Cancer Incidence and Mortality

Cancer is a vital health issue in Texas. Thousands of Texas residents are affected by cancer each year, and it is the second-leading cause of death in the state and the nation, accounting for one of every four deaths. More than 1.4 million Americans are expected to be diagnosed with cancer and more than 500,000 are expected to die from cancer-related causes in 2007. In Texas, more than 95,000 residents are expected to be diagnosed with cancer and more than 37,000 cancer-related deaths are expected in 2007.

Cancer begins when certain cells in the body change and start to grow abnormally and uncontrollably. Cancer cells can also invade other organs and tissues and be spread by the bloodstream and lymphatic system in a process called metastasis. This uncontrolled growth and spread of cancer can result in serious health problems and death. Currently, doctors cannot determine what causes cancer in an individual person, but there are several risk factors that may play a role in cancer development, including aging, tobacco, alcohol consumption, sunlight, ionizing radiation, certain viruses and bacteria, poor nutrition, lack of physical activity, being overweight, and certain hormones and chemicals. Many of these risk factors can be avoided, thus lowering a person’s risk of developing cancer. Other risk factors cannot be avoided, but many cancers can be cured if detected and treated early. Incidence and mortality rates for each cancer are presented as age-adjusted rates or age-specific rates.

Breast Cancer

Breast cancer usually develops in cells that line the ducts that carry milk to the nipples (ductal cancer) or in cells of the glands which make milk (lobular cancer). Ductal cancer is more common than lobular cancer, and, although more rare, cancer also can occur in other tissues of the breast. Breast cancer is the most common cancer diagnosis in Texas and U.S. women. It is estimated that, in 2007, approximately 15,122 Texas women will be diagnosed with invasive breast cancer and 2,843 women will die of the disease. Breast cancer occurs most frequently in women, but men can also develop breast cancer. Hispanic women have a lower risk of developing breast cancer than non-Hispanic women, and white women are at greater risk of breast cancer than African-American women.

Key Point: South Texas women had a lower breast cancer incidence rate than the rest of Texas and the nation. However, the region’s Hispanic women had a higher incidence of breast cancer than Hispanics in the rest of Texas.
Increasing age is the most important risk factor for breast cancer.\textsuperscript{1,6} Other risk factors include a personal or family history of breast cancer, genetic mutations in the BRCA1 or BRCA2 genes, certain breast changes such as atypical hyperplasia, high breast tissue density, high dose radiation to the chest, and certain reproductive factors such as never having children, having a first child after age 30, or having menstrual periods start early or end late in life. Modifiable risk factors for breast cancer include lack of physical activity, alcohol use, being overweight after menopause, and oral contraceptive use.\textsuperscript{1,7} Screening tests for breast cancer include the breast self-exam, clinical breast exam, and screening mammography.\textsuperscript{7}

Breast Cancer in South Texas

Overall, women in South Texas had a lower average annual age-adjusted incidence of breast cancer (104.1 cases of breast cancer per 100,000 women) than women in the rest of Texas (120.3/100,000) or nationwide (129.1/100,000). However, Hispanic women in South Texas had a higher incidence of breast cancer (83.5/100,000) compared to Hispanics in the rest of Texas (74.8/100,000), although they did not have a higher breast cancer incidence compared to Hispanic women nationwide (Figure 5.1). Hispanic women overall, including those in South Texas, had a much lower incidence of breast cancer (83.5/100,000) than non-Hispanic white women (129.2/100,000) (Figure 5.1).

\textbf{Figure 5.1.} Age-adjusted incidence of breast cancer in females by location.

Similar age trends for breast cancer incidence were seen for both Hispanic and non-Hispanic white women in South Texas. Similar to what was observed nationwide, the risk
of breast cancer in South Texas increased with age. Among women ages 30 and older, the incidence of breast cancer in non-Hispanic whites was higher than in Hispanics (Figure 5.2).

