The American Cancer Society is the nationwide community-based voluntary health organization dedicated to eliminating cancer as a major health problem by preventing cancer, saving lives and diminishing suffering from cancer, through research, education, advocacy and service.
Executive Summary

Cancer is a major health problem in Georgia

• More than 36,500 Georgians will be diagnosed with invasive cancer, and more than 16,000 will die from this disease in 2004.
• Cancer is the second leading cause of death in Georgia. From 1997-2001, cancer accounted for 22% of all deaths.
• Breast, lung and bronchus, and colorectal cancers account for 57% of all new cancers in Georgia among females.
• Breast cancer is the leading cause of cancer incidence among Georgia females and accounts for 32% of all new cancers in women.
• White females in Georgia are 10% more likely than black females to be diagnosed with cancer.
• Prostate, lung and bronchus, and colorectal cancers account for 28% of all cancer incidence in men.
• Black males in Georgia are 22% more likely than white males to be diagnosed with cancer.
• Black males in Georgia are 40% more likely than white males to die of cancer.
• Cancer mortality rates in Georgia have declined at an average annual rate of 1.9% since 1990.

Executive Summary

Much of the burden of death and disability from cancer is preventable

• Tobacco use accounts for at least 30% of all cancer deaths.
• Tobacco use is responsible for about 87% of all lung cancers in Georgia.
• Since 1993, smoking rates in Georgia have been relatively unchanged.
• In 2001, 15% of middle school students and 32% of high school students reported currently using some form of tobacco.
• About one-third of cancer deaths are related to diet, nutrition, and physical activity.
• In 2000, only 22% of Georgia adults ate 5 or more fruits and vegetables per day.
• In 2001, only 40% of Georgia adults were physically active on a regular basis.

Some cancers can be detected early, when treatment is most effective

• During 2000-2001, 55% of Georgia females aged 40 and older reported having a mammogram and clinical breast examination within the past year.
• During 2000-2001, 89% of Georgia females aged 18 and older without a hysterectomy reported having a Pap test within the past 3 years.
• During 2001, 42% of Georgia adults aged 50 and older reported having a sigmoidoscopy or colonoscopy in the past five years.

This report reflects the spirit of commitment and dedication to excellence demonstrated by the cancer registry and its partners in the medical community of Georgia. We hope that this report will be a useful tool in cancer control efforts in Georgia.
Introduction

The challenge
Cancer is the second leading cause of death in Georgia, accounting for 22% of all deaths during 1997-2001 (Figure 1). Every year, more than 13,000 Georgians die of cancer and more than 31,000 Georgians are diagnosed with this disease. The most common forms of cancer, lung, colorectal, breast and prostate, account for 58% of all cancer diagnosed and 53% of all cancer deaths.

Hope and progress
Currently, there is no universal prevention or cure for all types of cancer. However, the number of lives lost to this disease can be reduced. New and better treatments for cancer continue to be developed and survival rates for cancer are improving. Many cancers can be detected early, increasing the chances of successful treatment and survival.

Most importantly, the risk for death from cancer can be reduced by adopting a healthy lifestyle. About 30% of all cancer deaths can be prevented by not smoking. Similarly, 30% to 35% of cancer deaths could be prevented by not adopting a healthy diet and exercise practices.

Purpose of this report
This report was written to assist health professionals, volunteers and staff of cancer control organizations, community groups and others who are working to reduce the burden of cancer throughout Georgia. Data provided at the state and local level can be used to measure effectiveness of cancer control programs, develop future programs, develop funding proposals, and coordinate effective collaborations.

This report describes the burden of cancer in Georgia and includes: 1) the estimated number of new cancer cases and deaths in 2004; 2) the number of cases and incidence rates for each county; 3) the number of cancer deaths and mortality rates for each county; 4) the prevalence of cancer screening, and 5) the prevalence of cancer risk factors. For more information on cancer, visit the Georgia Division of Public Health web site at www.health.state.ga.us, call 1-800-ACS-2345, or visit the American Cancer Society web site at www.cancer.org.

Figure 1. Leading Causes of Death, Georgia, 1997-2001

Basic Cancer Information

What is cancer?
Cancer is a group of diseases characterized by uncontrolled growth and spread of abnormal cells. If the growth is not controlled, it can result in death. Cancer is caused by both internal and external factors. Many cancers can be prevented by lifestyle changes and many can be cured if detected and treated promptly.

How many new cases are expected to occur this year?
In 2004, an estimated 36,550 Georgians will be diagnosed with cancer — about 100 per day (Figure 2). In the United States (U.S.), 1.3 million cases of cancer are expected to occur in 2004. These estimates do not include non-melanoma skin cancer and carcinoma in situ for sites other than urinary bladder. Based on national estimates, more than one million cases of basal and squamous cell skin cancers are expected to be diagnosed in 2004.

How many people are expected to die of cancer this year?
In 2004, an estimated 16,130 Georgians are expected to die from cancer (Figure 3). Cancer is the second leading cause of death in Georgia, with about 1 out of every 4 deaths attributable to cancer. In the U.S., 563,700 cancer deaths are expected to occur in 2004.

Can cancer be prevented?
Many cancers can be prevented. Nearly two-thirds of cancer deaths can be linked to modifiable risk factors such as tobacco use, diet, obesity, and lack of exercise. In addition, many skin cancers could be prevented by protection from the sun’s rays. Regular screening exams by a health care provider can result in early detection of many cancers, when treatment is more likely to be successful.

Who is at risk of developing cancer?
Everyone. Since the occurrence of cancer increases as individuals age, most cancers affect adults who are middle-aged or older. Nearly 73% of all cancers in Georgia are diagnosed at age 55 and older. In the U.S., males have a 1 in 2 lifetime risk of developing cancer, and females have a 1 in 3 lifetime risk. Lifetime risk refers to the probability that an individual, over the course of a lifetime, will develop cancer.

How is cancer treated?
Cancer is commonly treated by surgery, radiation, chemotherapy, hormones, immunotherapy (agents to stimulate the body’s defenses) or a combination of two or more of these methods.

What are the costs of cancer?
The financial costs of cancer are great both to the individual and to society as a whole. Estimates from the National Institutes of Health put the overall annual cost for cancer in the U.S. at $171.6 billion: $60.9 billion for direct medical costs including health expenditure, $15.5 billion for indirect morbidity costs associated with lost productivity, and $95.2 billion for indirect mortality costs (cost of lost productivity due to premature death). Georgia cancer costs are approximately $4.2 billion: $1.5 billion for direct medical costs, $370 million for indirect morbidity costs, and $2.3 billion for indirect mortality costs.

Cancer

Cancer is the second leading cause of death in Georgia, accounting for 22% of all deaths during 1997-2001 (Figure 1). Every year, more than 13,000 Georgians die of cancer and more than 31,000 Georgians are diagnosed with this disease. The most common forms of cancer, lung, colorectal, breast and prostate, account for 58% of all cancer diagnosed and 53% of all cancer deaths.
Georgia Cancer Data Report

Cancer in Georgia in 2004

Figure 2. New Cancer Cases Georgia, 2004 Estimates

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Figure 3. Cancer Deaths Georgia, 2004 Estimates

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* NOS: Not otherwise specified
* Excludes non-melanoma skin cancer and carcinoma in situ except urinary bladder

Background

The Georgia Comprehensive Cancer Registry (GCCR) was established to collect information on all cancer cases diagnosed in Georgia since 1995. The GCCR is operated by the Georgia Department of Human Resources, Division of Public Health, and is part of the national effort to gain better understanding of cancer in the population. Cancer data are used to estimate cancer incidence rates within Georgia, monitor cancer trends, evaluate possible clusters of cancer, respond to inquiries about cancer from the public, and conduct cancer research. Data from the GCCR also assist state and local agencies in focusing cancer control programs on early detection and the reduction of risk behaviors.

