woman develops breast cancer. Studies show that most women who develop breast cancer have none of the risk factors listed below, other than the risk that comes with growing older. Also, most women with known risk factors do not get breast cancer. Scientists are conducting research into the causes of breast cancer to learn more about risk factors and ways of preventing this disease.

The risk of breast cancer increases gradually as a woman gets older. This disease is uncommon in women under the age of 35. All women age 40 and older are at risk for breast cancer. However, most breast cancers occur in women over the age of 50, and the risk is especially high for women over age 60.

Research has shown that the following conditions place a woman at increased risk for breast cancer:

- **Personal history of breast cancer.** Women who have had breast cancer face an increased risk of getting breast cancer again.
- **Genetic alterations.** Changes in certain genes (BRCA1, BRCA2, and others) make women more susceptible to breast cancer. In families in which many women have had the disease, gene testing can show whether a woman has specific genetic changes known to increase the susceptibility to breast cancer. Doctors may suggest ways to try to delay or prevent breast cancer, or improve the detection of breast cancer in women who have the genetic alterations.
- **Family history.** A woman's risk for developing breast cancer increases if her mother, sister, daughter, or two or more other close relatives, such as cousins, have a history of breast cancer, especially at a young age.
- **Race.** White women are slightly more likely to develop breast cancer than are African-American women. But African Americans are more likely to die of this cancer because they are often diagnosed at an advanced stage when breast cancer is harder to treat and cure. Asian, Hispanic, and American Indian women have a lower risk of developing breast cancer.
- **Certain breast changes.** Having a diagnosis of atypical hyperplasia or lobular carcinoma in situ (LCIS) or having had two or more breast biopsies for other benign conditions may increase a woman's risk for developing cancer.

Other factors associated with an increased risk for breast cancer include:

- **Breast density.** Women age 45 and older whose mammograms show at least 75 percent dense tissue are at increased risk. Dense breasts contain many glands and ligaments, which makes breast tumors difficult to "see," and the dense tissue itself is associated with an increased chance of developing breast cancer.
- **Radiation therapy.** Women whose breasts were exposed to radiation during their childhood, especially those who were treated with radiation for Hodgkin's disease, are at an increased risk for developing breast cancer throughout their lives. Studies show that the younger a woman was when she received her treatment, the higher her risk for developing breast cancer later in life.
- **Late childbearing.** Women who had their first child after the age of 30 have a greater chance of developing breast cancer than women who had their children at a younger age.

Also at a somewhat increased risk for developing breast cancer are women who started menstruating at an early age (before age 12), experienced menopause late (after age 55), never had children, or took hormone replacement therapy or birth control pills for long periods of time. Each of these factors increases the amount of time a woman's body is exposed to estrogen. The longer this exposure, the more likely she is to develop breast cancer.

Early Detection of Breast Cancer

When breast cancer is found and treated early, the chances for survival are better. Women can take an active part in the early detection of breast cancer by having regular screening mammograms and clinical breast exams (breast exams performed by health professionals). Some women also perform breast self-exams.

A screening mammogram is the best tool available for finding breast cancer early, before symptoms appear. A mammogram is a special kind of x-ray. It is different from a chest x-ray or x-rays of other parts of the body. Screening mammograms are used to look for breast changes in women who have no signs of breast cancer.

Mammograms can often detect breast cancer before it can be felt. Also, a mammogram can show small deposits of calcium in the breast. Although most calcium deposits are benign, a cluster of very tiny specks of calcium (called microcalcifications) may be an early sign of cancer.

Although mammograms are the best way to find breast cancer early, they do have some limitations. A mammogram may miss some cancers that are present (false negative) or may find things that turn out not to be cancer (false positive). And detecting a tumor early does not guarantee that a woman's life will be saved. Some fast-growing cancers may already have spread to other parts of the body before being detected.

Still, regularly scheduled screening mammograms, together with clinical breast exams, offer the best chance of finding and treating breast cancer early. Studies show that mammograms reduce the risk of dying from breast cancer.

Women should talk with their doctor about factors that can increase the risk for breast cancer. Women of any age who are at higher risk for this disease should ask their doctor when to begin and how often to have screening mammograms and breast exams.