**Figure 5.2.** Incidence of breast cancer in South Texas females by age group and race/ethnicity, 2000-2004.
Source: Texas Cancer Registry, Cancer Epidemiology and Surveillance Branch, Texas Department of State Health Services

In 2000-2004, a higher average annual age-adjusted incidence of breast cancer was seen in South Texas metropolitan counties (105.7/100,000) than in non-metropolitan counties (94.7/100,000). Overall, Bexar County had a higher incidence of breast cancer (119.9/100,000) than South Texas as a whole (104.1/100,000). Webb County and the Lower Rio Grande Valley region had lower breast cancer incidence compared to South Texas (Figure 5.3).
The overall breast cancer mortality rate among females in South Texas was 22/100,000. Breast cancer mortality rate patterns in South Texas were similar to incidence patterns.

References


Cervical Cancer

Cervical cancer typically begins in the lining of the cervix, which is the lower section of the uterus that connects the upper section of the uterus to the vagina. There are two main types of cervical cancer. By far, the most common type is squamous cell carcinoma, which develops from the cells that line the outer surface of the cervix near the top of the vagina. The other type is adenocarcinoma, which develops from the glandular cells that line the cervix. There are usually no symptoms of pre-cancerous changes to the cervix. Therefore, regular screening tests such as Pap tests, which can detect abnormal cervical cells before cancer develops, are of great importance.

Although regular screening makes cervical cancer one of the most detectable and preventable cancers, it remains a serious threat to the lives of Texas women. It is estimated that, in 2007, approximately 1,115 Texas women will be diagnosed with invasive cervical cancer and 395 women will die of the disease. In the U.S., Hispanic women are at greater risk of developing cervical cancer than non-Hispanic women, and African-American women are at greater risk of cervical cancer than are white women. Women over the age of 40 are at higher risk of cervical cancer than younger women.

Certain human papillomaviruses (HPVs) are the most important risk factor for cervical cancer, and early changes in cervical cells caused by HPV infections can be detected by...
the Pap test. An HPV vaccine is currently available for girls and women 9-26 years of age that may help protect against as much as 70% of cervical cancer. Women with HIV or other conditions that result in a weakened immune system are also at higher risk of cervical cancer. Other modifiable risk factors include smoking, sexual history, and long-term use of oral contraceptives.

Cervical Cancer in South Texas

Overall, cervical cancer incidence was slightly higher among women in South Texas (11.5 cases of cervical cancer per 100,000 women) than in the rest of Texas (10.1/100,000) in 2000-2004 (Figure 5.4). The overall incidence of cervical cancer in both South Texas and rest of Texas were higher than the nationwide incidence of 8.8/100,000. In South Texas, Hispanic women had a higher incidence of cervical cancer than non-Hispanic whites (Figure 5.4). This ethnic difference in incidence was not as large in South Texas as in the rest of Texas, however.

Age-specific trends in cervical cancer incidence differed between Hispanics and non-Hispanic whites. Incidence peaked in non-Hispanic white women at ages 30-44, but continued to rise with age in Hispanic women (Figure 5.5). This observation is of particular concern for Hispanics because research suggests that women diagnosed with cervical cancer at ages 50 or older are more likely than younger women to have an advanced stage of the disease. The incidence of cervical cancer in Hispanics was significantly higher than in non-Hispanic whites for ages 50 and older (Figure 5.5).

Figure 5.4. Age-adjusted incidence of cervical cancer in females by location.

Age-specific trends in cervical cancer incidence differed between Hispanics and non-Hispanic whites. Incidence peaked in non-Hispanic white women at ages 30-44, but continued to rise with age in Hispanic women (Figure 5.5). This observation is of particular concern for Hispanics because research suggests that women diagnosed with cervical cancer at ages 50 or older are more likely than younger women to have an advanced stage of the disease. The incidence of cervical cancer in Hispanics was significantly higher than in non-Hispanic whites for ages 50 and older (Figure 5.5).
The overall cervical cancer mortality rate among females in South Texas was 3.8/100,000. Cervical cancer mortality rate patterns were similar to those for cervical cancer incidence.

References


Colorectal Cancer

Colorectal cancer begins in the colon (the first 4-5 feet of the large intestine) or the rectum (the last few inches of the large intestine before the anus). Colorectal cancer is generally slow to develop and usually begins in a non-cancerous polyp, which can be removed during a colonoscopy, thus preventing invasive colorectal cancer. The most common type of colorectal cancer is adenocarcinoma, which begins in glandular tissue in the internal lining of the colon or rectum. Screening tests include the fecal occult blood test, sigmoidoscopy, colonoscopy, double contrast barium enema, and digital rectal exams.

