Breast Cancer
in Georgia, 2003-2007

Georgia Department of Public Health

Acknowledgments

What is Breast Cancer?

Breast cancer is a malignant (cancerous) tumor that starts from cells of the breast. The disease occurs most commonly in women, but men can get breast cancer as well. Since men account for only about one percent of total breast cancer cases, the information presented here refers only to breast cancer in women.

The breast itself is made up of lobules, ducts, fatty and connective tissue, blood vessels, and lymph vessels. Inside the breasts are glands that produce and release milk after a woman has a baby. The glands that make the milk are called lobules and the tubes that connect them to the nipple are called ducts.

Understanding the medical language as it relates to breast cancer can be challenging. Here are some terms that describe the most common types of breast cancer:

- **Ductal carcinoma in situ (DCIS):** This is the most common type of noninvasive breast cancer. Noninvasive means that the cancer has not spread through the walls of the ducts into the fatty tissue of the breast. Nearly all women with cancer at this stage can be cured. However, if the cancer is not treated at this time, it may develop into invasive breast cancer.
- **Infiltrating ductal carcinoma (IDC):** This cancer starts in a milk passage or duct, breaks through the wall of the duct, and invades the fatty tissue of the breast. From there it can spread to the lymph nodes, or via the bloodstream to other parts of the body. IDC is the most common type of breast cancer. It accounts for about 75-80 percent of invasive breast cancer.
- **Infiltrating lobular carcinoma (ILC):** This cancer starts in the milk glands or lobules. It can spread to other parts of the body, similar to IDC. About 10-15 percent of invasive breast cancers are of this type.

Less common types of breast cancer can include other invasive ductal-type cancers, inflammatory breast cancer (which is diagnosed more frequently in younger and African-American women), and Paget's disease, which accounts for less than five percent of all breast cancers detected nationwide, and less than 1 percent of all breast cancers detected in Georgia.

Breast cancer is the most common type of cancer diagnosed in Georgia women (as well as in the United States as a whole), and is the second-leading cause of cancer deaths among Georgia women, after lung cancer. A woman in the United States has approximately a one in eight chance of being diagnosed with breast cancer in her lifetime.

How is Breast Cancer Detected?

The earlier breast cancer is found, the better the chances that treatment will be effective. The American Cancer Society recommends the following screening guidelines for women without symptoms:

Mammogram: A mammogram uses X-ray technology to obtain an image of the inside of the breast. Women age 40 and older should have a mammogram every year, and should continue to do so for as long as they are in good health. While mammograms can miss some cancers, they are a valuable tool for finding breast cancer. Recent medical developments have introduced computer-aided mammography, digital mammography, and 3D mammography; however, traditional mammography remains the gold standard for screening, and is still the only test that has been shown to decrease the likelihood of dying from breast cancer.

Clinical breast exam (CBE): Women in their 20s and 30s should have a clinical breast examination (CBE) as part of a regular health exam by a health professional every three years. After age 40, women should have a breast exam by a health professional every year. A CBE can provide a complement to mammography- a two pronged approach to gather the most complete information.

Screening Rates for Georgia Women

The following data were collected by the Behavioral Risk Factor Surveillance System (BRFSS) during 2003-2007 and represent non-institutionalized civilian women living in Georgia.
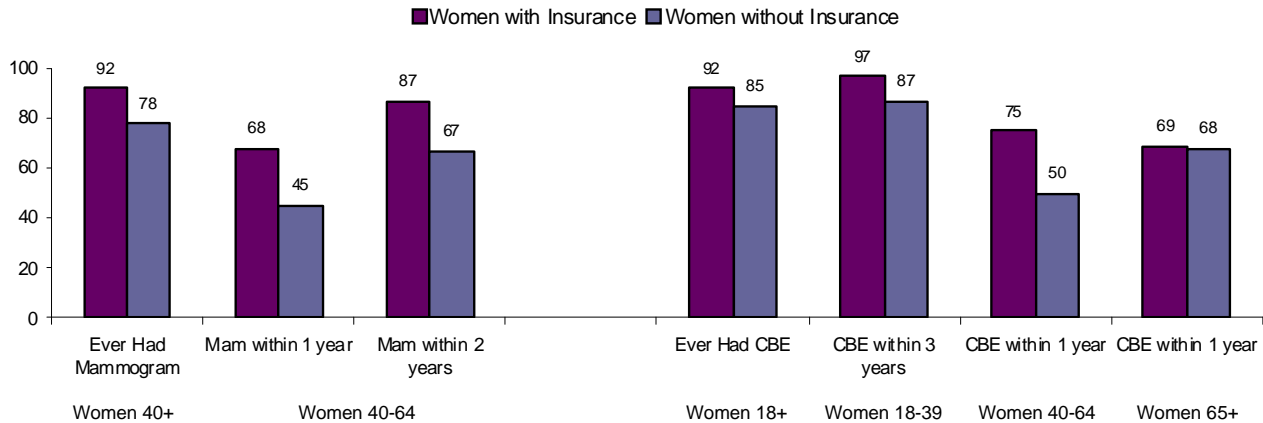
Mammogram: The five-year weighted prevalence for women 40 years and older who ever had a mammogram is 90 percent. Of these, 67 percent reported having had a mammogram within the past year, while 84 percent reported having had a mammogram sometime within the past two years.

Clinical Breast Exam (CBE): The five-year weighted prevalence for women who ever had a CBE is 91 percent.

Among women younger than 40 who reported having had a CBE, 95 percent reported that their last CBE was within the past three years. Of women aged 40 and older who reported having had a CBE, 71 percent reported that their last CBE was within the past year.