In June 2003, the Georgia Comprehensive Cancer Registry received Gold Certification by the North American Association of Central Cancer Registries (NAACCR) for the diagnosis year 2000. All standards for data completeness, timeliness, and quality were achieved at the highest level. Meeting these standards assures that the data are valid and reliable for use by health care and research communities across the state. In addition, the GCCR data met all the standards set by the Centers for Disease Control and Prevention, National Program of Cancer Registries (NPCR) for cancer diagnosis years 1999 and 2000. As a result, Georgia will be included in the United States Cancer Statistics publication.

Cancer incidence in Georgia

During 1999-2000, an annual average of 30,188 new invasive cancer cases were diagnosed in Georgia: 15,494 among males and 14,694 among females (Table 1-Appendix). Four cancer sites—breast, prostate, lung, and colorectal—accounted for 58% of the cancer cases in Georgia. The burden of these cancers can be significantly reduced by appropriate use of mammography, colorectal screening, and other early detection examinations and by preventing or stopping tobacco use, improving diet, and increasing physical activity.

There are twenty counties in rural south Georgia and in metropolitan Atlanta where incidence rates are significantly higher than the state average. Thirty-eight counties have incidence rates significantly lower than the state average. Cancer incidence rates were not calculated for three counties due to the small number of invasive cancer cases reported. Rates based on small numbers tend to be unreliable (Figure 4).
Cancer incidence in Georgia and the United States

- Males in Georgia are 42% more likely than females to be diagnosed with cancer (Table 1-Appendix).
- Prostate cancer (age-adjusted rate 156/100,000) is the leading cause of cancer incidence among Georgia males and accounts for 29% of all cancer incidence among males each year.
- Breast cancer (age-adjusted rate 122/100,000) is the leading cause of cancer incidence among Georgia females and accounts for 32% of all cancer incidence among females each year.
- For both males and females, lung and colorectal cancer are the second and third leading causes of cancer incidence.

Racial differences in cancer incidence in Georgia

- Black males in Georgia are 22% more likely than white males to be diagnosed with cancer, while white females are 10% more likely than black females to be diagnosed with cancer (Table 1-Appendix).
- The overall age-adjusted cancer incidence rates for 1999-2000 were 623 per 100,000 among black males and 510 per 100,000 among white males, and 385 per 100,000 among white females and 349 per 100,000 among black females.
- Prostate, colorectal, and kidney and renal pelvis cancer incidence rates are higher (78%, 18%, and 36%, respectively) among black males than among white males in Georgia (Figure 7).
- Breast, lung, uterine, and ovarian cancer incidence rates are higher among white females than among black females in Georgia (Figure 8).
- Colorectal and cervical cancer incidence rates are higher (25% and 37% respectively) among black females than among white females in Georgia (Figure 8).

Figure 5. Cancer Incidence Rates in Males, Georgia, 1999-2000, and the United States 1996-2000

Figure 6. Cancer Incidence Rates in Females, Georgia, 1999-2000, and the United States 1996-2000

Figure 7. Cancer Incidence Rates in Males by Race, Georgia, 1999-2000

Figure 8. Cancer Incidence Rates in Females by Race, Georgia, 1999-2000
Cancer Mortality in Georgia

During 1997-2001, there was an average of 13,322 cancer deaths in Georgia per year: 7,072 among males and 6,250 among females (Table 2, Appendix). Four cancer sites—lung, colorectal, breast, and prostate—accounted for 53% of cancer deaths in Georgia. The burden of these cancers can be significantly reduced by appropriate use of mammography, colorectal screening, and other early detection examinations and by preventing or stopping tobacco use, improving diet, and increasing physical activity.

Males in Georgia are about 66% more likely than females to die of cancer (Table 2, Appendix). Lung cancer is the leading cause of cancer death among Georgia males and females and accounts for 30% of all cancer deaths each year. Among males, prostate and colorectal cancer are the second and third leading causes of cancer death, while breast and colorectal cancer rank second and third among females.

The majority of the counties in Georgia have mortality rates that are similar to the state average. Twenty-three counties have mortality rates that are significantly higher than the state average, while sixteen counties have mortality rates significantly lower than the state average (Figure 11).

Cancer incidence in Georgia’s Hispanic population

For 1999 and 2000, a total of 630 invasive cancer diagnoses were reported among Georgia’s Hispanic population, an average of 315 invasive cancer cases diagnosed yearly. Hispanics have a lower overall cancer incidence rate than non-Hispanics: 275 per 100,000 among females compared to the state rate of 378 per 100,000, and 267 per 100,000 among Hispanic males compared to the state rate of 535 per 100,000. Five cancer sites—prostate, colorectal, lung, kidney and renal pelvis, and bladder—account for 48% of cancer cases among Hispanic males, while breast, colorectal, uterus, lung, and cervical account for 56% of all invasive cancer cases among Hispanic females.

- Breast cancer is the leading cause of cancer incidence among Hispanic females and accounts for 30% of all cases diagnosed each year.
- Prostate cancer is the leading cause of cancer incidence among Hispanic males. It accounts for 23% of all cases diagnosed every year.
- Prostate cancer rate is lower among Hispanic males than among black and white males (Figure 9).
- Hispanic males are 31% more likely than white males to be diagnosed with kidney and renal pelvis cancer (Figure 9).
- Hispanic females are 79% more likely than white females and 31% more likely than black females to be diagnosed with invasive cervical cancer (Figure 10).
- Hispanic females are less likely than white and black females to be diagnosed with breast cancer (Figure 10).

Males in Georgia are about 66% more likely than females to die of cancer (Table 2, Appendix). Lung cancer is the leading cause of cancer death among Georgia males and females and accounts for 30% of all cancer deaths each year. Among males, prostate and colorectal cancer are the second and third leading causes of cancer death, while breast and colorectal cancer rank second and third among females.

The majority of the counties in Georgia have mortality rates that are similar to the state average. Twenty-three counties have mortality rates that are significantly higher than the state average, while sixteen counties have mortality rates significantly lower than the state average (Figure 11).

Figure 9. Cancer Incidence Rates in Georgia by Race/Ethnicity, Males, 1999-2000

Figure 10. Cancer Incidence Rates in Georgia by Race/Ethnicity, Females 1999-2000

Figure 11. Age-Adjusted Cancer Mortality Rates by County, Georgia, 1997-2001
Cancer mortality in Georgia and the United States

- Lung and prostate cancer mortality rates are higher among Georgia males than among U.S. males by 16% and 12%, respectively (Figure 12).
- Pancreatic cancer and leukemia mortality rates are the same among Georgia males than among U.S. males (Figure 12).
- Colorectal cancer mortality rates are 14% lower among Georgia males than among U.S. males and 11% lower among Georgia females than among U.S. females (Figures 12 & 13).

