Texas Cancer Fast Stats 2018

Prepared by the Texas Cancer Registry

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TEXAS Health and Human Services | Texas Department of State Health Services

dshs.texas.gov

Cancer Survivors in Texas

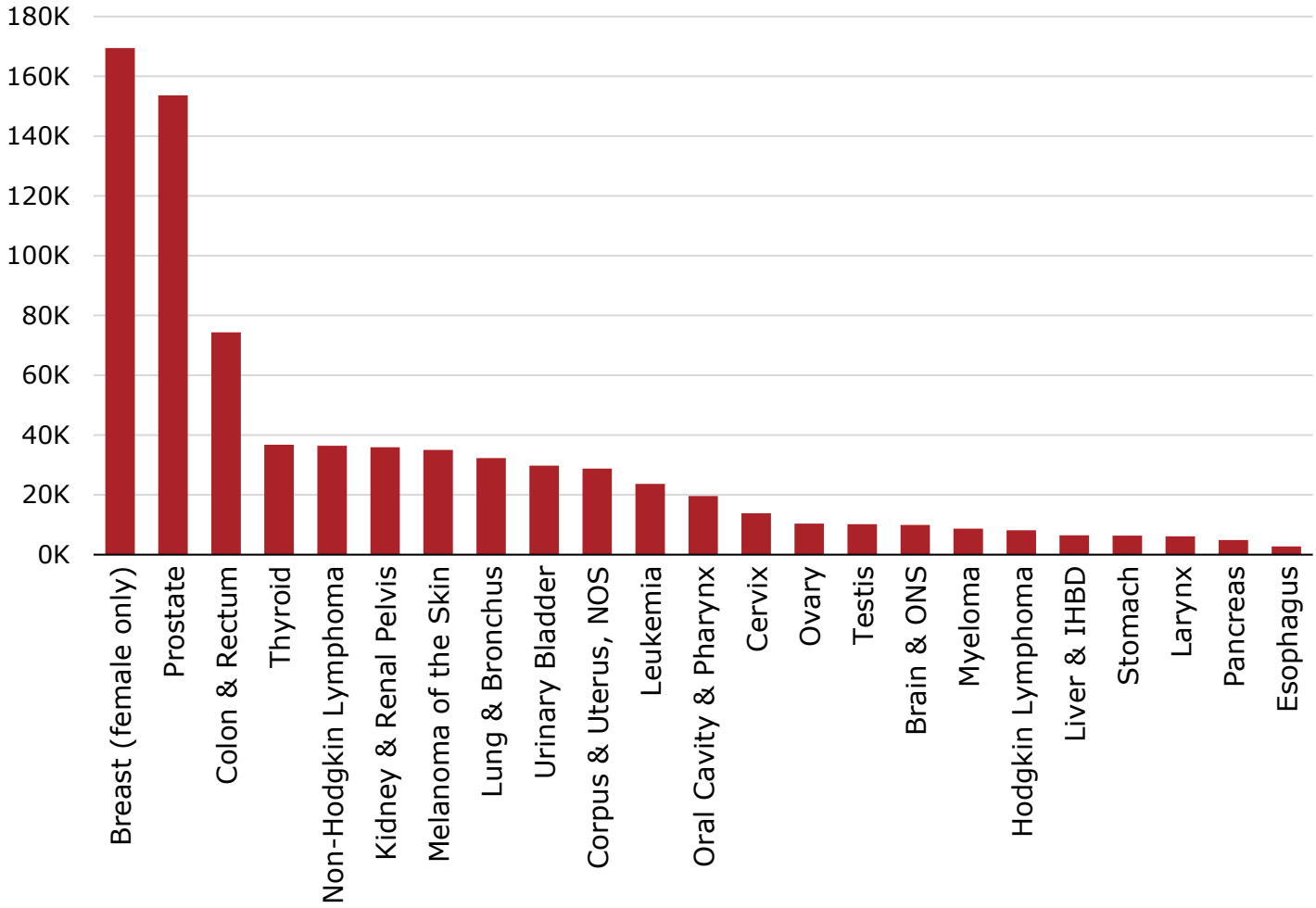
Cancer prevalence estimates the number of people alive on a certain date who have ever been diagnosed with cancer. These estimates help measure the burden of cancer diagnoses on the population and are often used for:

- Planning and allocating resources.
- Evaluating the success of cancer treatment in preventing cancer deaths.
- Quantifying the population of cancer survivors.