Some women perform monthly breast self-exams to check for any changes in their breasts. When doing a breast self-exam, it's important to remember that each woman's breasts are different, and that changes can occur because of aging, the menstrual cycle, pregnancy, menopause, or taking birth control pills or other hormones. It is normal for the breasts to feel a little lumpy and uneven. Also, it is common for a woman's breasts to be swollen and tender right before or during her menstrual period. Remember that for women in their forties and older, a monthly breast self-exam is not a substitute for regularly scheduled screening mammograms and clinical breast exams by a health professional.

The American Cancer Society recommends having a mammogram every year (annually) for women age 40 and older. Women 40 and older should also do monthly breast self-exams. Women ages 20-39 should have a clinical breast exam by a health professional every three years and should perform monthly breast self-exams.

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Recommended Reading and
Key Cancer Resources

How to Do Monthly Breast Self-Examinations[ii]

By regularly examining her own breasts, a woman is likely to notice any changes that occur. The best time for breast self examination (BSE) is about a week after your period ends, when your breasts are not tender or swollen. If you are not having regular periods, do BSE on the same day every month.

1. Lie down with a pillow under your right shoulder and place your right arm behind your head.

2. Use the finger pads of the three middle fingers on your left hand to feel for lumps in the right breast.

3. Press firmly enough to know how your breast feels. A firm ridge in the lower curve of each breast is normal. If you're not sure how hard to press, talk with your doctor or nurse.

4. Move around the breast in a circular, up and down line, or wedge pattern. Be sure to do it the same way every time, check the entire breast area, and remember how your breast feels from month to month.

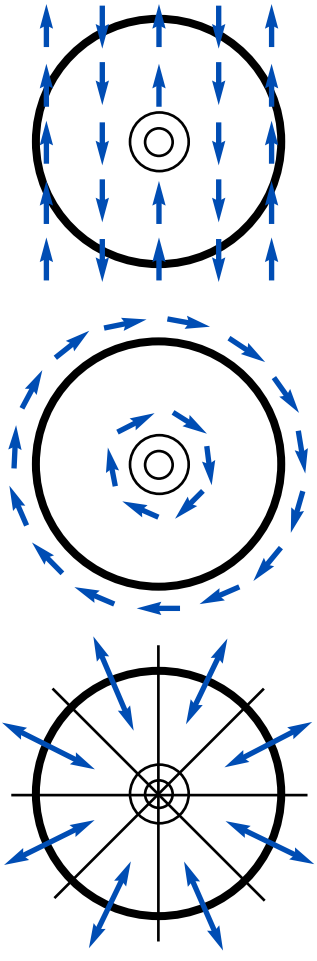
5. Repeat the exam on your left breast, using the finger pads of the right hand. (Move the pillow to under your left shoulder.)

6. If you find any changes, see your doctor right away.

7. Repeat the examination of both breasts while standing, with your one arm behind your head. The upright position makes it easier to check the upper and outer part of the breasts (toward your armpit). This is where about half of breast cancers are found. You may want to do the standing part of the BSE while you are in the shower. Some breast changes can be felt more easily when your skin is wet and soapy.

8. For added safety, you can check your breasts for any dimpling of the skin, changes in the nipple, redness, or swelling while standing in front of a mirror right after your BSE each month.

BSE Patterns



[ii] American Cancer Society. *Breast Self Exam:* The Breast Cancer Resource Center. Atlanta,GA. ACS, 1999. Available on the internet at http://www.cancer.org

Introduction to Cervical Cancer[iii]

Each year, about 15,000 women in the United States learn that they have cancer of the cervix. This National Cancer Institute (NCI) information will give you some important news about cancer of the cervix and about some conditions that may lead to this disease. You can read about prevention, symptoms, diagnosis, and treatment.

The Cervix

The cervix is the lower, narrow part of the uterus (womb). The uterus, a hollow, pear-shaped organ, is located in a woman's lower abdomen, between the bladder and the rectum. The cervix forms a canal that opens into the vagina, which leads to the outside of the body.

What Is Cancer?

Cancer is a group of more than 100 different diseases. They all affect the body's basic unit, the cell. Cancer occurs when cells become abnormal and divide without control or order.

Like all other organs of the body, the cervix is made up of many types of cells. Normally, cells divide to produce more cells only when the body needs them. This orderly process helps keep us healthy.

If cells keep dividing when new cells are not needed, a mass of tissue forms. This mass of extra tissue, called a growth or tumor, can be benign or malignant. Benign tumors are not cancer. They can usually be removed and, in most cases, they do not come back. Most important, cells from benign tumors do not spread to other parts of the body. Benign tumors are not a threat to life. Polyps, cysts, and genital warts are types of benign growths of the cervix.