Breast cancer mortality rates are 8% lower among Georgia females than among U.S. females (Figure 13).

Trends in cancer mortality in Georgia

- Overall cancer mortality rates among Georgia males decreased at an average annual rate of 1% since 1990.
- Since 1990, the lung cancer mortality rate for males has been declining at an average annual rate of 1.2% (Figure 14).
- During 1980-1992, prostate cancer mortality rates in Georgia increased at an average annual rate of 2.2% followed by a 1.5% average annual decline during 1993-2001.
- During 1980-1990, colorectal cancer mortality rates for males increased at an average annual rate of 0.6% followed by a 1.0% average annual decline.
- Mortality rates among males for leukemia and cancer of the pancreas have been relatively steady since 1980.

Overall cancer mortality rates among females, unlike males, have been steadily increasing over the past two decades; however, the increase appears to be slowing in recent years.
- Lung cancer mortality rates increased at an average annual rate of 6.7% from 1980-1990. Since then the increase slowed to 1.3% (Figure 15). Since 1988, more females have died each year of lung cancer than breast cancer; which, for over 40 years, had been the major cause of cancer death among females.
- During 1980-1987, breast cancer mortality rates in Georgia increased at an annual average rate of 3.2% followed by an average annual decrease of 1.5% during 1988-2001.
- Colorectal cancer mortality rates decreased at an average annual percent of 0.6% among males and 0.5% among females from 1980-1989 and increased at a similar rate since then.
- Mortality rates for cancers of the pancreas and ovary have been relatively steady since 1980.


Figure 14. Trends in Cancer Mortality Rates in Males, Georgia, 1979-2001

Figure 15. Trends in Cancer Mortality Rates in Females, Georgia, 1979-2001
Racial differences in cancer mortality in Georgia
Black males in Georgia are 40% more likely than white males to die of cancer; black females are 12% more likely than white females to die of cancer. From 1997-2001, the overall cancer mortality rates were 359 per 100,000 among black males, 256 per 100,000 among white males, 180 per 100,000 among black females, and 161 per 100,000 among white females.

- Lung, prostate, colorectal and pancreatic cancer mortality rates are higher (14%, 17%, 54% and 33%, respectively) among black males in Georgia than among white males (Figure 16).
- Breast, colorectal, and pancreatic cancer mortality rates are higher (36%, 58%, and 43%, respectively) among black females in Georgia than among white females (Figure 17).
- Lung and ovarian cancer mortality rates are lower (29% and 22%, respectively) among black females in Georgia than among white females (Figure 17).

New cases
Breast cancer is the most commonly diagnosed cancer among Georgia females. Currently it accounts for 32% of all female cancer cases. An average of 4,762 new invasive and 958 in situ breast cancer cases are diagnosed among Georgia females every year. One in 8 American females will develop breast cancer in her lifetime. Breast cancer can also occur in males, but is rare.

Cobb/Douglas (3-1), Fulton (3-2), Dekalb (3-5) and East Metro (3-4) Health Districts have significantly higher incidence rates than the state rate, while the LaGrange (4), South Central (5-1), and Southeast (9-2) Health Districts have significantly lower rates (Figure 18).

Deaths
An average of 1,019 Georgia females die of breast cancer every year. Breast cancer is the second leading cause of cancer death in Georgia females and it accounts for 16% of all cancer deaths in females. Breast cancer mortality rates increased at an average annual rate of 3.2% between 1980-1987 followed by a decrease of 1.5% per year since 1988. This decrease is probably the result of earlier detection through mammography and improved treatment.

The Fulton (3-2) and Coastal (9-3) Health Districts have significantly higher mortality rates than the state average, while the North (2), LaGrange (4), and South Central (5-2) Health Districts have significantly lower rates (Figure 19).

Breast Cancer

![Figure 16. Cancer Mortality Rates in Males by Race, Georgia, 1997-2001](image)

![Figure 17. Cancer Mortality Rates in Females by Race, Georgia, 1997-2001](image)

![Figure 18. Age-Adjusted Breast Cancer Incidence Rates by Health Districts, Georgia, 1999-2000](image)

![Figure 19. Age-Adjusted Breast Cancer Mortality Rates by Health Districts, Georgia, 1997-2001](image)
**Stage of disease**

Stage of disease refers to the extent to which cancer has spread when diagnosed. In general the earlier the stage, the better the chance of survival. For breast cancer, the overall five year survival rate is 86%. If the cancer is discovered at a local stage, the survival rate is 97%, but only 78% when discovered at a regional stage and 23% when discovered at a distant stage.

In Georgia from 1999-2000, 66% of the breast cancers were diagnosed at an early stage (in situ and localized) compared to 30% at a late stage (regional and distant) (Figure 20). The percentage diagnosed at an early stage varies among Health Districts, ranging from 56% in South Central (5-1) to 70% in South (8-1) and East Metro (3-4) Health Districts (Figure 21).

**Risk factors**

- Increasing age
- Personal or family history of breast cancer
- White race
- A long menstrual history (menstrual periods that start early and end late in life)
- Never having children or having the first child after age 30
- Recent use of oral contraceptives or postmenopausal estrogens
- Breast biopsy with abnormal results
- Previous breast radiation
- Consuming 2 or more drinks of alcohol daily
- Obesity
- Physical inactivity

**Prevention**

Although there is no sure way to prevent breast cancer, the best strategy is to avoid the modifiable risk factors, including alcohol, estrogen use, obesity, and inactivity. The use of the anti-estrogen drug tamoxifen has been shown to reduce the risk of recurrence in localized breast cancer.

**Early detection**

Early detection of breast cancer saves lives. Mammograms and clinical breast exams are both important screening tools. A mammogram, or low-dose x-ray of the breast, is valuable because it can identify breast abnormalities before a woman or her health care provider can feel them.

**Breast cancer screening in Georgia**

According to the 2000-2001 Behavioral Risk Factor Surveillance System, 55% of women 40 years and older reported having had a mammogram and clinical breast examination within the past year. Women 50-64 years (62%) were more likely than women 40-49 years (49%) or 65 years and older (54%) to have had a mammogram and clinical breast examination (Figure 22).

Among the 19 public health districts in Georgia, the percentage of women who had a mammogram and clinical breast exam in the past year ranged from 45% in the South Central (5-1) to 62% in the Cobb/Douglas (3-1) Health District (Figure 23).

**American Cancer Society Guidelines for Breast Cancer Screening**

Yearly mammograms are recommended starting at age 40. The age at which screening should be stopped should be individualized by considering the potential risks and benefits of screening in the context of overall health status and longevity. Clinical breast exam should be a part of a periodic health exam, about every 3 years for women in their 20s and 30s, and every year for women 40 and older.

Women should know how their breasts normally feel and report any breast change promptly to their health care providers. Breast self exam is an option for women starting in their 20s.

Women at increased risk (e.g, women with family history, genetic tendency, past breast cancer) should talk with their doctors about the benefits and limitations of starting mammography screening earlier, having additional tests, or more frequent exams.
**New cases**
Yearly, an average of 412 new invasive cervical cancer cases are diagnosed among Georgia females. In the U.S., incidence rates have decreased over the past decades. As Pap screening has become more prevalent, pre-invasive lesions of the cervix are detected far more frequently than invasive cancer.