Screening in Relation to Health Insurance in Georgia

Between 2003 and 2007, approximately 16 percent of women in Georgia reported that they did not have health insurance.
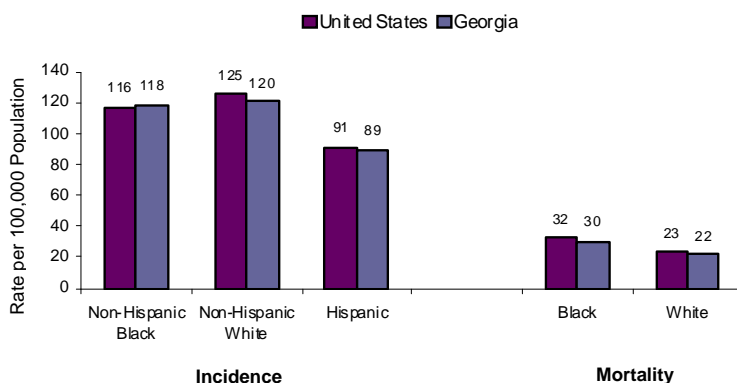
■ Women with Insurance ■ Women without Insurance

	Ever Had Mammogram	Mam within 1 year	Mam within 2 years	Ever Had CBE	CBE within 3 years	CBE within 1 year	CBE within 1 year
With Insurance	92	68	87	92	97	75	69
Without Insurance	78	45	67	85	87	50	68

| Women 40+ | Women 40-64 | | Women 18+ | Women 18-39 | Women 40-64 | Women 65+ |

Mammogram: Between 2003 and 2007, among women aged 40 and older who reported that they had no health insurance, 78 percent reported that they had had a mammogram, compared to 92 percent of women with insurance. Among women aged 40-64 who had reported ever having a mammogram, women who had insurance were both more likely to have had a mammogram within the past year (68 percent vs. 45 percent), and within the past two years (87 percent vs. 67 percent).

Clinical Breast Exam (CBE): Women with health insurance were more likely to report having ever had a CBE, compared to uninsured women 92 percent vs. 85 percent). Insured women of all age groups were more likely to report having had CBE screening within the recommended guidelines.

Who Develops Breast Cancer?

Breast Cancer Incidence and Mortality Rates by Race, US (2003-2007) and GA (2003-2007)

■ United States ■ Georgia

Rate per 100,000 Population

	Non-Hispanic Black	Non-Hispanic White	Hispanic	Black	White
United States	116	125	91	32	23
Georgia	118	120	89	30	22

| **Incidence** | | | **Mortality** | |

Rates are age-adjusted to the 2000 US standard population.

Yearly from 2003-2007, an average of 5,400 cases of female breast cancer were reported to the Georgia Comprehensive Cancer Registry. White women were more likely to be diagnosed with the disease than were black or Hispanic women.

Yearly, over 1,000 Georgia women died from breast cancer. The mortality rate for black women was higher than that for white women.

Overall, Georgia's breast cancer incidence and mortality rates were similar, and often below, the US average for black, white, and Hispanic women.

What are the Causes and Risk Factors for Breast Cancer?

We do not yet know exactly what causes breast cancer, but we do know that certain risk factors are linked to the disease. A risk factor is anything that indicates a person has a higher than normal chance of getting a disease such as cancer. Different cancers have different risk factors. Some risk factors, such as smoking, can be controlled. Others, like a person's age or family history, can't be controlled. But having a risk factor, or even several, doesn't mean that a person will get the disease.

While all women are at risk for breast cancer, the following factors can increase a woman's chances of having the disease.

Risk Factors That Can Be Controlled
- **Not having children:** Women who have had no children, or who had their first child after age 30, have about a 40 percent higher risk of breast cancer.
- **Hormone replacement therapy (HRT):** It has become clear that long-term use (several years or more) of combined HRT (estrogens together with progesterone) for relief of menopause symptoms can increase the risk of breast cancer as well as the risk of heart disease, blood clots, and strokes. These breast cancers are also found at a more advanced stage. Among women who used HRT, the therapy seems to reduce the effectiveness of mammograms. Five years after stopping HRT, the breast cancer risk appears to drop back to normal.
- **Birth control pills:** Several studies have been conducted to determine the relationship between oral contraceptives and breast cancer, but the results have been conflicting as to whether they increase the risk or not. It's a good idea to discuss the risks and benefits of taking birth control pills with your doctor.
- **Not breastfeeding:** Studies have shown that breastfeeding lowers breast cancer risk, especially if breastfeeding lasts 1½ to 2 years. This may be because breastfeeding lowers a woman's total number of menstrual periods.
- **Alcohol:** Use of alcohol is clearly linked to an increased risk of getting breast cancer. Women who have one drink a day have a very small increased risk. Those who have two to five drinks daily have about a 50 percent higher risk of breast cancer than women who do not drink alcohol.
- **Obesity:** Being overweight is linked to a higher risk of breast cancer, especially if the weight gain took place during adulthood or after menopause. Also, the risk seems to be higher if the extra fat is in the waist area. However, a recent study showed that women who lost weight (on the order of 20 pounds) after menopause reduced their overall risk for breast cancer by almost half.
- **Exercise:** Recent studies show that strenuous exercise during youth might provide life-long protection against breast cancer and that moderate to strenuous physical activity as an adult can lower breast cancer risk by about 60 percent. Even smaller amounts of regular exercise may reduce risk—30 minutes of activity on three or four days of the week appears to have a beneficial effect. More research is being done to confirm these findings.