Colorectal cancer is the third-most common cancer diagnosis in both men and women in Texas and the U.S. It is also the third-most common cause of cancer death in both genders. It is estimated that, in 2007, approximately 9,844 Texas residents will be diagnosed with colorectal cancer and 3,826 will die of the disease. In the U.S., men have a higher risk of colorectal cancer than women. Hispanics are at lower risk of developing colorectal cancer than non-Hispanics, and African-Americans are at greater risk than whites. The incidence of colorectal cancer increases with age. In the U.S., more than 90% of all colorectal cancers are diagnosed in persons ages 50 or older.

Risk factors for colorectal cancer include having colorectal polyps, a personal or family history of colorectal cancer, or certain diseases that cause inflammation of the large intestine, such as Crohn’s disease or ulcerative colitis. Modifiable risk factors include obesity, lack of physical activity, diet (a high intake of red or processed meat and a low intake of fruits and vegetables), smoking, and heavy alcohol consumption.

Colorectal Cancer in South Texas

Colorectal cancer incidence was lower in South Texas (44.1 cases of colon cancer per 100,000 population) than in the rest of Texas (50.4/100,000) or nationwide (52.4/100,000). However, the incidence of colorectal cancer among Hispanics in South Texas was slightly higher than the incidence among Hispanics in the rest of Texas.
Non-Hispanic whites had a higher incidence of colorectal cancer (46.8/100,000) than Hispanics (40.4/100,000) in South Texas in 2000-2004 (Figure 5.6).

**Figure 5.6.** Age-adjusted incidence of colorectal cancer by location.

Sex and age patterns of colorectal cancer incidence were the same in South Texas as the nation. In South Texas, males had a much higher incidence of colorectal cancer (55.6/100,000) than females (35.1/100,000), and the risk of colorectal cancer increased with age. Webb County and the Lower Rio Grande Valley region both had lower incidences of colorectal cancer than all of South Texas (Figure 5.7). In these locations, both the Hispanic and non-Hispanic white populations had lower colorectal cancer incidences than their counterparts in South Texas as a whole.
The overall colorectal cancer mortality rate in South Texas was 15.8/100,000. Unlike incidence, the colorectal cancer mortality rates among Hispanics in South Texas and the rest of Texas were very similar, and not much difference in mortality rates was observed between Hispanics and non-Hispanic whites. For all other comparisons, colorectal cancer mortality rate patterns were the same as those for colorectal cancer incidence.

References


Prostate Cancer

Prostate cancer develops in the prostate gland, which is a male reproductive system gland located beneath the bladder, in front of the rectum, and surrounding the urethra. The prostate gland makes some of the fluid in semen. Prostate cancer is generally very slow to grow, and most men will develop prostate cancer if they reach advanced age. Screening tests include the digital rectal exam and the blood test for prostate-specific antigen (PSA test).

Prostate cancer is the most common cancer diagnosis and the second-leading cause of cancer death in men in both Texas and the nation. It is estimated that, in 2007, approximately 15,011 Texas men will be diagnosed with invasive prostate cancer and 2,061 will die of the disease. Hispanic men are at lower risk of developing colorectal cancer than non-Hispanics, and African-American men are at greater risk than whites. The risk of prostate cancer increases with age. Besides age and race/ethnicity, the only other well-known risk factor for prostate cancer is a family history of the disease.