Rates vary by Health District. The South (8-1) Health District has a significantly higher incidence rate than the state rate. East Metro (3-4) Health District has a significantly lower rate. South Central (5-1), and Coastal (9-3) Health Districts had less than 20 new cases and rates were not calculated (Figure 24 and Table 1).

**Deaths**
Yearly, an average of 120 Georgia females die of cervical cancer. In Georgia, mortality rates from cervical cancer have declined nearly 44% during the past 20 years.

The LaGrange (4), Southwest (8-2), and Southeast (9-2) Health Districts have significantly higher mortality rates than the state average. DeKalb (3-5) Health District has a significantly lower rate. Clayton (3-3), North Georgia (1-2), South Central (5-1), and Coastal (9-3) Health Districts had less than 20 deaths and rates were not calculated (Figure 25 and Table 1).

**Stage of disease**
Stage of disease refers to the extent to which cancer has spread when diagnosed. In general the earlier the stage, the better chance of survival. For cervical cancer, the overall five year survival rate is 71%. If the cancer is discovered at a local stage, the survival rate is 92%, but only 51% when discovered at a regional stage and 15% when discovered at a distant stage.

Among Georgia women diagnosed with cervical cancer in 1999-2000, 56% had early stage (localized) cancers (Figure 26). The vast majority of invasive cervical cancers can be prevented. Following the guidelines for early detection of cervical cancer helps in the prevention of this cancer.

**Risk factors**
- Certain types of human papillomavirus
- First intercourse at an early age
- Multiple sex partners, or partners who have had multiple sex partners
- Cigarette smoking

**Prevention**
Almost all invasive cervical cancers can be prevented. Early detection and treatment of precancerous lesions prevents invasive disease. Cervical cancer can be prevented by delaying onset of first sexual intercourse and limiting the number of lifetime sex partners, both of which reduce exposure to the human papillomavirus and are risk factors beyond their relationship to human papillomavirus.

**Early detection**
Deaths from cervical cancer were reduced dramatically with the advent of the Pap smear test in the 1940s. With regular Pap tests and appropriate follow-up care, death from cervical cancer is almost totally preventable.

Figure 26. Stage at Diagnosis for Cervical Cancer, Georgia, 1999-2000
Note: Cervical cancer in situ is not reported

**American Cancer Society Guidelines for Early Detection of Cervical Cancer**
Cervical cancer screening should begin approximately 3 years after a woman begins having vaginal intercourse, but no later than 21 years of age. Screening should be done every year with conventional Pap tests or every two years with liquid-based Pap tests. At or after age 30, women who have had three normal test results in a row may get screened every 2 to 3 years. Alternatively, cervical cancer screening with HPV DNA testing and conventional or liquid-based cytology can be performed every 3 years. Doctors may suggest more frequent screening for women with HIV or a weak immune system.
Cervical cancer screening in Georgia

According to the 2000-2001 Behavioral Risk Factor Surveillance System, 89% of women 18 years and older without a hysterectomy reported having a Pap test within the past 3 years. Women from 18-54 years of age were significantly more likely than women 65 years and older to have had a Pap test within the past three years (Figure 27).

Figure 27. Percentage of Women Reporting a Pap Test Within the Past Three Years by Age Group, Georgia, 2000-2001

New cases

Colorectal cancer is the third most common cancer diagnosed among Georgia males and females. Yearly, an average of 3,331 new cases of colorectal cancer are diagnosed in Georgia: 1,665 in males and 1,666 in females.

The North Central (5-2) Health District has a significantly higher incidence rate than the state for both males and females, while the North Georgia (1-2) and East Metro (3-4) Health Districts have significantly lower rates (Figure 29).

Figure 29. Age-Adjusted Colorectal Cancer Incidence Rates by Health Districts, Georgia, 1999-2000

Deaths

Yearly, an average of 1,227 Georgians die of colorectal cancer: 593 males and 634 females. Colorectal cancer is the third leading cause of cancer death among Georgia males and females. Since 1990, colorectal cancer mortality rates decreased at an average annual rate of 0.3% among males and 0.5% among females.

The North Central (5-2) Health District has a significantly higher mortality rate than the state (Figure 30).

Figure 30. Age-Adjusted Colorectal Cancer Mortality Rates by Health Districts, Georgia, 1997-2001
Sigmoidoscopy/Colonoscopy
inserting barium into colon and rectum. Contrast barium enema, a series of x-rays after using a long, lighted flexible tube; and double colonoscopy, an examination of the entire colon lower colon using a lighted flexible tube; sigmoidoscopy, an examination of the rectum and tests, which detect blood in a person’s stool sample; for colorectal cancer. They are fecal occult blood There are four effective tools available for screening and detection and removal of precancerous polyps.

Prevention
Preventing colorectal cancer saves lives. Strategies for prevention include managing modifiable risk factors (above), such as diet and physical activity, and detection and removal of precancerous polyps.

Early detection
There are four effective tools available for screening for colorectal cancer. They are fecal occult blood tests, which detect blood in a person’s stool sample; sigmoidoscopy, an examination of the rectum and lower colon using a lighted flexible tube: colonoscopy, an examination of the entire colon using a long, lighted flexible tube; and double contrast barium enema, a series of x-rays after inserting barium into colon and rectum.

Stage of disease
Stage of disease refers to the extent to which cancer has spread when diagnosed. In general the earlier the stage, the better chance of survival. For colorectal cancer, the overall five year survival rate is 62%. If the cancer is discovered at a local stage, the survival rate is 90%, but only 65% when discovered at a regional stage and 9% when discovered at a distant stage. Early detection and removal of precancerous polyps can greatly reduce the risk of developing or dying of invasive colorectal cancer.

During 1999-2000, 54% of colorectal cancers were diagnosed at a late stage (regional and distant) while only 39% were diagnosed early (in situ and local) (Figure 31). The percentage diagnosed at an early stage varies among Health Districts, ranging from 31% in Clayton (3-3) Health District to 45% in East Metro (3-4) Health District (Figure 32).

Risk factors
- Increasing age
- Personal or family history of colorectal cancer, polyps, or inflammatory bowel disease
- Smoking and alcohol consumption
- Physical inactivity
- A high fat or low fiber diet
- Inadequate intake of fruits and vegetables
- Obesity

Figure 31. Stage at Diagnosis for Colorectal Cancer, Georgia, 1999-2000

Figure 32. Early Stage at Diagnosis for Colorectal Cancer by Health District, Georgia 1999-2000

Risk factors
- Increasing age
- Personal or family history of colorectal cancer, polyps, or inflammatory bowel disease
- Smoking and alcohol consumption
- Physical inactivity
- A high fat or low fiber diet
- Inadequate intake of fruits and vegetables
- Obesity

Prevention
Preventing colorectal cancer saves lives. Strategies for prevention include managing modifiable risk factors (above), such as diet and physical activity, and detection and removal of precancerous polyps.

Early detection
There are four effective tools available for screening for colorectal cancer. They are fecal occult blood tests, which detect blood in a person’s stool sample; sigmoidoscopy, an examination of the rectum and lower colon using a lighted flexible tube: colonoscopy, an examination of the entire colon using a long, lighted flexible tube; and double contrast barium enema, a series of x-rays after inserting barium into colon and rectum.