Malignant tumors are cancer. Cancer cells can invade and damage tissues and organs near the tumor. Cancer cells also can break away from a malignant tumor and enter the lymphatic system or the bloodstream. This is how cancer of the cervix can spread to other parts of the body, such as nearby lymph nodes, the rectum, the bladder, the bones of the spine, and the lungs. The spread of cancer is called metastasis.

Cancer of the cervix also may be called cervical cancer. Like most cancers, it is named for the part of the body in which it begins. Cancers of the cervix also are named for the type of cell in which they begin. Most cervical cancers are squamous cell carcinomas. Squamous cells are thin, flat cells that form the surface of the cervix.

When cancer spreads to another part of the body, the new tumor has the same kind of abnormal cells and the same name as the original (primary) cancer. For example, if cervical cancer spreads to the bones, the cancer cells in the bones are cervical cancer cells. The disease is called metastatic cervical cancer (it is not bone cancer).

NOTE: Cancer of the cervix is different from cancer that begins in other parts of the uterus and requires different treatment. The

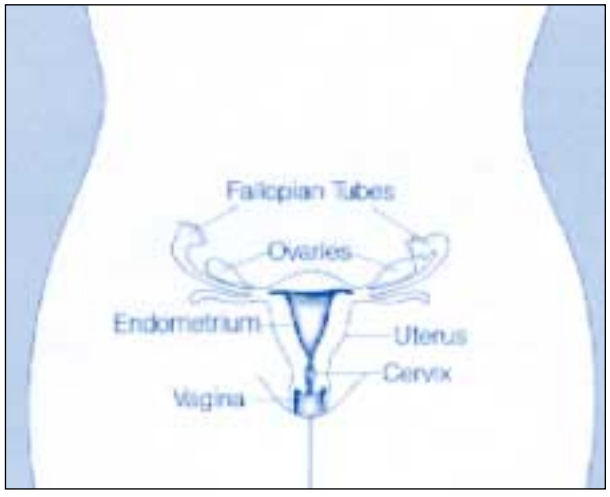


Photo courtesy of National Cancer Institute

[iii] Adapted from: National Cancer Institute: *What you need to know about…* Bethesda, MD. NCI, 1999. Available on the internet at http://cancernet.nci.nih.gov/wyntk_pubs/cervix.htm

most common type of cancer of the uterus begins in the endometrium, the lining of the organ. Endometrial cancer is discussed in the booklet *What You Need To Know About™ Cancer of the Uterus.* This booklet may be ordered by calling the Cancer Information Service at 1-800-4-CANCER.

Precancerous Conditions and Cancer of the Cervix

Cells on the surface of the cervix sometimes appear abnormal but not cancerous. Scientists believe that some abnormal changes in cells on the cervix are the first step in a series of slow changes that can lead to cancer years later. That is, some abnormal changes are precancerous; they may become cancerous with time.

Over the years, doctors have used different terms to refer to abnormal changes in the cells on the surface of the cervix. One term now used is squamous intraepithelial lesion (SIL). (The word lesion refers to an area of abnormal tissue; intraepithelial means that the abnormal cells are present only in the surface layer of cells.) Changes in these cells can be divided into two categories:

Low-grade SIL refers to early changes in the size, shape, and number of cells that form the surface of the cervix. Some low-grade lesions go away on their own. However, with time, others may grow larger or become more abnormal, forming a high-grade lesion. Precancerous low-grade lesions also may be called mild

Early Detection of Cervical Cancer

Women should have regular checkups, including a pelvic exam and a Pap test, if they are or have been sexually active or if they are age 18 or older. Those who are at increased risk of developing cancer of the cervix should be especially careful to follow their doctor's advice about checkups. Women who have had a hysterectomy (surgery to remove the uterus, including the cervix) should ask their doctor's advice about having pelvic exams and Pap tests.

If all women had pelvic exams and Pap tests regularly, most precancerous conditions would be detected and treated before cancer develops. That way, most invasive cancers could be prevented. Any invasive cancer that does occur would likely be found at an early, curable stage.

In a pelvic exam, the doctor checks the uterus, vagina, ovaries, fallopian tubes, bladder, and rectum. The doctor feels these organs for any abnormality in their shape or size. A speculum is used to widen the vagina so that the doctor can see the upper part of the vagina and the cervix.