Risk Factors That Cannot Be Controlled
- **Sex:** Simply being a woman is the main risk factor for breast cancer. Although some men can (and do) get breast cancer, their overall risk is minimal compared to the risk for women.
- **Age:** The chance of getting breast cancer goes up as a woman gets older. About eight out of ten breast cancers are found in women over age 50.
- **Genetic risk factors:** One case out of ten breast cancer cases is linked to changes (mutations) in certain genes. The most common gene changes are those of the BRCA1 and BRCA2 genes. But other gene changes may raise breast cancer risk as well.
- **Family history:** Breast cancer risk is higher among women whose close blood relatives have this disease. The relatives can be from either the mother's or father's side of the family. Having a mother, sister, or daughter diagnosed with breast cancer before the age of 50 almost doubles a woman's risk.
- **Personal history of breast cancer:** A woman with cancer in one breast has a three to four times greater chance of developing a new cancer in the other breast or another part of the same breast. This is different from a recurrence of the first cancer.
- **Race:** White women are more likely to develop breast cancer than are black women, but black women are more likely to die of this cancer. Asian, Hispanic, and American-Indian women have a lower risk of breast cancer.
- **History of abnormal breast biopsy:** Having a previous biopsy result of atypical hyperplasia increases a woman's breast cancer risk by four to five times.
- **Radiation:** Women who have had chest area radiation treatment have a greatly increased risk of breast cancer. Some reports found the risk to be 12 times normal.
- **Menstrual periods:** Women who began having periods early (before 12 years of age) or who went through menopause after the age of 50 have an increased risk of breast cancer.

- **Treatment with DES:** In the 1940s through the 1960s some pregnant women were given DES (diethylstilbestrol) because it was thought to lower their chances of miscarriage. Recent studies have shown that these women have about a 35 percent increased risk of developing breast cancer, and their daughters who were exposed to DES in the womb also have an increased risk.

Prevalence of Self-Reported Risk Factors for Georgia Women

Based on the Georgia Behavioral Risk Factor Surveillance System for 2003-2007:

Risk Factor	All Women	Women 40-64 Years	Women without Health Insurance	Women with Health Insurance
Exercise Had activity in last 30 days	72%	71%	67%	73%
Alcohol Use Any drinks in last 30 days Average 2-5 drinks per occasion	40% 45%	41% 56%	36% 56%	41% 44%
Overweight/Obese	55%	60%	59%	54%

- **Exercise:** Participants were asked if they had engaged in any physical activity in the past month. Seventy-two percent of women reported that they had engaged in some physical activity. Women with health insurance were more likely to report a history of activity than uninsured women.
- **Alcohol Use:** Participants were asked if they had had at least one alcoholic drink in the previous 30 days. Forty percent of all women reported that that had consumed at least one drink, and insured women were more likely to have drank than uninsured women. For those who said yes, they were asked how many drinks they averaged on the days they drank. Among all women who reported having drunk alcohol in the past month, 45 percent averaged 2-5 drinks per occasion. For women 40-64, 41 percent averaged 2-5 drinks per occasion. For women with no health insurance, 56 percent averaged 2-5 drinks per occasion.
- **Overweight/Obesity:** Participants were asked to report their height and weight, and their resulting Body Mass Index (BMI) was calculated based on those responses. BMI greater than or equal to 25 is considered overweight, and greater than or equal to 30 is considered obese. Fifty-five percent of participating women had a calculated BMI that placed them as overweight or obese, and 60 percent of women 40-64 were considered overweight or obese. Fifty-nine percent of women who reported having no health insurance were considered overweight or obese.

Prevention of Breast Cancer

Although it is not possible to prevent the development of breast cancer simply by avoiding your exposure to the controllable risk factors mentioned above, there have been recent advances in the use of breast cancer preventive drugs. These drugs have estrogen-blocking properties, which help to prevent the occurrence of breast cancer (and also have the benefit of preventing/treating osteoporosis). The two drugs are *tamoxifen*, which has been in use for several years already for both treatment and prevention; and *raloxifene*, a relatively new drug approved by the FDA in 2007. So far raloxifene has been proven beneficial in post-menopausal women who are already at high risk for breast cancer. Both drugs seem to be useful in controlling the occurrence of invasive cancer, however, tamoxifen is also beneficial for use with non-invasive cancers.

What are the Symptoms of Breast Cancer?

The number of breast cancers that are found before symptoms occur has increased largely due to the widespread use of mammography screening. However, some breast cancers are not found because even under ideal conditions, mammography does not detect every cancer, which is why it is important to have clinical breast examinations as well for a more complete screening.

The most common sign of breast cancer is a new lump or mass. A lump that is painless, hard, and has irregular edges is more likely to be cancer. Some rare cancers are tender, soft, and rounded, which is why it's important to have anything unusual checked by a health professional that is trained to perform clinical breast examinations.

Other signs of breast cancer include the following:
- A swelling of part of the breast
- Skin irritation or dimpling
- Nipple pain or the nipple turning inward
- Redness or scaliness of the nipple or breast skin
- A nipple discharge other than breast milk
- A lump in the underarm area

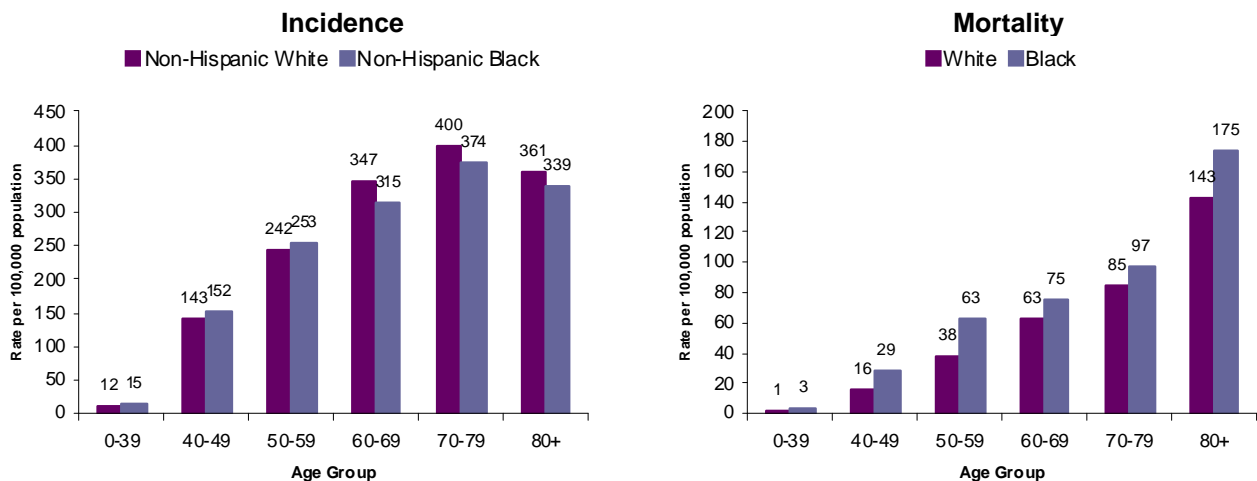# What are the Top Five Cancers in Georgia?