American Cancer Society Guidelines for Early Detection of Colorectal Cancer
Starting at age 50
- Annual Fecal Occult Blood Test (FOBT) or fecal immunochemical test (FIT)
- Flexible sigmoidoscopy every 5 years.
- Annual FOBT or FIT and flexible sigmoidoscopy (FSIG) every 5 years*
- Colonoscopy every 10 years.
- Double contrast barium enema every 5 years.

*Combined testing is preferred over either annual FOBT or FIT or FSIG every 5 years alone. People who are at moderate or high risk for colorectal cancer should talk with a doctor about a different testing schedule.

Figure 33. Fecal Occult Blood Test (FOBT) at Home within the Past Year and Sigmoidoscopy/Colonoscopy within the Past 5 Years by Age Group, Adults 50 Years and older, Georgia, 2001.

Among the 19 public health districts, the percentage of adults 50 and older who had a blood stool test using a home kit ranged from 11% in the East Central (6) to 39% in the Fulton (3-2) Health Districts. The percentage of adults 50 and older who had a sigmoidoscopy or colonoscopy within the past 5 years ranged from 28% in the South West (8-2) to 57% in the DeKalb (3-5) Health Districts (Figure 34).
New cases
Lung cancer is the most common cancer diagnosed in Georgia and accounts for 16% of all cancer diagnoses. Yearly, an average of 4,015 new cases of lung cancer are diagnosed in Georgia: 3,024 in males and 1,927 in females.

North Georgia (1-2), Northwest (1-1), and South (8-1) Health Districts have significantly higher incidence rates than the state rate while Northeast (10) and DeKalb (3-5) Health Districts have significantly lower rates (Figure 35).

Deaths
Yearly, an average of 2,015 Georgians die of lung cancer: 1,513 males and 502 females. Lung cancer deaths account for 30% of all cancer deaths in Georgia. In recent years, mortality rates from lung cancer have declined among males; however, among females, rates have doubled since 1980. Decreasing mortality rates among males are a result of decreased smoking rates over the previous 30 years.

Southwest (8-2), East Central (6), Clayton (3-3), North Central (5-2), Northwest (1-1), and South (8-1) Health Districts have significantly higher mortality rates than the state average, while Fulton (3-2), East Metro (3-4), DeKalb (3-5), Northeast (10), and North (2) Health Districts have significantly lower rates (Figure 36).

Stage of disease
Stage of disease refers to the extent to which cancer has spread when diagnosed. In general the earlier the stage, the better chance of survival. For lung and bronchus cancer, the five year survival rate is 15%. If the cancer is discovered at a local stage, the survival rate is 49%, but only 22% when discovered at a regional stage and 3% when discovered at a distant stage. During 1999-2000, 69% of the lung cancers were diagnosed at a late stage (regional and distant) (Figure 37). The percentage diagnosed at a late stage varies among Health Districts, ranging from 54% in South Central (5-1) Health District to 76% in Fulton (3-2) and DeKalb (3-5) Health Districts (Figure 38).

Risk factors
- Tobacco use accounts for 87% of all lung cancer cases
- Exposure to environmental (second-hand) tobacco smoke
- Exposure to certain industrial substances such as arsenic, some organic chemicals, radon, and asbestos, particularly for persons who smoke
- Radiation exposure from occupational, medical, and environmental sources
- Air pollution

Prevention
The best strategy for preventing lung cancer is not to smoke or to stop smoking and to avoid exposure to environmental or second-hand smoke. People who work with potentially cancer-causing chemicals should take appropriate protective measures to avoid harmful exposure.

Early detection
There is no known effective way to routinely screen for lung cancer. Because symptoms often do not appear until the disease is advanced, early detection is difficult.
Prostate Cancer

New cases
Prostate cancer is the most commonly diagnosed cancer among Georgia males, accounting for 29% of all male cancer cases. Yearly, an average of 4,427 new cases of invasive prostate cancer are diagnosed among Georgia males.

The Southwest (8-2), DeKalb (3-5), Fulton (3-2), and North Central (5-2) Health Districts have significantly higher incidence rates than the state rate, while the Northwest (1-1), North Georgia (1-2), North (2), Northeast (10), East Central (6), LaGrange (4-0), and East (9-1), have significantly lower rates (Figure 39).

Stage of disease
Stage of disease refers to the extent to which cancer has spread when diagnosed. In general the earlier the stage, the better the chance of survival. For prostate cancer, the five year survival rate is 97%. If the cancer is discovered at a local stage, the survival rate is 100%, but only 34% when discovered at a distant stage. Prostate cancer usually grows more slowly than most other cancers. As a result, the majority of prostate cancers are diagnosed at an early stage (in situ and localized). During 1999-2000, 78% of prostate cancers were diagnosed at an early stage. The percentage diagnosed at an early stage varies among Health Districts, ranging from 34% in South Central (5-1) Health District to 87% in Clayton (3-3) Health District (Figure 41).

Deaths
Prostate cancer is the second leading cause of cancer death among males. Yearly, an average of 784 Georgia males die of prostate cancer. During the 1980s, prostate cancer mortality rates in Georgia increased at an average annual rate of 2.2% followed by an average decline of 1.5% annually. Mortality rates among black males are twice as high as rates among white males.

The East Central (6), West Central (7), North Central (5-2) and East (9-1) Health Districts have significantly higher mortality rates than the state rate, while the Northwest (1-1), North Georgia (1-2), North (2), and Cobb/Douglas (3-1) Health Districts, have significantly lower rates (Figure 40).

Risk factors
- Increasing age
- Black race
- Family history
- Obesity

Prevention
There is no known way to prevent prostate cancer. However, maintaining a normal body mass index (BMI) through a healthy diet and physical activity reduces the risk for death. Known risk factors such as age, race, and family history cannot be controlled.

Early detection
A blood test for prostate specific antigen (PSA) and digital rectal examination of the prostate gland are two tools commonly used to detect prostate cancer early. Neither the PSA nor the digital rectal examination have been proven to reduce mortality from prostate cancer. Currently, there are no commonly accepted recommendations regarding routine screening for prostate cancer. Men should discuss prostate cancer screening options with their health care professional.

Figure 39. Age-Adjusted Prostate Cancer Incidence Rates by Health Districts, Georgia, 1999-2000

Figure 40. Age-Adjusted Prostate Cancer Mortality Rates by Health Districts, Georgia, 1997-2001

Figure 41. Early Stage at Diagnosis for Prostate Cancer by Health District, Georgia 1999-2000

American Cancer Society Guidelines for Early Detection of Prostate Cancer
At present, national organizations commonly recommend informed decision making about testing for prostate cancer rather than a recommendation that all men be screened. For both men at average risk and high risk, information should be provided about what is known and what is uncertain about the benefits and limitations of early detection and treatment of prostate cancer so that they can make an informed decision about testing.*

*The American Cancer Society also recommends that the PSA test and the digital rectal examination be offered annually, beginning at age 50, to men who have a life expectancy of at least 10 years. Men at high risk (African American men and men with one or more first-degree relatives diagnosed with prostate cancer at an early age) should begin testing at age 45.
New cases
Yearly, an average of 1,034 new cases of malignant melanoma, the most serious form of skin cancer, are diagnosed in Georgia: 577 in males and 457 in females.