The Pap test is a simple, painless test to detect abnormal cells in and around the cervix. A woman should have this test when she is not menstruating; the best time is between 10 and 20 days after the first day of her menstrual period. For about 2 days before a Pap test, she should avoid douching or using spermicidal foams, creams, or jellies or vaginal medicines (except as directed by a physician), which may wash away or hide any abnormal cells.

A Pap test can be done in a doctor's office or a health clinic. A wooden scraper (spatula) and/or a small brush is used to collect a sample of cells from the cervix and upper vagina. The cells are placed on a glass slide and sent to a medical laboratory to be checked for abnormal changes.

The way of describing Pap test results is changing. The newest method is the Bethesda System. Changes are described as low-grade or high-grade SIL. Many doctors believe that the Bethesda System provides more useful information than an older system, which uses numbers ranging from class 1 to class 5. (In class 1, the cells in the sample are normal, while class 5 refers to invasive cancer.) Women should ask their doctor to explain the system used for their Pap test.

dysplasia or cervical intraepithelial neoplasia 1 (CIN 1). Such early changes in the cervix most often occur in women between the ages of 25 and 35 but can appear in other age groups as well.

High-grade SIL means there are a large number of precancerous cells; they look very different from normal cells. Like low-grade SIL, these precancerous changes involve only cells on the surface of the cervix. The cells will not become cancerous and invade deeper layers of the cervix for many months, perhaps years. High-grade lesions also may be called moderate or severe dysplasia, CIN 2 or 3, or carcinoma in situ. They develop most often in women between the ages of 30 and 40 but can occur at other ages as well.

If abnormal cells spread deeper into the cervix or to other tissues or organs, the disease is then called cervical cancer, or invasive cervical cancer. It occurs most often in women over the age of 40.

Symptoms of Cervical Cancer

Precancerous changes of the cervix usually do not cause pain. In fact, they generally do not cause any symptoms and are not detected unless a woman has a pelvic exam and a Pap test.

Symptoms usually do not appear until abnormal cervical cells become cancerous and invade nearby tissue. When this happens, the most common symptom is abnormal bleeding. Bleeding may start and stop between regular menstrual periods, or it may occur after sexual intercourse, douching, or a pelvic exam. Menstrual bleeding may last longer and be heavier than usual. Bleeding after menopause also may be a symptom of cervical cancer. Increased vaginal discharge is another symptom of cervical cancer.

These symptoms may be caused by cancer or by other health problems. Only a doctor can tell for sure. It is important for a woman to see her doctor if she is having any of these symptoms.

Diagnosis of Cervical Cancer

The pelvic exam and Pap test allow the doctor to detect abnormal changes in the cervix. If these exams show that an infection is present, the doctor treats the infection and then repeats the Pap test at a later time. If the exam or Pap test suggests something other than an infection, the doctor may repeat the Pap test and do other tests to find out what the problem is.

Colposcopy is a widely used method to check the cervix for abnormal areas. The doctor applies a vinegar-like solution to the cervix and then uses an instrument much like a microscope (called a colposcope) to look closely at the cervix. The doctor may then coat the cervix with an iodine solution (a procedure called the Schiller test). Healthy cells turn brown; abnormal cells turn white or yellow. These procedures may be done in the doctor's office.

The doctor may remove a small amount of cervical tissue for examination by a pathologist. This procedure is called a biopsy. In one type of biopsy, the doctor uses an instrument to pinch off small pieces of cervical tissue. Another method used to do a biopsy is called loop electrosurgical excision procedure

(LEEP). In this procedure, the doctor uses an electric wire loop to slice off a thin, round piece of tissue. These types of biopsies may be done in the doctor's office using local anesthesia.

The doctor also may want to check inside the opening of the cervix, an area that cannot be seen during colposcopy. In a procedure called endocervical curettage (ECC), the doctor uses a curette (a small, spoon-shaped instrument) to scrape tissue from inside the cervical opening.

These procedures for removing tissue may cause some bleeding or other discharge. However, healing usually occurs quickly. Women also often experience some pain similar to menstrual cramping, which can be relieved with medicine.