Top Five Cancer Sites and Cancer-Related Deaths, Georgia Females, 2003-2007

Sites	Deaths
Breast	Lung & Bronchus
Lung & Bronchus	**Breast**
Colon & Rectum	Colon & Rectum
Uterine Corpus	Pancreas
Melanoma	Ovary

Breast cancer is the most common cancer diagnosed and the second leading cause of cancer death among women in Georgia. One in 8 American females will develop breast cancer in her lifetime.

At What Age is Breast Cancer Most Often Diagnosed?

Georgia Breast Cancer Incidence and Mortality by Age Group and Race, 2003-2007

Incidence
Non-Hispanic White ■ Non-Hispanic Black

Age Group	Non-Hispanic White	Non-Hispanic Black
0-39	12	15
40-49	143	152
50-59	242	253
60-69	347	315
70-79	400	374
80+	361	339

Mortality
White ■ Black

Age Group	White	Black
0-39	1	3
40-49	16	29
50-59	38	63
60-69	63	75
70-79	85	97
80+	143	175

Rates are age-adjusted to the 2000 U.S. standard population.

Although breast cancer incidence and mortality rates are highest in older women, breast cancer may also occur in younger women. In Georgia, women over the age of 60 have the highest rate of breast cancer; however, black women have higher incidence rates than white women at younger ages. Mortality rates steadily increase with age; the highest mortality rates are seen in women 80 years of age and older. Before the age of 40, breast cancer deaths are very rare, but they do occur occasionally. In all age groups, black women have higher mortality rates than white women. Every year, about 47 Georgia women under 40 years of age die from breast cancer.

What is the Treatment for Breast Cancer?

Each type of treatment has benefits and side effects. Age, overall health, and the stage of the cancer are all factors to consider. Staging is a standardized way to summarize information about how far a cancer has spread from its point of origin. In situ breast cancers are contained within the ducts or lobules inside the breast. Localized breast cancers have invaded the breast tissue and fat, but have not spread beyond the breast. Regional stage breast cancers have spread beyond the breast to the chest wall, skin, and/or to the lymph nodes of the breast and underarm area on the same side of the chest. Distant stage breast cancers have spread to distant sites such as bone (except adjacent rib), liver, or lung, or the other breast. Distant stage also includes dissemination to lymph nodes on the opposite side of the chest or to distant lymph nodes.

- **Surgery:** Most women with breast cancer will have some type of surgery to treat the primary breast tumor. The purpose of surgery is to remove as much of the cancer as possible. The type of surgery performed will depend mainly on the stage of the tumor. There are several surgical treatment options to be considered that will take into account the tumor characteristics, the recommendations of the surgeon and/or oncologist, and the preference of the patient. These options include:
  - Lumpectomy (the breast lump and some normal tissue around it are removed)
  - Simple mastectomy (the entire breast is removed)
  - Modified radical mastectomy (the entire breast and some of the lymph nodes under the arm are removed).
  - Radical mastectomy (the entire breast, lymph nodes, and some of the chest wall muscle and skin are removed—this type of surgery is now generally reserved for the most advanced cases)
  Two additional surgical options are useful when combined with reconstructive surgery to restore the breast's appearance: skin-sparing mastectomy and subcutaneous (nipple-sparing) mastectomy.
- **Chemotherapy:** Chemotherapy involves the use of drugs to kill cancer cells. If chemotherapy is given after surgery (adjuvant therapy) it can reduce the chance of the cancer returning. Neoadjuvant chemotherapy is given before surgery, often to shrink the tumor making it easier to remove. Chemotherapy can also be used as the main treatment for cancer that has spread outside the breast and underarm area or spreads widely after initial treatment.
- **Radiation Therapy:** Radiation therapy is treatment with high-energy rays to kill or shrink cancer cells. The radiation may come from outside the body (external radiation) or from radioactive materials placed directly in the tumor (internal or implant radiation). Radiation therapy may be used to destroy cancer cells remaining in the breast, chest wall, or underarm area after surgery or, less often, to reduce the size of a tumor before surgery. For women with certain types of early-stage breast cancers (especially without the involvement of lymph nodes), a recent study has shown that a shorter course of radiation may be just as beneficial as the traditional, longer course.
- **Hormone Therapy:** The female hormone estrogen can increase the growth of breast cancer cells in some women. A drug such as tamoxifen, which blocks the effect of estrogen, can be given to counter this growth.
- **Immunotherapy:** The HER2/neu protein is a growth-promoting protein found in normal breast cells and most breast cancers. Some breast cancers have too much of this protein which can cause the cancer to grow and spread faster. Herceptin can stop the HER2/neu protein from causing breast cancer cell growth. It may also help the immune system to better attack the cancer.

Who Survives Breast Cancer?