Prostate Cancer Incidence in South Texas

Prostate cancer incidence in South Texas (137.1 cases of prostate cancer per 100,000 men) was lower than in the rest of Texas (150.8/100,000) or nationwide (170.3/100,000). When compared to Hispanic men in the rest of Texas or nationwide, Hispanic men in South Texas had a significantly lower incidence of prostate cancer. However, non-Hispanic whites in South Texas had a slightly higher prostate cancer incidence (153/100,000) when compared to non-Hispanic whites in the rest of Texas (148/100,000), although they still had a lower incidence than among non-Hispanic whites nationwide (166.8/100,000) (Figure 5.8). Non-Hispanic white men had a much higher incidence of prostate cancer than Hispanic men in South Texas (Figure 5.8).
Prostate cancer incidence increased with age for both Hispanic and non-Hispanic white men in South Texas up to ages 70-74, but, at ages 75 and older, declined among non-Hispanic whites and leveled off among Hispanics (Figure 5.9). Non-Hispanic whites had a higher risk of prostate cancer than Hispanics in all age groups except ages 85 and older.

Figure 5.8. Age-adjusted incidence of prostate cancer among males, by location.

Figure 5.9. Incidence of prostate cancer among South Texas males, by age group and race/ethnicity, 2000-2004.
Source: Texas Cancer Registry, Cancer Epidemiology and Surveillance Branch, Texas Department of State Health Services
In South Texas, men living in metropolitan counties had a higher incidence of prostate cancer (138.6/100,000) than those living in non-metropolitan counties (127.8/100,000). Bexar County had a higher incidence of prostate cancer than observed in South Texas among both Hispanic and non-Hispanic white men. Webb County also had a higher, though not a statistically significantly higher, incidence of prostate cancer than South Texas for Hispanics and non-Hispanic whites. The Lower Rio Grande Valley region had a lower incidence of prostate cancer than South Texas as a whole for both Hispanics and non-Hispanic whites (Figure 5.10).

![Figure 5.10.](image)

**Figure 5.10.** Age-adjusted incidence of prostate cancer among South Texas males in selected South Texas locations, by race/ethnicity, 2000-2004.

Source: Texas Cancer Registry, Cancer Epidemiology and Surveillance Branch, Texas Department of State Health Services

The overall prostate cancer mortality rate in South Texas was 23.7 deaths per 100,000 persons. Like incidence, prostate cancer mortality rates were lower in South Texas than in the rest of Texas or nationwide. However, mortality rates among non-Hispanic whites were lower in South Texas than in the rest of Texas, and virtually no difference in prostate cancer mortality rates was seen between Hispanic and non-Hispanic white men in South Texas (Figure 5.11).
The trend in age-specific prostate cancer mortality for South Texas also was different from the trend seen in prostate cancer incidence; mortality rates continued to increase among the oldest age groups (Figure 5.12). Also, unlike prostate cancer incidence, no difference was observed in metropolitan and non-metropolitan counties’ prostate cancer mortality rates.
Figure 5.12. Prostate cancer mortality among South Texas males by age group, 2000-2004. Source: Texas Cancer Registry, Cancer Epidemiology and Surveillance Branch, Texas Department of State Health Services

References


Lung and Bronchus Cancer

Lung and bronchus cancers impact the respiratory system. The bronchi are tubes that connect the trachea (windpipe) with smaller tubes in the lungs called bronchioles.\(^1,2\) Most lung cancers begin in cells that line the bronchi, but also can begin in other parts of the lung such as the trachea, bronchioles, or alveoli (tiny air sacs attached to the bronchioles).\(^2\)

For treatment purposes, lung and bronchus cancers are grouped into small cell cancers and non-small cell cancers, which account for 10-15% and 85-90% of all lung and bronchus cancers, respectively.\(^2,3\) Small cell lung cancer grows more quickly than non-small cell lung cancer and is more likely to metastasize; however, it is less common than non-small cell lung cancer.\(^3\) There are no recommended screening tests for lung and bronchus cancer for asymptomatic people.\(^4\)

Lung and bronchus cancer is the second-most common cancer diagnosis and the leading cause of cancer death among both men and women in the U.S. and Texas.\(^4\) It is estimated that, in 2007, approximately 12,016 Texas men and women will be diagnosed with lung and bronchus cancer and 10,974 will die of the disease.\(^5\) In the U.S., males have a higher risk of lung and bronchus cancer than females.\(^4\) Hispanic men and women are at lower risk of developing lung and bronchus cancer compared to non-Hispanics. African-American men are at greater risk of lung and bronchus cancer than white men, while white women have a higher risk than African-American women.\(^6\) Like most cancers, increasing age is a risk factor for lung and bronchus cancer, but the most important risk factor is cigarette smoking.\(^4\) Other risk factors include exposure to secondhand cigarette smoke, radon, asbestos, certain metals and organic chemicals, air pollution, and a history of tuberculosis.\(^4,7\)