These tests may not show for sure whether the abnormal cells are present only on the surface of the cervix. In that case, the doctor will then remove a larger, cone-shaped sample of tissue. This procedure, called conization or cone biopsy, allows the pathologist to see whether the abnormal cells have invaded tissue beneath the surface of the cervix. Conization also may be used as treatment for a precancerous lesion if the entire abnormal area can be removed. This procedure requires either local or general anesthesia and may be done in the doctor's office or in the hospital.

In a few cases, it may not be clear whether an abnormal Pap test or a woman's symptoms are caused by problems in the cervix or in the endometrium (the lining of the uterus). In this situation, the doctor may do dilation and curettage (D and C). The doctor stretches the cervical opening and uses a curette to scrape tissue from the lining of the uterus as well as from the cervical canal. Like conization, this procedure requires local or general anesthesia and may be done in the doctor's office or in the hospital.

Treating Precancerous Conditions

Treatment for a precancerous lesion of the cervix depends on a number of factors. These factors include whether the lesion is low or high grade, whether the woman wants to have children in the future, the woman's age and general health, and the preference of the woman and her doctor. A woman with a low-grade lesion may not need further treatment, especially if the abnormal area was completely removed during biopsy, but she should have a Pap test and pelvic exam regularly. When a precancerous lesion requires treatment, the doctor may use cryosurgery (freezing), cauterization (burning, also called diathermy), or laser surgery to destroy the abnormal area without harming nearby healthy tissue. The doctor also can remove the abnormal tissue by LEEP or conization. Treatment for precancerous lesions may cause cramping or other pain, bleeding, or a watery discharge.

In some cases, a woman may have a hysterectomy, particularly if abnormal cells are found inside the opening of the cervix. This surgery is more likely to be done when the woman does not want to have children in the future.

IMPORTANT NOTE: These materials cannot answer every question you may have about cancer of the cervix. They cannot take the place of talks with doctors, nurses, and other members of the health care team. Knowledge about cancer of the cervix keeps increasing. For up-to-date information or to order these publications in full, call the NCI-supported Cancer Information Service (CIS) toll free at 1-800-4-CANCER (1-800-422-6237).

Facts About Breast Cancer in the United States: Year 2002

- More women in the United States are living with breast cancer than any other cancer (excluding skin cancer). Approximately 3 million women in the U.S. are living with breast cancer: 2 million who have been diagnosed and an estimated 1 million who do not yet know they have the disease.

- Breast cancer is the most commonly diagnosed cancer among women in the United States and worldwide (excluding skin cancer). In 2002, it is estimated that 251,300 new cases of breast cancer will be diagnosed among women in the United States: 203,500 invasive breast cancers and 47,800 cases of ductal carcinoma in situ (DCIS).[1]

- Breast cancer is the second leading cause of cancer death for women in the U.S; approximately 39,600 women in the U.S. will die from the disease this year. Breast cancer is the leading cause of cancer death for U.S. women between the ages of 20 and 59, and the leading cause of cancer death for women worldwide.

- A woman in the United States has a 1 in 8 chance of developing invasive breast cancer during her lifetime - this risk was 1 in 11 in 1975.[2] This year, a new case of breast cancer will be diagnosed every 2 minutes, and a woman will die from breast cancer every 13 minutes.

- Studies of women diagnosed with breast cancer in the past show that almost half (47%) of all women diagnosed with invasive breast cancer die from the disease within 20 years.[3] Approximately 14% of women diagnosed with invasive breast cancer die from the disease within 5 years.

- Combining all age groups, white (non-Hispanic) women are more likely to develop breast cancer than black women. However, black women are more likely to die of breast cancer than are white women.

- Black women have a higher breast cancer mortality rate at every age, and a lower survival rate than white women.[4] The five-year survival rate for white women diagnosed with invasive breast cancer is 87% while the five-year survival rate for black women diagnosed with invasive breast cancer is only 72%.

- Older women are much more likely to get breast cancer than younger women. Most breast cancers — about 77% — occur in women ages 50 and older. Less than 5% of all breast cancer cases occur in women under the age of 40. However, younger women who get breast cancer have a lower survival rate than older women who get breast cancer.

- Before the 1990s, breast cancer mortality rates had been about the same for nearly four decades. In white women, breast cancer mortality declined by 1.6% annually from 1989-1995 and by 3.5% annually from 1995-1999. In black women, mortality increased until 1993, and then declined by 1.2% annually from 1993-1999.[5] In both white and black women, mortality has declined faster for women under the age of 50 than for women age 50 and over.