Percent of U.S. Women Surviving Five Years after Diagnosis
with Breast Cancer, by Stage of Disease and Race, 1999-2006
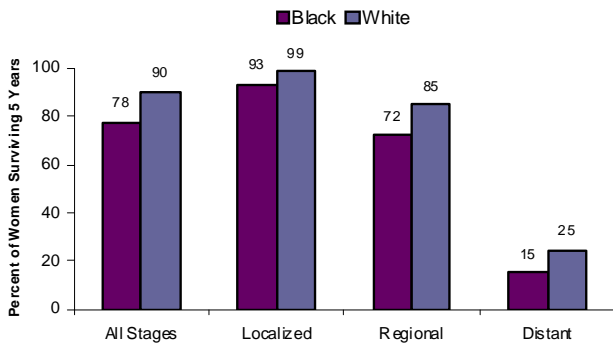
		Localized	Regional	Distant
% of tumors found at this stage*	U.S. Black†	51%	39%	8%
	U.S. White†	61%	32%	5%
	GA Black†	42%	31%	6%
	GA White†	51%	24%	3%

* Unstaged tumors are not shown.
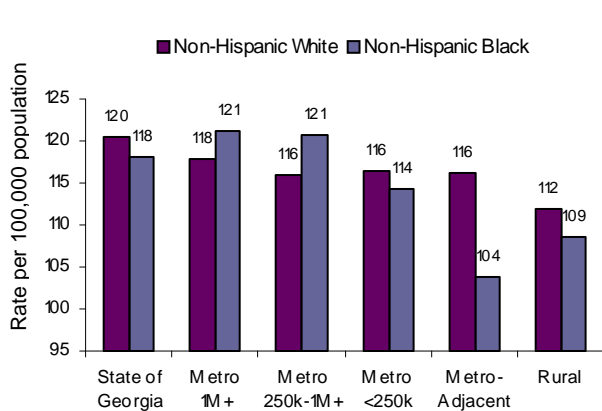**† U.S. data is for 1999-2006; Georgia data is for 2003-2007**

Survival rates depend mainly on two elements: how early the cancer is detected, and the pathology of the tumor (how aggressive it is). Early detection is important because survival for early stage breast cancer is much greater than that for later stage disease. Five-year survival for tumors found in the localized stage is 93 percent among U.S. black women and 99 percent among U.S. white women. In Georgia, about 42 percent of cases among black women and about 51 percent of cases among white women are diagnosed in the localized stage. If the cancer is diagnosed at the distant stage, five-year survival drops to about 15 percent for U.S. black women and 25 percent for U.S. white women. Detection and treatment of breast cancer have greatly improved in recent years, with the five-year relative U.S. survival rate for all stages combined significantly increasing from 75 percent in 1974-1976 to 89 percent in 1999-2006.

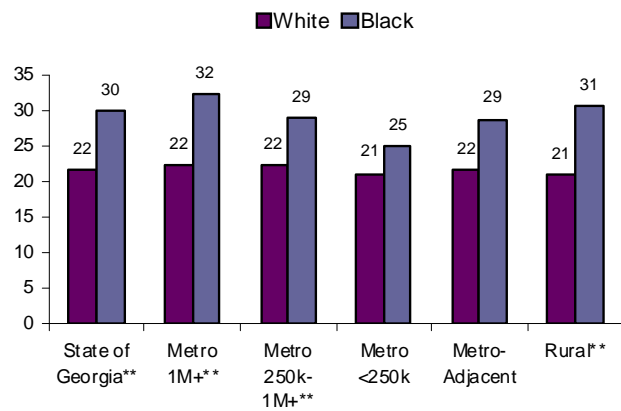# Racial Disparities in Breast Cancer Mortality

Black women in Georgia have lower breast cancer incidence rates than white women, and yet have higher mortality, especially among younger women. A number of research studies have attempted to figure out why this is occurring. Various causes have been considered such as lifestyle factors, socioeconomic status, access to care, and biological causes such as tumor subtypes. One way to classify breast tumors is by their expression, or lack thereof, of hormone receptors (estrogen, progesterone, and human epidermal growth factor receptor 2). Recently, attention has been paid to triple negative tumors – those that lack expression of all three hormones. Research has shown that these particular tumors seem to be more prevalent in younger women (particularly black women) and are not only more aggressive, but show poorer response to breast cancer treatments which may account for part of the disparity. Since socioeconomic status, access to and use of care, and other behavioral characteristics still play a part in the breast cancer prognosis, further research will need to be conducted to clarify the relationship among all risk factors, as well as any possible biologic differences in other racial/ethnic groups.

How Does Breast Cancer Vary by Region?

Georgia Breast Cancer Incidence and Mortality Rates by Race and Geography
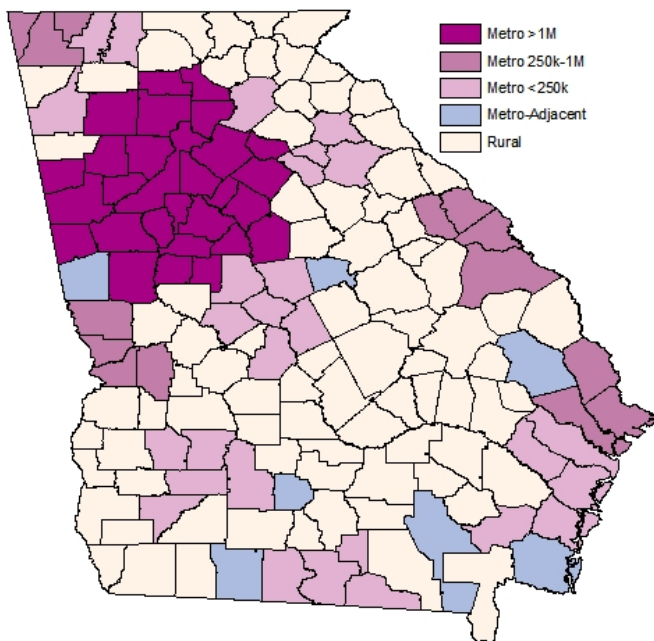
Incidence