Lung and Bronchus Cancer in South Texas

The incidence of lung and bronchus cancer in South Texas was 51.5 cases per 100,000 persons in 2000-2004. South Texas had a lower incidence of lung and bronchus cancer than the rest of Texas (72/100,000) and nationwide (64.8/100,000). Hispanics in South Texas had a similar incidence of lung and bronchus cancer as Hispanics in the rest of Texas; however, non-Hispanic whites in South Texas had a lower incidence (69/100,000) when compared to non-Hispanic whites in the rest of Texas (78/100,000). As seen nationwide, Hispanics had a lower incidence of lung and bronchus cancer than non-Hispanic whites in South Texas. Non-Hispanic whites in South Texas had twice the risk of lung cancer as Hispanics (Figure 5.13).
The incidence of lung and bronchus cancer is rare until ages 30-44, and then rises until ages 75-79 for Hispanics and ages 80-85 for non-Hispanic whites. Incidence declines among non-Hispanic whites at ages 85 and older, but levels off for Hispanics at ages 75 and older (Figure 5.14). Among those age 40 and older in South Texas, non-Hispanic whites have a statistically significantly higher incidence than Hispanics.
As seen nationwide, South Texas males had a higher incidence of lung and bronchus cancer than females. The incidence of lung and bronchus cancer was nearly two times higher among non-Hispanic white males than non-Hispanic white females, and was nearly three times higher among Hispanic males than Hispanic females (Figure 5.15).

The lung and bronchus cancer mortality rate in South Texas was 40.2 deaths per 100,000 persons. Lung cancer mortality rate patterns were very similar to those for lung cancer incidence.

References


Liver and Intrahepatic Bile Duct Cancer

Liver and intrahepatic bile duct cancer occurs either in the liver, an organ which metabolizes nutrients, makes bile, and detoxifies chemicals, or in the intrahepatic bile duct, a tube within the liver that carries bile to the gallbladder.¹ There are no recommended screening tests for liver and intrahepatic bile duct cancer for asymptomatic people.¹

Liver and intrahepatic bile duct cancer is relatively rare in both Texas and the U.S. It is the 13th most common cancer diagnosis in U.S. men and the 18th in women.² It is estimated that, in 2007, approximately 1,398 Texas residents will be diagnosed with liver and intrahepatic bile duct cancer and 1,353 residents will die of the disease.³ The incidence of liver and intrahepatic bile duct cancer increases with age, and men are twice as likely as women to develop liver cancer.⁴ Hispanic men and women have a much higher risk of developing liver and intrahepatic bile duct cancer than non-Hispanics. Asian and Pacific Islanders have the highest risk of liver and intrahepatic bile duct cancer.² Risk factors for liver and intrahepatic bile duct cancer include:

- Chronic hepatitis B and C infection
- Alcohol use
- Obesity
- Diabetes
- Inherited syndromes like hemochromatosis and Wilson’s disease
- Exposure to certain chemicals or drugs
- Infection with the hepatitis C virus

Key Point: South Texas had a higher incidence of liver cancer than the rest of Texas or nation. South Texas Hispanics had a higher incidence than those in the rest of Texas, and a higher incidence than non-Hispanic whites in South Texas.
cancer include cirrhosis of the liver, chronic liver infections such as hepatitis B and C, and a family history of liver cancer.\textsuperscript{4}

Liver and Intrahepatic Bile Duct Cancer in South Texas

The South Texas incidence of liver and intrahepatic bile duct cancer was 10.2 cases per 100,000 persons in 2000-2004. This incidence was about one-and-a-half times higher than the incidence of liver cancer in the rest of Texas and nationwide (Figure 5.16). In South Texas, the incidence of liver and intrahepatic bile duct cancer among Hispanics was more than twice as high as the incidence among non-Hispanic whites (Figure 5.16).