As of January 1, 2015 (the most recent date for which data are available), 775,148 Texans diagnosed with cancer in the previous 20 years were alive. Some of these individuals were cancer free, and others were receiving treatment.

The cancer sites with the highest number of survivors in Texas are breast, prostate, colorectal, thyroid, non-Hodgkin's lymphoma, melanoma, and kidney. Those diagnosed with breast and prostate cancers make up about 40 percent of the cancer survivor population.

Texas Cancer Prevalence by Site as of January 1, 2015



NOS= Not Otherwise Specified; ONS = Other Nervous System; IHBD = Intrahepatic Bile Duct

For more information, visit https://www.dshs.texas.gov/tcr/data/prevalence.aspx.

Top 10 New Cancer in Texas, 2011–2015

Incidence measures the number of newly diagnosed cases during a specific time period in a population. The cancer incidence rate is the number of new cancers of a specific site/type occurring in a specified population during a year, usually written as the number of cancers per 100,000 people at risk.

Among men, incidence rates were highest for prostate cancer at 95.4 cases per 100,000. Among women, incidence rates were highest for breast cancer at 111.7 cases per 100,000. Lung cancer incidence rates were second highest among both men and women at 65.5 and 43.5 cases per 100,000, respectively. Colon and rectum cancer was the third most common cancer site for both men and women, at 45.7 and 31.8 cases per 100,000, respectively.

***107,271** new cancer cases were diagnosed among Texans in 2015.*

New Cancers in Men

Rank	*Cancer*	*Rate*	*Cases*
1	Prostate	95.4	11,572
2	Lung & Bronchus	65.5	7,254
3	Colon & Rectum	45.7	5,331
4	Urinary Bladder	26.9	2,830
5	Kidney & Renal Pelvis	24.4	2,935
6	Non-Hodgkin Lymphoma	21.3	2,442
7	Melanoma	17.8	2,035
8	Leukemia	17.5	1,997
9	Liver & IHBD	17.2	2,210
10	Oral Cavity & Pharynx	16.8	2,096

New Cancers in Women

Rank	*Cancer*	*Rate*	*Cases*
1	Breast	111.7	15,257
2	Lung & Bronchus	43.5	5,885
3	Colon & Rectum	31.8	4,339
4	Corpus & Uterus, NOS	21.5	3,019
5	Thyroid	18.3	2,435
6	Non-Hodgkin Lymphoma	14.6	1,972
7	Kidney & Renal Pelvis	13.3	1,830
8	Ovary	11.0	1,493
9	Leukemia	10.7	1,441
10	Pancreas	10.6	1,445

Rates are per 100,000 and age-adjusted to the 2000 U.S. Standard Population. Cases are average annual cases averaged over the total 5-year period, 2011–2015.