Cobb/Douglas (3-1), DeKalb (3-5), and Fulton (3-2) Health Districts have significantly higher incidence rates than the state rate while Northeast (10), East Central (6), Northwest (1-1) and East (9-1) Health Districts have significantly lower rates (Figure 42).

Figure 42. Age-Adjusted Malignant Melanoma Incidence Rates by County, Georgia, 1999-2000

Deaths
Yearly, an average of 178 Georgians die of melanoma: 114 males and 64 females.

Most health districts in Georgia have mortality rates similar to the state average. Clayton (3-3) and South Central (5-1) Health Districts had less than 20 deaths and the melanoma mortality rate was not calculated (Figure 43).

Figure 43. Age-Adjusted Malignant Melanoma Mortality Rates by County, Georgia, 1997-2001

Stage of disease
Stage of disease refers to the extent to which cancer has spread when diagnosed. In general the earlier the stage, the better the chance of survival. For malignant melanoma, the five year survival rate is 89%. If the cancer is discovered at a local stage, the survival rate is 96%, but only 60% when discovered at a regional stage and 14% when discovered at a distant stage.

During 1999-2000, 88% of the malignant melanomas were diagnosed at an early stage (in situ and localized) of disease (Figure 44). The percentage diagnosed at an early stage varies among Health Districts, ranging from 72% in West Central (7) Health District to 96% in Cobb/Douglas (3-1) Health Districts (Figure 45).

Risk factors
- Excessive exposure to ultraviolet radiation from sunlight or tanning lamps
- Fair complexion
- Family history of melanoma
- Personal history of melanoma
- Multiple or atypical nevi (moles)
- Occupational exposure to coal tar, pitch, creosote, arsenic compounds, or radium
- History of severe sunburn occurring early in life

Prevention
Limit or avoid direct exposure to sun during the midday hours (10 a.m. – 4 p.m.). When outdoors, wear a hat that shades the face, neck, and ears, as well as clothing that covers as much as possible of the arms, legs and torso. Wear sunglasses to protect the skin around the eyes. Use sunscreen with a sun protection factor (SPF) of 15 or higher. Avoid tanning beds and sun lamps, which provide an additional source of UV radiation. Severe sunburns in childhood may increase risk of melanoma in later life. Because much exposure to sunlight occurs during childhood or adolescence, protection behaviors should begin early in life. Children should be protected from the sun.
Early detection
Careful inspection of the skin can detect melanoma early so that it can be treated successfully. Recognition of changes in skin growths or the appearance of new growths is the best way to find early skin cancer. Adults should practice regular skin self-examination. Suspicious lesions should be evaluated promptly by a physician. A simple ABCDE rule outlines the warning signals of melanoma:
A - Asymmetry: One half of the mole does not match the other half;
B - Border: The edges of the mole are ragged, notched, or blurred;
C - Color: The pigmentation is not uniform, with variable degrees of tan, brown, or black;
D - Diameter: Greater than 6 millimeters (about 1/2 inch);
E - Enlargement: Any sudden or progressive increase in size of a mole should be of concern.

Sun Exposure in Georgia
According to sun exposure data collected on the 1999 Behavioral Risk Factor Surveillance Survey, 27% of adults in Georgia reported they had a sunburn in the past 12 months. Men (31%) were more likely than women (23%) to have had a sunburn, and the likelihood of sunburn decreased significantly with age (Figure 46).

American Cancer Society Guidelines for Early Detection of Melanoma
Ages 40 years and older: A skin examination by a healthcare professional every year and monthly self-examination.
Ages 20-39 years: A skin examination by a healthcare professional every three years and monthly self-examination.

Tobacco use
Smoking is a major preventable cause of death in our society. Tobacco use accounts for at least 30% of all cancer deaths and 87% of all lung cancer cases, and is also associated with cancers of the nasal cavities, mouth, pharynx, larynx, esophagus, pancreas, uterine cervix, kidney, bladder, stomach and liver, and with myeloid leukemia. In 2001, tobacco use was responsible for 18% (one in six) deaths in Georgia, and Georgians who die as a result of their smoking habit lose an average of 16.4 years of life.

In 1986, the US Surgeon General concluded that the use of spit tobacco is not a safe substitute for smoking cigarettes. Spit tobacco causes cancer and a number of non-cancerous oral conditions, and can lead to nicotine addiction and dependence.2 Cigars contain most of the same carcinogens and cancer-producing chemicals found in cigarettes. Regular cigar smoking causes cancer of the lung, oral cavity, larynx and esophagus, and may also be related to cancer of the pancreas.3

Tobacco use among Georgia adults
• The prevalence of smoking declined by about 20% between 1984 and 1993, from 31% to 24%; however, the prevalence has been relatively unchanged since 1993 (Figure 47).
• According to the 2001 Behavioral Risk Factor Surveillance System, an estimated 24% of Georgia adults smoke. 26% of males and 22% of females are current smokers. One in four white adults (25%) and one in five black adults (21%) smoke cigarettes. Smoking rates vary by age, with young adults aged 18-24 years the most likely to smoke cigarettes (30%) and adults 65 and older the least likely (12%) (Figure 48).
• Among the 19 public health districts in Georgia, the prevalence of cigarette smoking ranged from 17% in the Cobb/Douglas Health District (3-1) to 32% in the Southeast Health District (9-2) (Figure 49).

Figure 46. Percentage of Adults Reporting a Sunburn Within the Past 12 Months, by Age Group, Georgia, 1999.

Figure 47. Current Cigarette Use by Year, Adults 18+ Years of Age, Georgia, 1984-2001.
Many smokers want to stop. According to the 2001 Behavioral Risk Factor Surveillance System, 60% of Georgia males and 59% of Georgia females who were current smokers reported that they had tried to quit smoking for at least one day during the past year. There are many benefits to stopping smoking. People who quit smoking, regardless of age, live longer than people who continue to smoke. Quitting smoking decreases the risk of developing many cancers and other major diseases, including chronic obstructive pulmonary disease (COPD) and cardiovascular diseases.\(^1\)

**Tobacco use among Georgia youth**

According to the 2001 Georgia Youth Tobacco Survey, 15% of middle school students and 32% of high school students reported using some form of tobacco:
- 9% of middle school and 24% of high school students were current cigarette smokers
- 5% of middle school and 15% of high school students smoked cigars
- 3% of middle school and 6% of high school students smoked bidis*\(^*\)
- 5% of middle school and 10% of high school students used spit tobacco

Among males, 11% of middle school students and 27% of high school students reported current cigarette smoking. Among females, 7% of middle school students and 20% of high school students reported current cigarette smoking. White high school students (31%) were three times as likely and Hispanic high school students (21%) were twice as likely as black high school students (10%) to smoke cigarettes. The prevalence of cigarette smoking increased at higher grades (Figure 50).

In nine of the public health districts in Georgia, current cigarette smoking among middle school students ranged from 4% in Fulton (3-2) to 13% in Northwest District (1-1) and LaGrange (4) Health Districts. In six districts, smoking among high school students ranged from 21% in the East Central District (6) to 28% in the Southwest District (8-2) (Figure 51).