Legend: ■ Non-Hispanic White ■ Non-Hispanic Black

Rate per 100,000 population

Region	Non-Hispanic White	Non-Hispanic Black
State of Georgia	120	118
Metro 1M+	118	121
Metro 250k-1M+	116	121
Metro <250k	116	114
Metro-Adjacent	116	104
Rural	112	109

Rates are age-adjusted to the 2000 U.S. standard population.
*Fewer than 20 cases; Rates not calculated

Mortality

Legend: ■ White ■ Black

Region	White	Black
State of Georgia**	22	30
Metro 1M+**	22	32
Metro 250k-1M+**	22	29
Metro <250k	21	25
Metro-Adjacent	22	29
Rural**	21	31

** Rates are statistically significantly different for blacks vs. whites

Legend:
■ Metro > 1M
■ Metro 250k-1M
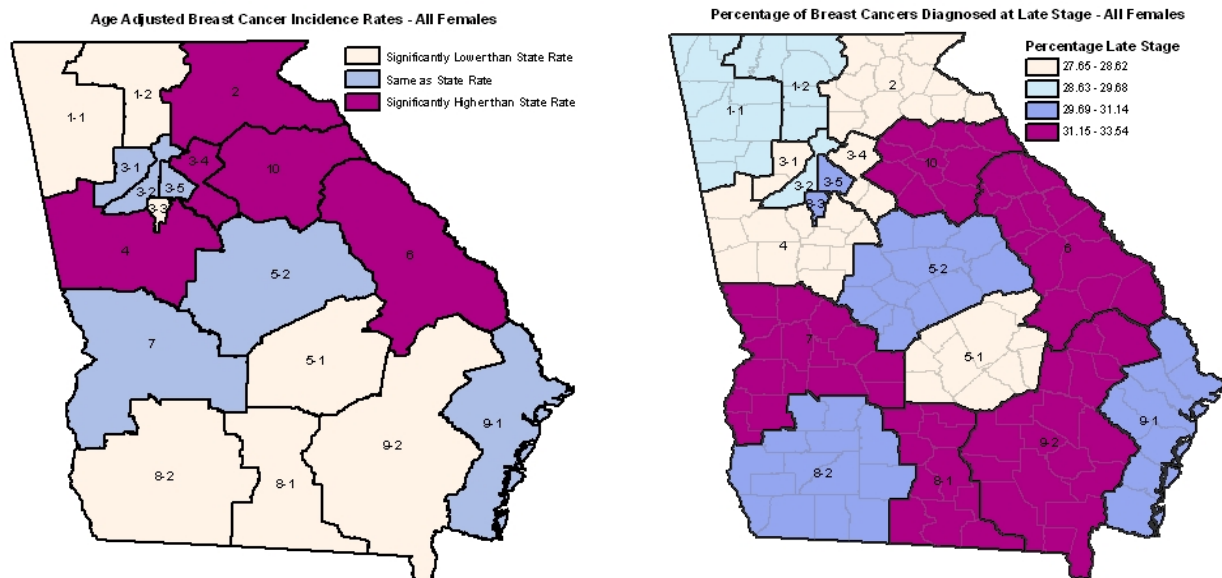■ Metro <250k
■ Metro-Adjacent
□ Rural

Please refer to the Technical Notes for a description of the Rural-Urban Continuum.

White women in Georgia have higher rates of breast cancer than black women. When examining rates by geography, however, black women have higher rates in the larger metro areas, while white women have higher rates in outer-lying metro, metro-adjacent, and rural areas. The greatest disparity in incidence rates between black and white women seems to occur in suburban (metro-adjacent) counties.

White women in rural counties experienced significantly lower rates of breast cancer incidence than white women statewide. Black women in the smaller metro counties experienced significantly lower rates of breast cancer incidence than black women statewide. None of the other incidence rates for the various metropolitan classifications were significantly different from the statewide incidence rates for either race.

In the state of Georgia, black women have higher mortality rates from breast cancer than white women, regardless of geography. The widest disparities in mortality rates exist in the largest metro areas and rural counties. In those areas, the disparity between black and white mortality rates is statistically significant. None of the mortality rates for any of the metropolitan classifications were significantly different from the statewide mortality rates for either race.

Age Adjusted Breast Cancer Incidence Rates - All Females

Significantly Lower than State Rate
Same as State Rate
Significantly Higher than State Rate

Percentage of Breast Cancers Diagnosed at Late Stage - All Females

Percentage Late Stage
27.65 - 28.62
28.63 - 29.68
29.69 - 31.14
31.15 - 33.54

Health Districts in southern and northwest Georgia have significantly lower breast cancer incidence rates than the state as a whole, and several health districts surrounding the metro Atlanta/North Georgia area as well as the coast have significantly higher rates. When looking at stage at diagnosis, women in eastern and southern health districts experience higher percentages of late stage breast cancer diagnoses than women in north Georgia and metro Atlanta. Screening may play a large role in this phenomenon; women in rural areas may not have adequate access to screening and would therefore not be diagnosed as often. In addition, lack of awareness about the importance of screening may prevent women from having regular screenings that might lead to earlier diagnoses.

How Does Georgia Compare with the United States?