- The current methods of treatment in use in the United States are: surgery (mastectomy and lumpectomy), radiation, chemotherapy, hormone therapy, and monoclonal antibody therapy.

- Mammography screening does not prevent or cure breast cancer; however, it may detect the disease before symptoms occur. Breast cancer tumors can exist for six to ten years before they grow large enough to be detected by mammography. In addition, mammography is less effective in younger women than in older women.

- All women are at risk for breast cancer. About 90% of women who develop breast cancer do not have a family history of the disease.

- Factors that increase a woman's risk of breast cancer include: older age, earlier age at menarche, later

age at menopause, nulliparity (having no children), later age at first full-term pregnancy, daily alcohol consumption, use of hormonal replacement therapy, use of the drug diethylstilbestrol (DES), postmenopausal obesity, ionizing radiation, genetic factors and family history of breast or ovarian cancer. Factors that decrease a woman's risk of breast cancer include: breast-feeding and physical activity (exercise).

- There is nothing a woman can do to ensure that she will not get breast cancer. Although scientists have discovered some risk factors for breast cancer, most factors account for only small increases in a person's chances of developing breast cancer. There is no cure for breast cancer.

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Information was provided by the ***National Breast Cancer Coalition****, www.stopbreastcancer.org*

[1] In 2002, approximately 1,500 new cases of invasive breast cancer will be diagnosed among men in the United States. Approximately 400 men in the U.S. will die from the disease.

[2] These estimates are based on an average lifespan of over 85 years.

[3] This statistic was obtained by studying women who were diagnosed with breast cancer 20 years ago. It is impossible to know what the 20-year breast cancer survival rate will be for women diagnosed today.

[4] Mortality rate is the proportion of people who die of a disease in a population at risk during a specific time period. Survival rate is the proportion of people diagnosed with a disease who live for a specific period of time. For example, a five-year cancer survival rate is the proportion of cancer patients who are still alive 5 years after the diagnosis of their cancer.

[5] Mortality trends have only been analyzed up to 1999.

Key Cancer Resources

The American Cancer Society has chapters in every state, as well as many community chapters. For information on local events and free materials, visit www.cancer.org or call anytime at 1-800-ACS-2345.

The National Cancer Institute offers free materials as well as information on cancer research, statistics, background information, and clinical trials. You can reach their Cancer Information Service at 1-800-4-CANCER or visit www.cancer.gov.

Breast and Cervical Cancer

A Decade of Progress

Recognizing the value of screening and early detection, Congress passed the Breast and Cervical Cancer Mortality Prevention Act of 1990. This act established CDC's National Breast and Cervical Cancer Early Detection Program (NBCCEDP). Now in its 12th year, the NBCCEDP has provided more than 3.5 million screening exams to almost 1.5 million underserved women, including older women, women with low incomes, and women of racial and ethnic minority groups. As of September 2001, the program has diagnosed more than 11,000 breast cancers, more than 48,000 precancerous cervical lesions, and more than 800 cervical cancers. These numbers do not include the many women who, though screened outside the NBCCEDP, have benefited from its outreach programs.

The NBCCEDP operates in all 50 states, the District of Columbia, 6 U.S. territories, and 14 American Indian/Alaska Native organizations. Fiscal year 2001 appropriations of approximately $184 million enable CDC to increase education and outreach programs for women and health care providers, improve quality assurance measures for screening, and improve access to screening and follow-up services. Screening services provided by the NBCCEDP include clinical breast examinations, mammograms, pelvic examinations, and Pap tests. Postscreening diagnostic services, such as surgical consultation and biopsy, are also funded by the NBCCEDP to ensure that all women with abnormal screening results receive timely and adequate diagnostic evaluation and treatment referrals.

In 2000, Congress passed the Breast and Cervical Treatment and Prevention Act to help provide treatment to women enrolled in the NBCCEDP and who are diagnosed with a breast or cervical cancer or precancer.

Partnerships for Cancer Control in Populations at Higher Risk

Partnerships that focus their prevention efforts on populations at greater risk are essential for understanding and alleviating disparities. Both mammograms and Pap tests are underused by women who are members of racial and ethnic minority groups, have less than a high school education, are older, or live below the poverty level.