The percentage of Georgia high school students who were current cigarette smokers in 2001 (24%) is the same as the percentage in 1993. This is very similar to the prevalence of and trend in smoking among adults.

*bidis (pronounced “bee-dees” are small, thin hand-rolled cigarettes imported to the U.S. primarily from India and other Southeast Asian countries.
Nutrition, physical activity, and obesity

Existing scientific evidence suggests that about one-third of the cancer deaths that occur in the US each year are due to dietary factors. The introduction of healthful diet and exercise practices at any time from childhood to old age can promote health and reduce cancer risk. Many dietary factors can affect cancer risk, i.e., type of food, food preparation methods, portion sizes, food variety, and overall caloric balance. Cancer risk can be reduced by an overall dietary pattern that includes a high proportion of plant foods (fruits, vegetables, grains and beans), limited amounts of meat, dairy, and other high-fat foods, and a balance of caloric intake and physical activity.

The recommendations of the American Cancer Society Advisory Committee on Diet, Nutrition, and Cancer Prevention (see text box) are consistent in principle with the 1992 US Department of Agriculture (USDA) Food Guide Pyramid, the 1995 Dietary Guidelines for Americans, and dietary recommendations of other agencies. Although no diet can guarantee full protection against any disease, these recommendations offer the best nutritional information currently available to help Americans reduce their risk for cancer.

Nutrition in Georgia

• According to the Behavioral Risk Factor Surveillance System (2000), only 22% of Georgia adults were eating the recommended 5 or more servings of fruits and vegetables per day: 41% reported eating 3-4 servings per day, 34% ate 1-2 servings per day, and 3% reported eating less than 1 serving per day (Figure 52).

Physical activity

Physical activity can help protect against some cancers, either by balancing caloric intake with energy expenditure or by some other unknown mechanisms. Moderate physical activity may increase caloric needs and encourage consumption of healthful foods while maintaining a recommended body weight. The physical activity recommendations of the American Cancer Society Advisory Committee on Diet, Nutrition, and Cancer Prevention (see text box below) are consistent in principle with the recommendations of the Centers for Disease Control and Prevention, the American College of Sports Medicine, a National Institutes of Health Consensus Conference, and the US Surgeon General.

Physical activity in Georgia

• According to the 2001 Behavioral Risk Factor Surveillance System, 27% of Georgia adults reported no leisure time physical activity. Women (31%) were more likely than men (24%) to report no leisure time physical activity. Blacks (35%) were more likely than whites (24%) to report no leisure time physical activity.

• Considering all types of physical activity, including walking for transportation and housework, only 40% of adults were regularly active (moderate activity at least 5 days a week for 30 or more minutes or vigorous activity at least 3 days a week for 20 minutes or more) (Figure 53).

American Cancer Society Guidelines

Choose most of the foods you eat from plant sources.

Eat five or more servings of fruits and vegetables each day; eat other foods from plant sources, such as breads, cereals, grain products, rice, pasta, or beans several times each day.

Consumption of fruits and vegetables can reduce the risk for some cancers. The evidence is particularly strong for reducing the risk for colon cancer.

Limit the intake of high-fat foods, particularly from animal sources.

Choose foods low in fat; limit consumption of meats, especially high-fat meats.

High-fat diets have been associated with an increased risk of cancers of the colon and rectum, prostate, and uterine corpus (endometrium).

Limit consumption of alcoholic beverages, if you drink at all.

Alcohol consumption increases the risk for cancers of the mouth, esophagus, pharynx, larynx, and liver. Studies have also noted an association between alcohol consumption and an increased risk for breast cancer. The mechanism is unknown but may be related to alcohol-induced changes in hormones in the blood, or to a carcinogenic effect of alcohol or its metabolites on breast tissue.

American Cancer Society Guidelines

Be physically active: achieve and maintain a healthy weight.

• Be at least moderately active for 30 minutes or more on most days of the week.

• Stay within your healthy weight range.
**Obesity**

An imbalance of caloric intake and output can lead to weight gain and becoming overweight or obese. Obesity increases the risk for chronic disease, including heart disease, type II diabetes, and cancers such as breast, colon, endometrium, esophagus, gallbladder, liver, prostate, ovarian, pancreas, and kidney.

**Obesity among Georgia adults**

A common measure of healthy weight for adults is body mass index (BMI). Calculated as the ratio of weight (in kilograms) to height squared (in meters), BMI is an indicator of total body fat. For adults 20 years of age and older, a BMI of 18.0-24.9 is considered normal, while adults with a BMI of 25.0-29.9 are considered overweight. Obesity is defined as a BMI of 30.0 or more.

- According to the 2001 Georgia Behavioral Risk Factor Surveillance System, 65% of men and 54% of women are overweight or obese based on self-reported height and weight. Among adults, 68% of blacks and 57% of whites are overweight or obese. For adults 20 years of age and older, a BMI of 18.0-24.9 is considered normal, while adults with a BMI of 25.0-29.9 are considered overweight. Obesity is defined as a BMI of 30.0 or more.

- From 1991 through 2001, the prevalence of obese adults in Georgia more than doubled from 10% to 23%, while the percentage of overweight adults remained fairly stable at around 40% (Figure 55).

- In four of the 19 public health districts in Georgia, more than two-thirds of the adult population is overweight or obese. The prevalence of overweight and obese adults ranges from 51% in the Fulton Health District (3-2) to 68% in the Southwest Health District (8-2) (Figure 56).

- According to the 2001 Youth Tobacco Survey, 37% of middle school males, 22% of middle school females, 33% of high school males, and 21% of high school females are at-risk-for-overweight or overweight. The percent of white females who are overweight or at-risk-for-overweight is about half that of other race/ethnic and sex groups (Figure 57).

**Obesity among youth in Georgia**

Defining obesity among children and adolescents is difficult since BMI is age dependent, and height and weight change as a child develops. Growth charts show the distribution of weight-for-height across a range of ages for a reference population and provide a useful means to define childhood overweight based on percentile cut-offs. Children with a BMI-for-age greater than the 85th percentile but less than the 95th percentile are classified as at risk for overweight. Overweight children have a BMI-for-age at or above the 95th percentile. The term “obese” is not used in this classification system.

According to the 2001 Youth Tobacco Survey, 37% of middle school males, 22% of middle school females, 33% of high school males, and 21% of high school females are at-risk-for-overweight or overweight. The percent of white females who are overweight or at-risk-for-overweight is about half that of other race/ethnic and sex groups (Figure 57).
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.

**Confidence interval:** A range of probable values for a parameter estimate. A 95% confidence interval is one that will contain the true prevalence in 95 out of 100 samples surveyed.

**Prevalence:** The number of people with a disease or risk factor out of the total number of persons in a population. Often expressed as a percent.

**Risk factor:** A biologic, behavioral, or physical finding that is consistently associated with increased probability of a disease or complications from the disease.

**Data Sources:** The number of deaths for the state of Georgia were obtained from the Georgia Department of Human Resources, Division of Public Health, Georgia Comprehensive Cancer Registry. For Table 1, the ICD-02 codes used for disease categories were 1) breast: C500-C509; 2) colon & rectum: C180-C209; 260, C299; 3) lung & bronchus: C340-C349; 4) prostate: C619; 5) uterine cervix: C530-C539.