Breast Cancer Mortality Rates, Georgia vs. the U.S., by Race, 1980-2007

US White   US Black   GA White   GA Black

Rate per 100,000 population

Year of Death
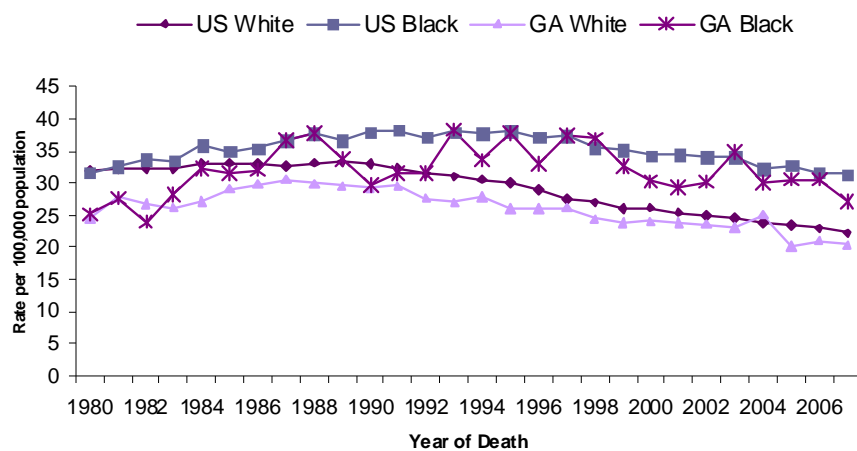
Rates are age-adjusted to the 2000 U.S. standard population.

From 1980 through 2007, the breast cancer mortality rates among Georgia women were slightly lower than for the rest of the United States. Mortality rates are generally higher among black women than white women.

From 1980 through 1989, mortality rates for both black and white women in Georgia increased. During the 1990s, rates for white women leveled off and started to decrease, while rates for black women fluctuated, peaking in 1993. From 2002 through 2007, rates continued to decrease for white women, and began to decrease for black women as well.

Breast Cancer Incidence Rates, Georgia vs. the US, by Race, 1999-2007
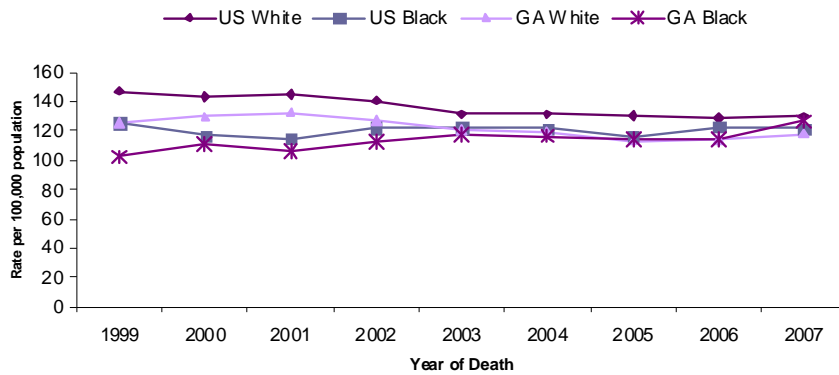
Between 1999 and 2007, breast cancer incidence rates for white women in both the U.S. and Georgia decreased, the incidence rate for black women in Georgia increased, and the rate for black women in the rest of the U.S. remained mostly flat. By 2007, white women in the U.S. had the highest breast cancer incidence rate, white women in Georgia had the lowest rate, and black women in the U.S. and Georgia had rates in the middle.

Screening and Treatment Options in Georgia

For women who have health insurance and do not live below the poverty line, their private doctor/nurse practitioner will be the most likely provider for breast cancer screening. However, what happens to women who are in need of screening or diagnostic testing for breast cancer who don't have insurance or the funds to afford the tests?

National Breast and Cervical Cancer Early Detection Program

The National Breast and Cervical Cancer Early Detection Program (NBCCEDP) was created by the Centers for Disease Control and Prevention (CDC) after Congress passed the Breast and Cervical Cancer Mortality Prevention Act of 1990. The purpose of the Early Detection Program is to provide access to breast and cervical screening to low-income, uninsured, or underinsured women. The NBCCEDP works by funding screening programs in all 50 states, the District of Columbia, 5 U.S. territories, and 12 American Indian/Alaska Native tribal organizations. For breast cancer specifically, the NBCCEDP will refer eligible women to a local provider for mammograms, clinical breast examinations, follow-up diagnostic testing if needed, and referral for treatment in the event of a positive diagnosis.

In the state of Georgia the program is called the Breast and Cervical Cancer Program (also known as the Cancer Screening Program and formerly known as BreasTest and More). It was launched in 1994, and is funded by federal and state funds.

Different funding sources have particular goals and objectives for the types of women they predominantly screen. For example, CDC has a specific breast cancer screening goal that at least 75 percent of federally funded screening mammograms must be given to women ages 50-64 because they are a priority population at greater risk for the disease.

Eligibility

To be considered eligible for the program in Georgia, a woman must:
- Have a household income of less than 200 percent (double) of the Federal Poverty Level
- Have no insurance or be underinsured (and not eligible for Medicare or Medicaid assistance)
- Must not have had a mammogram in the past year (otherwise, must be displaying symptoms of possible breast cancer)

Screening mammograms are limited to women ages 40-64, however, younger women may access the program to receive a diagnostic mammogram if they meet the above criteria and have symptoms that are highly suspicious of breast cancer. Women whose screening procedures show abnormalities may be sent for diagnostic follow-up.

Following a Positive Breast Cancer Diagnosis

Women who are diagnosed with breast cancer through the Georgia Breast and Cervical Cancer Early Detection Program (or elsewhere, and meet BCCP eligibility criteria), have options available to assist with treatment.

Women's Health Medicaid Program

The Women's Health Medicaid Program was established in 2001 following the passage of the National Breast and Cervical Cancer Prevention and Treatment Act of 2000. Women apply for the program at local health departments. The application for presumptive eligibility is forwarded to Medicaid for the final determination.