CDC funds a strong and effective network of partners who are well positioned in communities at risk. These partners have developed projects that are focused on underserved populations and cover a wide range of public and professional education interventions. For example, many projects are involved with developing low-literacy, bilingual, and culturally appropriate educational materials that are used in diverse training and outreach programs and educational campaigns. The various interventions used by the different projects contribute to the common goal of increasing access to and use of screening services among priority populations.

For more information on the National Breast and Cervical Cancer Early Detection Program visit http://www.cdc.gov/cancer/nbccedp/index.htm or contact:

Centers for Disease Control and Prevention
National Center for Chronic Disease Prevention and Health Promotion
Mail Stop K-64
4770 Buford Highway NE
Atlanta, GA 30341-3717

(770) 488-4751
Voice Information System: 1 (888) 842-6355
Fax (770) 488-4760

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Key Cancer Resources

National Health Calendar and Additional Health Information

Each year, the National Health Information Center produces a National Health Calendar that is useful when planning cancer education activities. As outlined in **Chapter 2**, planning an event to coincide with theme events can be beneficial to your efforts. The National Health Calendar can be downloaded at **www.health.gov/nhic/** or you can call **1-800-336-4797** to order a copy. Listed below are a number of cancer events that occur throughout the year and contact information for the organizations that sponsor each event can be found on an official copy of the National Health Calendar:

January
National Cervical Cancer Month

March
National Colorectal Cancer Awareness Month

April
Cancer Control Month
21-27 (2002)-National Minority Cancer Awareness Week

May
Skin Cancer Awareness Month
15 (2002) - National Employee Health and Fitness Day

June 5 (2002)
National Cancer Survivors Day

September
Ovarian Cancer Awareness Month
Prostate Cancer Awareness Month
Gynecologic Cancer Awareness Month

October
National Breast Cancer Awareness Month
17 (2002) - National Mammography Day

The Wellness Councils of America is North America's premier resource for worksite wellness. Visit their website at **www.welcoa.org** for downloadable information and to learn how to make a case for worksite wellness programs in your school community.

The National Breast Cancer Coalition (NBCC) is a grassroots organization dedicated to eradicating breast cancer through action and advocacy. NBCC members are committed to reaching this difficult goal. Call **1-800-622-2838** or visit **www.stopbreastcancer.org** to find information about NBCC's history, goals, and accomplishments, learn about our current breast cancer educational and training programs and find out how to become an advocate for change by joining the Coalition.

The Koman Foundation sponsors Race for the Cure® and other charitable events. Its website offers online quizzes and resources, as well as general information on the foundation. Visit **www.komen.org** or call **800-I'M-AWARE®** (800-462-9273) for more information.

Case Study: SDEA Office of Educational Innovation

Project REACH—A South Dakota Success!

Project REACH, a breast and cervical cancer prevention and awareness program developed by the National Education Association Health Information Network (NEA HIN), became the first health-related program of the South Dakota Education Association/NEA. South Dakota was one of the five states selected to take part in the program.

Thanks to funding from the Centers for Disease Control & Prevention, NEA HIN and the SDEA/NEA Office of Educational Innovation (OEI) have been able to work collaboratively to offer this program designed by and for school employees. Breast and cervical cancer awareness programs are important for school employees since some studies found that teachers may have a higher rate of death from breast cancer than women in other occupations. "This unique training opportunity is designed to give school employees the skills, resources and support needed to design local cancer education programs in their school community", explained Rena Large, NEA HIN.

Many steps were taken to get Project REACH off the ground. Janet Wilson, Executive Director of SDEA/NEA OEI formed an advisory committee and a local planning committee that helped establish goals and determine membership needs. Support and assistance of other key partners - the American Cancer Society, that provides outreach and community education programs, and the South Dakota BCCEDP, that coordinates service providers, screenings and tracking of women who qualify for services such as mammograms and PAP smears, were also essential in making this program a success.

These partners also guided OEI in selecting the target area – the southeastern part of South Dakota. School districts in the area were invited to take part in the program. The seven districts involved with Project REACH included Brookings, Dell Rapids, Hanson Co., Lennox, Sioux Falls, Sioux Valley, and West Central. The districts formed intervention teams consisting of 4 – 8 educational employees representing various occupations such as school administrators, support personnel, teachers, school nurses or others involved with health and wellness programs.