The incidence of liver and intrahepatic bile duct cancer was nearly three times greater in South Texas males than females (15.5/100,000 vs. 5.8/100,000). As seen nationwide, liver and intrahepatic bile duct cancer incidence in South Texas increased with age. The incidence of liver cancer was very low until ages 45-49. Among older age groups, Hispanics had a higher rate of liver and intrahepatic bile duct cancer than non-Hispanic whites, and this rate differential increased as age increased (Figure 5.17).
In South Texas, the incidence of liver and intrahepatic bile duct cancer was slightly higher in metropolitan counties (10.4/100,000) than in non-metropolitan counties (8.7/100,000). Liver and intrahepatic bile duct cancer incidence in the Lower Rio Grande Valley region (8.8/100,000) was slightly lower than the incidence for South Texas as a whole (10.2/100,000). However, the incidence of liver and intrahepatic bile duct cancer in Webb County (16.3/100,000) was nearly two times higher than the incidence in South Texas (Figure 5.18).
Figure 5.18. Age-adjusted incidence of liver and intrahepatic bile duct cancer in selected South Texas locations, 2000-2004.
Source: Texas Cancer Registry, Cancer Epidemiology and Surveillance Branch, Texas Department of State Health Services

The overall liver and intrahepatic bile duct cancer mortality rate in South Texas was 8.6/100,000. For the most part, patterns of liver cancer mortality rate in South Texas were similar to those for liver cancer incidence. However, unlike liver cancer incidence, not much difference in mortality rates was seen between metropolitan and non-metropolitan counties.

References


Stomach Cancer

Stomach cancer, also called gastric cancer, usually develops in the cells that line the inside of the stomach. There are no recommended screening tests for stomach cancer in asymptomatic people.\(^1\)

Stomach cancer is a relatively rare cancer in both Texas and the U.S. It is the 11\(^{th}\) most common cancer diagnosis in U.S. men and the 16\(^{th}\) most common in women.\(^2\) It is estimated that, in 2007, approximately 1,724 Texas residents will be diagnosed with stomach cancer and 1,020 will die of the disease.\(^3\) The U.S. average annual age-adjusted incidence rate for 1999-2003 was 10.7 cases of stomach cancer per 100,000 men and 5.1 cases per 100,000 women.\(^2\) Hispanic men and women have a higher risk of developing stomach cancer than non-Hispanics, and Asian and Pacific Islanders have a higher risk than whites or African-Americans.\(^2\) The incidence of stomach cancer increases with age. Other risk factors for stomach cancer include *Helicobacter pylori* infection, certain health conditions such as pernicious anemia or chronic gastritis, and a family history of stomach cancer. Modifiable risk factors include smoking and a diet high in smoked, salted, or pickled foods.\(^4\)

Stomach Cancer in South Texas

South Texas had a slightly higher incidence of stomach cancer (8.6 cases of stomach cancer per 100,000 persons) than the rest of Texas (7/100,000). However, this incidence was very similar to the nationwide stomach cancer incidence (8.1/100,000). In South Texas, stomach cancer incidence in Hispanics (11.7/100,000) was more than two times higher than the incidence in non-Hispanic whites (5.3/100,000) (Figure 5.19).
South Texas’ stomach cancer incidence increased with age, as it did nationally. Hispanics had a higher incidence than non-Hispanic whites ages 45 and older (Figure 5.20).

Figure 5.19. Age-adjusted incidence of stomach cancer by location.
Source of Texas incidence: Texas Cancer Registry, Cancer Epidemiology and Surveillance Branch, Texas Department of State Health Services, 2000-2004 data; National: National Cancer Institute, 17-region SEER data, 2000-2003

Figure 5.20. Incidence of stomach cancer in South Texas by age group and race/ethnicity, 2000-2004.
Source: Texas Cancer Registry, Cancer Epidemiology and Surveillance Branch, Texas Department of State Health Services
In South Texas, the incidence of stomach cancer was two times higher in Hispanic males than in Hispanic females, and stomach cancer incidence was two-and-a-half times higher in non-Hispanic white males than in non-Hispanic white females (Figure 5.21).