Low-income women who have been diagnosed with breast cancer and need to access treatment can apply to the program. In order to be considered eligible, women must:

- Meet the financial requirement for the Breast and Cervical Cancer Program
- Be under 65 years of age
- Be a U.S. citizen and Georgia resident
- Must not have health coverage (and not be eligible for Medicare or Medicaid)

Accomplishments and Limitations

The Breast and Cervical Cancer Program of Georgia has helped thousands of women gain access to vital breast cancer screening tools such as mammograms and clinical breast exams over the years. Specifically, during the 2007 calendar year, almost 22,000 women were provided a mammogram and/or CBE, and almost 200 breast cancers were detected through the program. Of those cancers, over 50 percent were considered invasive.

Financial realities are an important limitation of the program, and BCCP cannot serve all women in need. Funding amounts fluctuate over time, and providers can only perform as many screenings as the money allows. The U.S. Census Bureau estimates that in 2007, the state of Georgia had approximately 147,000 uninsured women age 40-64 living below 200 percent of the federal poverty level (which coincides with the eligibility criteria for the Breast and Cervical Cancer Program). Thus, only about 15 percent of the eligible women in Georgia were able to take advantage of the screening and diagnostic services offered.

Where Can I Find Out More about Breast Cancer?

American Cancer Society
Telephone: 1-800-ACS-2345
Internet Address: http://www.cancer.org

Cancer Control Planet
Internet Address: http://cancercontrolplanet.cancer.gov/

Encore Plus Program of the YWCA
Office of Women's Health Initiatives
Telephone: 1-800-953-7587 or 202-467-0801
Internet Address: http://www.ywca.org

National Breast Cancer Coalition
Telephone: 1-800-622-2838 or 202-296-7477
Internet Address: http://www.natlbcc.org or
    http://www.stopbreastcancer.org

Breast and Cervical Cancer Program of Georgia
Internet Address: http://health.state.ga.us/programs/bccp/

National Cancer Institute, Cancer Information Service
Telephone: 1-800-4-CANCER or 800-422-6237
Internet Address: http://www.cancer.gov/

National Coalition for Cancer Survivorship
Telephone: 1-877-NCCS-YES or 877-622-7937
Internet Address: http://www.canceradvocacy.org/

Susan G. Komen Breast Cancer Foundation
Telephone: 1-800-IM AWARE or 800-462-9273
Internet Address: http://www.komen.org/

Y-Me National Breast Cancer Hotline
Telephone: 1-800-221-2141, 1-800-986-9505 (Spanish)
Internet Address: http://www.y-me.org

Technical Notes

Definitions:
Age-adjusted rate: A rate calculated in a manner that allows for the comparison of rates derived from populations with different age structures.
Cancer incidence rate: The number of new cancer cases occurring in a population during a specified period of time. Often expressed per 100,000 population.
Cancer mortality rate: The number of cancer deaths occurring in a population during a specified period of time. Often expressed per 100,000 population.

2003 Rural-Urban Continuum Codes: Rural-Urban Continuum Codes form a classification scheme that distinguishes metropolitan (metro) counties by the population size of their metro area, and nonmetropolitan (nonmetro) counties by degree of urbanization and adjacency to a metro area or areas:
    1 = Counties in metro areas of 1 million population or more
    2 = Counties in metro areas of 250,000 to 1 million population
    3 = Counties in metro areas of fewer than 250,000 population
    4 = Urban population of 20,000 or more, adjacent to a metro area
    5 = Urban population of 20,000 or more, not adjacent to a metro area
    6 = Urban population of 2,500 to 19,999, adjacent to a metro area
    7 = Urban population of 2,500 to 19,999, not adjacent to a metro area
    8 = Completely rural or less than 2,500 urban population, adjacent to a metro area
    9 = Completely rural or less than 2,500 urban population, not adjacent to a metro area
The above codes were regrouped into the following five categories:
    1 = Metro >1M
    2 = Metro 250K-1M
    3 = Metro <250K
    4 = Metro-Adjacent
    5 = there are no counties in Georgia that fit category number 5
    6, 7, 8 and 9 = Rural

Data Sources:
The number of deaths and mortality rates for the state of Georgia were obtained from the Georgia Department of Public Health, Vital Records Program. The number of deaths and mortality rates for the United States were obtained from the North American Association of Central Cancer Registries (NAACCR) and from the Surveillance, Epidemiology, and End

Results (SEER) program, National Cancer Institute. Mortality data were coded using ICD-9 (1980-1998) and ICD-10 codes (1999-2007). The ICD-9 codes for breast cancer are 174.0-174.9, while the ICD-10 codes are C50.0:C50.9.

The number of new cases and incidence rates for the state of Georgia were obtained from the Georgia Department of Human Resources, Division of Public Health, Georgia Comprehensive Cancer Registry. The number of new cases and incidence rates for the United States were obtained from NAACCR. Incidence data were coded using ICD-O-3 codes (2003-2007). The ICD-O-3 codes used for breast cancer are C50.0:C50.9.

Cancer stage and survival data for the United States were obtained from SEER.

Population estimates for 1980-2007 and the 2000 U.S. standard population were obtained from the U.S. Bureau of the Census.

Data regarding prevalence of risk factors such as exercise habits, alcohol use, overweight/obesity, insurance status, and breast cancer screening behaviors for Georgia were obtained from the Georgia Department of Community Health, Behavioral Risk Factor Surveillance System, and were analyzed as weighted averages for the years 2003 through 2007.

Methods:
Incidence rates were calculated per 100,000 population and age-adjusted by the direct method to the 2000 U.S. standard population. The incidence rates are five-year average annual rates for the period 2003 through 2007. Mortality rates were calculated per 100,000 population and age-adjusted by the direct method to the 2000 U.S. standard population. Except where calculated to show trends, the mortality rates are five-year average annual rates for 2003 through 2007.