In April 2000, teams from the seven pilot sites attended the Project REACH training. The program goals included increasing awareness and knowledge of basic cancer information and personal cancer risks, increasing team and community collaboration skills and linking teams with community resources and services. The teams planned their own local Project REACH project. As a result, enthusiasm grew for the promotion of Project REACH and each team implemented their plan within their district and community.

Brookings team members integrated Project REACH into their Coordinated School Health program. In October, the team conducted a pink ribbon campaign and distributed calendars, bookmarks and fact sheets about breast and cervical cancer to the staff. They also distributed All Women Count! coupons and posters throughout their community. As a major event, they hosted a panel discussion on breast and cervical cancer for female staff and community members and a panel discussion on prostate and colon cancer for male staff and community members. SDSU students majoring in nursing assisted with booths and displays and speakers from the local community and Avera McKennan Hospital assisted in the program. The Brookings team received additional funds for the panel discussion from the NEA HIN Vivian Roy Bowser Cancer Education Fund.

About that same time, West Central's team was busy making salads and desserts for Women's Night Out. Dinner tickets were sold out with approximately 80 community and staff members coming together to learn about breast and cervical cancer. The team had a great time hosting the event with team members designing their own table theme, which included

Barbie, Halloween, Mother Earth and many more. Avera McKennan Hospital and local team members shared information throughout the evening.

Dell Rapids introduced their staff to Project REACH over breakfast and incorporated Denim Days, a big hit with the staff. They also researched questions regarding insurance coverage. Sioux Valley team members distributed pink ribbons and calendars to their staff. The Lennox team members displayed information at the staff in-service, had Denim Days in October and distributed NEA HIN calendars with paychecks. This month they will continue their efforts by distributing "Beads Of Life" necklaces to their staff members.

On behalf of the 3,000 employees in the Sioux Falls District, twelve educational employees and two students joined in to assist with Project REACH.

With a $2,000 grant from NEA HIN's Vivian Roy Bowser Cancer Education Fund, and a $200 gift from Medical X-Ray Center in Sioux Falls, the Sioux Falls Team put together a "Celebration of Smiles" poster honoring twenty-three cancer survivors employed by the Sioux Falls School District. This poster, including a list of information resources ranging from local clinics and cancer institutes to the NEA HIN Web site (www.neahin.org), was enclosed in the Fall 2000 Back-to-School mailing to all District employees.

Sandra Schlenker, the team leader said, "I am so pleased that these people willingly came forward to be included in this celebration photo. I have heard many positive responses from individuals who received this mailing. A number of them have indicated that this message served as a motivational tool in seeking personal health consultations."

Projects carried out by the Sioux Falls team included providing health information booths at the Back-to-School General Session; distributing reminder calendars, bead necklaces, and emery boards to district employees; promoting employee attendance at the Sioux Valley Breast Health Endowment Fundraiser featuring Lillie Shockney; and sharing Project REACH information with Sioux Falls Retired Educators Group.

The Sioux Falls Team offers the following Words of Wisdom: "School employees are notorious for nurturing others at the expense of their own health. In promoting Project REACH, we want to encourage educators to seek health information and early detection through local screening facilities. We also want to instill hope and confidence with regard to personal health issues. When screenable cancers are found early, treatment is more likely to be successful. Self-examinations for cancers of the breast and skin may result in detection of tumors at earlier stages. The 5-year relative survival rate for screenable cancers is about 81%. But, if all Americans participated in regular screenings, this rate could increase to more than 95%."

Hanson County found that being a part of the Project REACH team was an eye opener for them and it enabled them to open the eyes of their community members. The activities centered on already existing school activities, making it convenient to display and discuss Project REACH information. The team set up a booth at their Health/Career Fair for high school students and community members. They used the display board, breast model, pamphlets, and bead necklaces, attracting much attention. They also set up information tables with the bead necklaces and pamphlets at the Homecoming Pie Social and at Parent-Teacher Conferences.

October was a great month for activities since it was Breast Cancer Awareness Month. Posters, stickers, coupons and table tents were available for the entire Hanson County School staff in their workroom. During Staff Meetings, the bead necklaces and pocket calendars were given out with a brief discussion about Project REACH. The "Beads Of Life" necklaces were a big hit as far as making it more concrete for others to understand the importance of mammography. Many were made aware that this is not only an issue for women, but for men and families as well, since it affects so many lives of those involved. The team members believe this important health issue needs the attention and awareness that Project REACH was able to provide.

Celebration Dinner Held

In appreciation of the work each team did to implement their program