Figure 5.21. Age-adjusted incidence of stomach cancer in South Texas by sex and race/ethnicity, 2000-2004. Source: Texas Cancer Registry, Cancer Epidemiology and Surveillance Branch, Texas Department of State Health Services

The overall stomach cancer mortality rate in South Texas was 5.8 deaths per 100,000 persons. Stomach cancer mortality rate patterns were very similar to those for stomach cancer incidence.

References


Gallbladder Cancer

Gallbladder cancer usually develops in cells that line the inside of the gallbladder, a small pear-shaped organ that stores bile and is located below the right lobe of the liver.\(^1\) Gallbladder cancer is a relatively rare cancer in both the U.S and Texas. It is estimated that, in the nation in 2007, 9,250 new cases of gallbladder and other biliary cancer are expected, as well as 3,250 deaths.\(^2\) In the U.S., gallbladder cancer is most common in Native American and Hispanic populations. Women are twice as likely as men to develop gallbladder cancer. Incidence of gallbladder cancer increases with age, and three of every four people in the U.S. who are diagnosed with it are older than age 65.\(^1\) Other risk factors for gallbladder cancer include having gallstones and inflammation of the gallbladder, typhoid, a family history of gallbladder cancer, and exposure to certain industrial chemicals. Modifiable risk factors include obesity and a diet high in carbohydrates and low in fiber.\(^1\)

Gallbladder Cancer in South Texas

Overall, South Texas had a higher incidence of gallbladder cancer (1.5 cases of gallbladder cancer per 100,000 persons) than the rest of Texas (1/100,000) and the nation (1.2/100,000). Among Hispanic and non-Hispanics, the nationwide gallbladder cancer incidence for these race/ethnic groups was slightly higher than that of South Texas (Figure 5.22). A greater difference in incidence was seen between Hispanic and non-Hispanic white race/ethnic groups than between residents in South Texas and the rest of Texas. In South Texas, the incidence of gallbladder cancer in Hispanics (2.2/100,000) was more than two times higher than the incidence in non-Hispanic whites (0.9/100,000) (Figure 5.22).
Figure 5.22. Age-adjusted incidence of gallbladder cancer by location.

For the most part, the incidence of gallbladder cancer in South Texas increased with age. The difference in gallbladder cancer incidence between Hispanics and non-Hispanic whites grew with age as well (Figure 5.23), although the incidence difference between Hispanics and non-Hispanic whites was not significant at any of the age groups.
In South Texas, gallbladder cancer incidence was higher in females (2/100,000) than in males (0.9/100,000). Among Hispanics, females had twice the risk of gallbladder cancer as males, and among non-Hispanic whites, females had a risk of gallbladder cancer that was more than two times higher than males (Figure 5.24).

The overall gallbladder cancer mortality rate in South Texas was 0.9 deaths per 100,000 persons. Gallbladder cancer mortality rate patterns mirrored those for gallbladder cancer incidence.

References


Childhood and Adolescent Leukemia

Leukemia is a cancer that develops in bone marrow cells that eventually circulate in the blood or lymphatic system. Leukemia can be classified by the type of cell where the cancer began. For most children with leukemia, cancer begins in immature lymphocytes and is called lymphocytic leukemia. Leukemias that start in other types of immature cells found in the blood, such as red blood cells, myeloid white blood cells, and platelets, are called myeloid, myelocytic, or myelogenous leukemias. Leukemias can also be divided into two additional groups, chronic or acute. Most leukemia in children is acute.¹

Leukemia is the most common cancer in children and adolescents in both the U.S. and Texas.¹ Thirty percent of all childhood cancers are leukemia.² Among children with leukemia, slightly more than 70% will be diagnosed with acute lymphocytic leukemia (ALL). Most of the remaining cases of childhood leukemia will be acute myelogenous leukemia (AML).¹ There are no recommended screening tests for leukemia in asymptomatic children or adolescents.¹,³