**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 the period 1997 through 2001. Incidence rates were calculated per 100,000 population and age-adjusted by the direct method to the 2000 U.S. standard population. Rates were calculated for 1999-2000 as these are the years in which Cancer Registry data is greater than 95% complete. The estimated number of cases for 2004 was calculated by multiplying the age-specific state population estimates for 2004. These revisions affected cancer rate calculations for 1999-2000. In general, differences between projected populations and the actual census counts had little impact on the state or regions but these revisions impact rates in small areas such as counties and metropolitan areas. Specifically, in Georgia, bridged estimates lowered the cancer rates among blacks in some metropolitan Atlanta counties below the rates originally calculated by national organizations using earlier population estimates.

For Tables 1, Figures 1, 3, 11-17, 25, 30, 36 and 40, the ICD-9 codes used to define cancer sites were 1) all cancers: 140.0-208.9; 2) breast: 174.0-174.9; 3) colon & rectum: 153.0-153.9, 154.0-154.1, 159.0-4) leukemia: 202.4, 203.1, 204.0-207.2, 207.8, 208.0-208.9; 5) lung & bronchus: 162.2-162.6; 6) pancreas: 157.0-157.9; 7) prostate: 185; and 8) uterine cervix: 180.0-180.9. For Tables 1, Figures 1, 3, 11-17, 25, 30, 36 and 40, the ICD-10 codes used to define cancer sites were 1) all cancers: C00-C97; 2) breast: C500-C509; 3) colorectal: C180-C209; C299; 4) leukemia: C901. C910-C959; 5) lung & bronchus: C340-C349; 6) prostate: C619; and 8) uterine cervix: C530-C539.

**Methods:** 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 the period 1997 through 2001. Incidence rates were calculated per 100,000 population and age-adjusted by the direct method to the 2000 U.S. standard population. Rates were calculated for 1999-2000 as these are the years in which Cancer Registry data is greater than 95% complete. The estimated number of cases for 2004 was calculated by multiplying the age-specific state population estimates for 2004. These revisions affected cancer rate calculations for 1999-2000. In general, differences between projected populations and the actual census counts had little impact on the state or regions but these revisions impact rates in small areas such as counties and metropolitan areas. Specifically, in Georgia, bridged estimates lowered the cancer rates among blacks in some metropolitan Atlanta counties below the rates originally calculated by national organizations using earlier population estimates.

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**Data Sources:** The number of deaths for the state of Georgia were obtained from the Georgia Department of Human Resources, Division of Public Health, Vital Records Branch. Deaths and death rates for the United States were obtained from the National Center for Health Statistics, Centers for Disease Control and Prevention (CDC). Mortality data was coded using ICD-9 codes (1997-1998) and ICD-10 codes (1999-2001). For Figure 1, the ICD-9 codes for the disease categories were 1) cancer: 140-208; 2) heart disease: 390-398, 402, 404-429; 3) chronic obstructive pulmonary disease: 490-496; 4) diabetes: 250; 5) pneumonia and influenza: 480-487; 6) stroke: 430-438; 7) unintentional injuries: E800-E949; and 8) other: all disease codes not already categorized. For Tables 1, Figures 1, 3, 11-17, 25, 30, 36 and 40, the ICD-9 codes used for disease categories were 1) breast: C500-C509; 2) colon & rectum: C180-C189, C260, C199, C209; 3) lung & bronchus: C340-C349; 4) prostate: C619; and 5) uterine cervix: C530-C539. Population projections for 2004 were obtained from the Office of Planning and Budgeting for the state of Georgia. US standard population for 1997-2001 were obtained from the US Bureau of the Census. Risk factor and screening behavior data were obtained from the Behavioral Risk Factor Surveillance System, a state-based surveillance system administered by the Georgia Department of Human Resources, Division of Public Health, in collaboration with the CDC. The objective of the Behavioral Risk Factor Surveillance System is to collect uniform, state-specific data on preventive health practices and risk behaviors that are linked to chronic diseases, injuries and preventable infectious diseases in the adult population. Limitations of Behavioral Risk Factor Surveillance System data include bias that may result from self-reporting of behaviors and sampling error as a result of surveying a sample rather than taking a complete population enumeration.

These data also do not include Georgians without a telephone in the household.

Data on youth tobacco use were obtained from the Georgia Youth Tobacco Survey (GYTS). The GYTS is a random sample of students in public schools grades 6-8 and grades 9-12. The purpose of this survey is to collect information on cigarette, smokeless tobacco, and cigar use; knowledge and attitudes; media and advertising; minors access; school curriculum; environmental tobacco smoke; and cessation. The survey was jointly developed by the Division of Public Health’s Tobacco Prevention Program and the CDC.
References


Georgia Public Health Districts

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<tr>
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<td>District 1-1, Northwest (Rome)</td>
<td>Bartow, Catoosa, Chattooga, Dade, Floyd, Gordon, Haralson, Paulding, Polk, Walker</td>
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<td>District 1-2, North Georgia (Dalton)</td>
<td>Cherokee, Fannin, Gilmer, Murray, Pickens, Whitfield</td>
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Statistical Appendix

Table 1: Number of Incident Cancer Cases and Age-Adjusted Incidence Rates, Selected Sites, by County and Sex, Georgia, 1999-2000

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Table 1. Number of Incident Cancer Cases and Age-Adjusted Incidence Rates, Selected Sites, by County and Sex, Georgia, 1999-2000

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*Average annual rate per 100,000, age-adjusted to the 2000 U.S. standard population. **Rate not calculated for fewer than 20 cases. ***Data not shown for confidentiality reasons.
### Table 2: Number of Cancer Deaths and Age-Adjusted Mortality Rates, Selected Sites, by County and Sex, Georgia, 1997-2001

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*Average annual rate per 100,000, age-adjusted to the 2000 U.S. standard population. **Rate not calculated for fewer than 20 cases. ***Data not shown for confidentiality reason.
Table 2. Number of Cancer Deaths and Age-Adjusted Mortality Rates, by County and Sex, Georgia, 1997-2001

<table>
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<tr>
<th>County</th>
<th>Deaths Total</th>
<th>Male Rate</th>
<th>Female Rate</th>
<th>Deaths Total</th>
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<th>Female Rate</th>
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<th>Female Rate</th>
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<td>124.5</td>
<td>35357</td>
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<td>190.3</td>
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</tbody>
</table>

*Average annual rate per 100,000, age-adjusted to the 2000 U.S. standard population.  **Rate not calculated for fewer than 20 cases.  ***Data not shown for confidentiality reasons.
Mission Statement for Georgia
Our mission is to promote and protect the health of people in Georgia wherever they live, work, and play. We unite with individuals, families, and communities to improve their health and enhance their quality of life.

Mission Statement for American Cancer Society
The American Cancer Society is the nationwide community-based voluntary health organization dedicated to eliminating cancer as a major health problem by preventing cancer, saving lives and diminishing suffering from cancer, through research, education, advocacy, and service.

Mission Statement for Georgia Cancer Coalition
The mission of the Georgia Cancer Coalition is to reduce the number of cancer deaths in the state. In so doing, Georgia intends to become a national leader in cancer control by accelerating prevention, early detection, treatment and research.