Cancer in children and adolescents is relatively rare.³ Over nine years (1995-2003), there were 2,293 cases of leukemia, myeloproliferative or myelodysplastic disease in Texas children ages 0-14 and another 437 cases in adolescents ages 15-19.⁴ Hispanic children and adolescents are at a slightly higher risk of developing leukemia, myeloproliferative or myelodysplastic disease compared to non-Hispanic children and adolescents, while African-American children and adolescents have the lowest risk.⁵ In general, rates of leukemia and myeloproliferative or myelodysplastic disease are slightly higher in boys than girls.¹,⁵ Little is known about the risk factors for childhood and adolescent leukemia. The few known risk factors are prenatal exposure to X-rays and certain genetic conditions, such as Down’s syndrome and Li-Fraumeni syndrome.¹,³

Childhood and Adolescent Leukemia in South Texas

Incidence of childhood and adolescent leukemia in South Texas from 2000-2004 (56.3 cases of leukemia per million children or adolescents) was higher than the incidence observed either in the rest of Texas (47/million) or nationwide (43.2/million). Hispanics and non-Hispanic whites in South Texas had very slightly higher, but not statistically significantly higher, incidences of childhood and adolescent leukemia than their counterparts in the rest of Texas and nationwide (Figure 5.25). In South Texas, the incidence of childhood and adolescent leukemia was slightly higher, but not statistically
significantly higher, for Hispanics (59/million) than for non-Hispanic whites (48.7/million) (Figure 5.25).

Figure 5.25. Age-adjusted incidence of child and adolescent leukemia by location.

The incidence of childhood leukemia (62.8/million) was nearly two times higher than the incidence of adolescent leukemia (37.1/million) in South Texas during 2000-2004. The incidence of leukemia in South Texas decreased with age. Incidence was highest among children 0-4 years old (Figure 5.26).
As observed nationwide, incidence of childhood and adolescent leukemia in South Texas was higher for males (67.2/million) than for females (45.1/million).

The overall child and adolescent leukemia mortality rate in South Texas was 13.8/million. The trend in age-specific child and adolescent leukemia was quite different than the trend in incidence; the highest mortality rate was seen among the adolescent (15-19) age group (Figure 5.27). However, none of the age groups’ mortality rates were statistically significantly different from any of the others. Except for the age trend, all other leukemia mortality rate patterns were similar to those for leukemia incidence.
Figure 5.27. Child and adolescent leukemia mortality in South Texas by age group, 2000-2004. Source: Texas Cancer Registry, Cancer Epidemiology and Surveillance Branch, Texas Department of State Health Services

References


### Summary – Cancer Incidence and Mortality

**Table 5.1.** Summary table of age-adjusted incidence rates in South Texas, the rest of Texas, and nationwide for each of the cancer types analyzed.

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<th>Incidence per 100,000 population*</th>
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<td>Lung and Bronchus Cancer</td>
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</tr>
<tr>
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<td>56.3 per million</td>
</tr>
</tbody>
</table>

*All estimates except child and adolescent leukemia are expressed in terms of incidence per 100,000 population. Child and adolescent leukemia, however, is expressed in terms of incidence per million population.

**Table 5.2.** Summary table of age-adjusted mortality rates in South Texas, the rest of Texas, and nationwide for each of the cancer types analyzed.

<table>
<thead>
<tr>
<th>Cancer Type</th>
<th>Mortality per 100,000 population*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast Cancer</td>
<td>22.0</td>
</tr>
<tr>
<td>Cervical Cancer</td>
<td>3.8</td>
</tr>
<tr>
<td>Colorectal Cancer</td>
<td>15.8</td>
</tr>
<tr>
<td>Prostate Cancer</td>
<td>23.7</td>
</tr>
<tr>
<td>Lung and Bronchus Cancer</td>
<td>40.2</td>
</tr>
<tr>
<td>Liver and Intrahepatic Bile Duct Cancer</td>
<td>8.6</td>
</tr>
<tr>
<td>Stomach Cancer</td>
<td>5.8</td>
</tr>
<tr>
<td>Gallbladder Cancer</td>
<td>0.9</td>
</tr>
<tr>
<td>Childhood and Adolescent Leukemia</td>
<td>13.8 per million</td>
</tr>
</tbody>
</table>

*All estimates except child and adolescent leukemia are expressed in terms of mortality per 100,000 population. Child and adolescent leukemia is expressed in terms of mortality per million population.