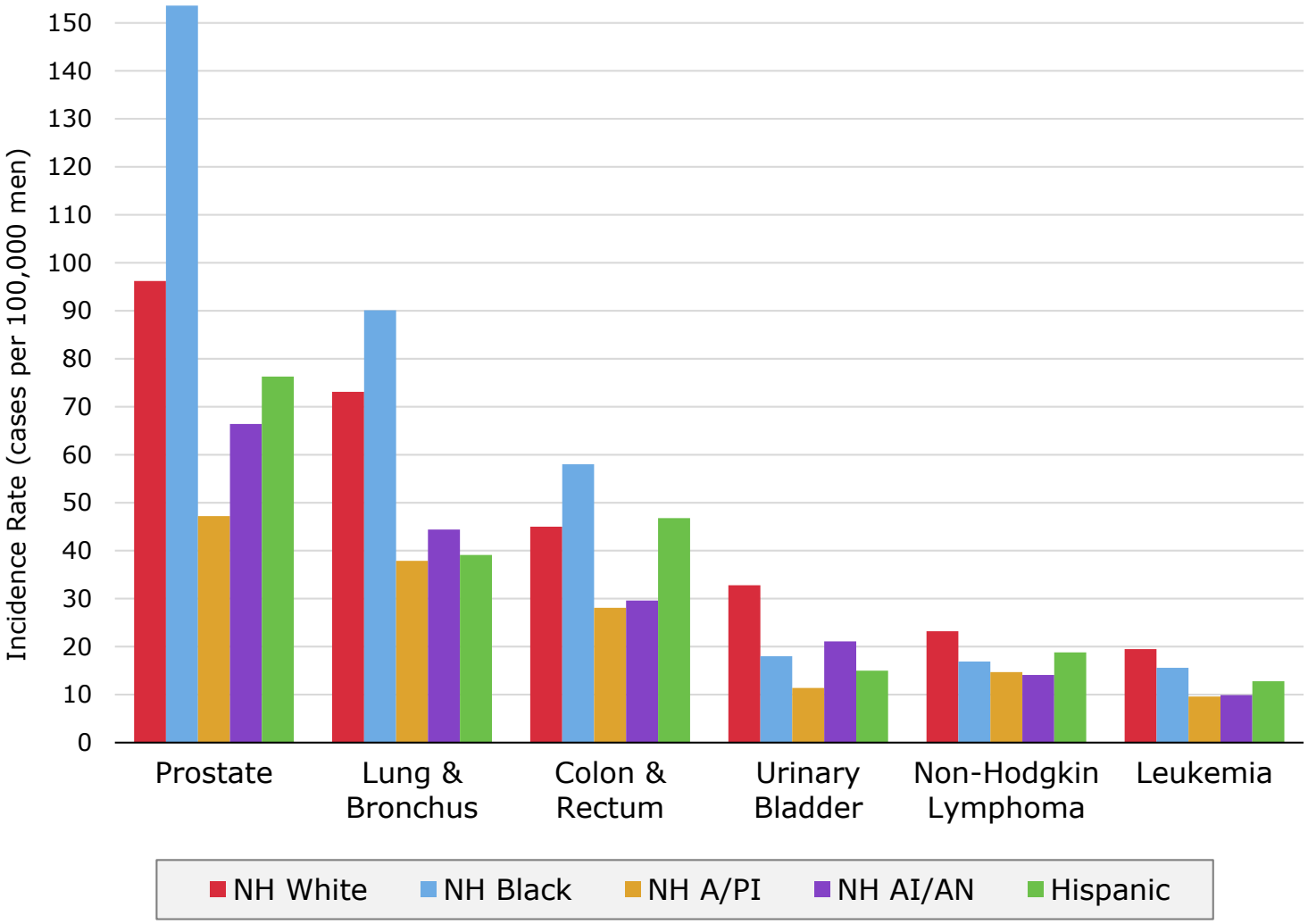
For more information, visit https://www.dshs.texas.gov/tcr/data/incidence-and-mortality.aspx.

New Cancers in Men by Race/Ethnicity

From 2011–2015, prostate cancer was the most common new cancer diagnosed in Texas men for all race/ethnicity groups. Lung and bronchus cancer was the second most common site for new cancer diagnoses in men in all race/ethnicity groups except for Hispanics, whose second most common new cancer cases was colon and rectum.

Non-Hispanic (NH) blacks had the highest incidence rate of all race/ethnicity groups for the three most commonly diagnosed cancers in Texas men: prostate, lung & bronchus, and colon & rectum. NH white men had the highest incidence rate for urinary bladder cancer, non-Hodgkin lymphoma and leukemia.

Age-Adjusted Incidence Rates Among Texas Men, 2011–2015



NH = Non-Hispanic; A/PI = Asian/Pacific Islander; AI/AN = American Indian/Alaska Native

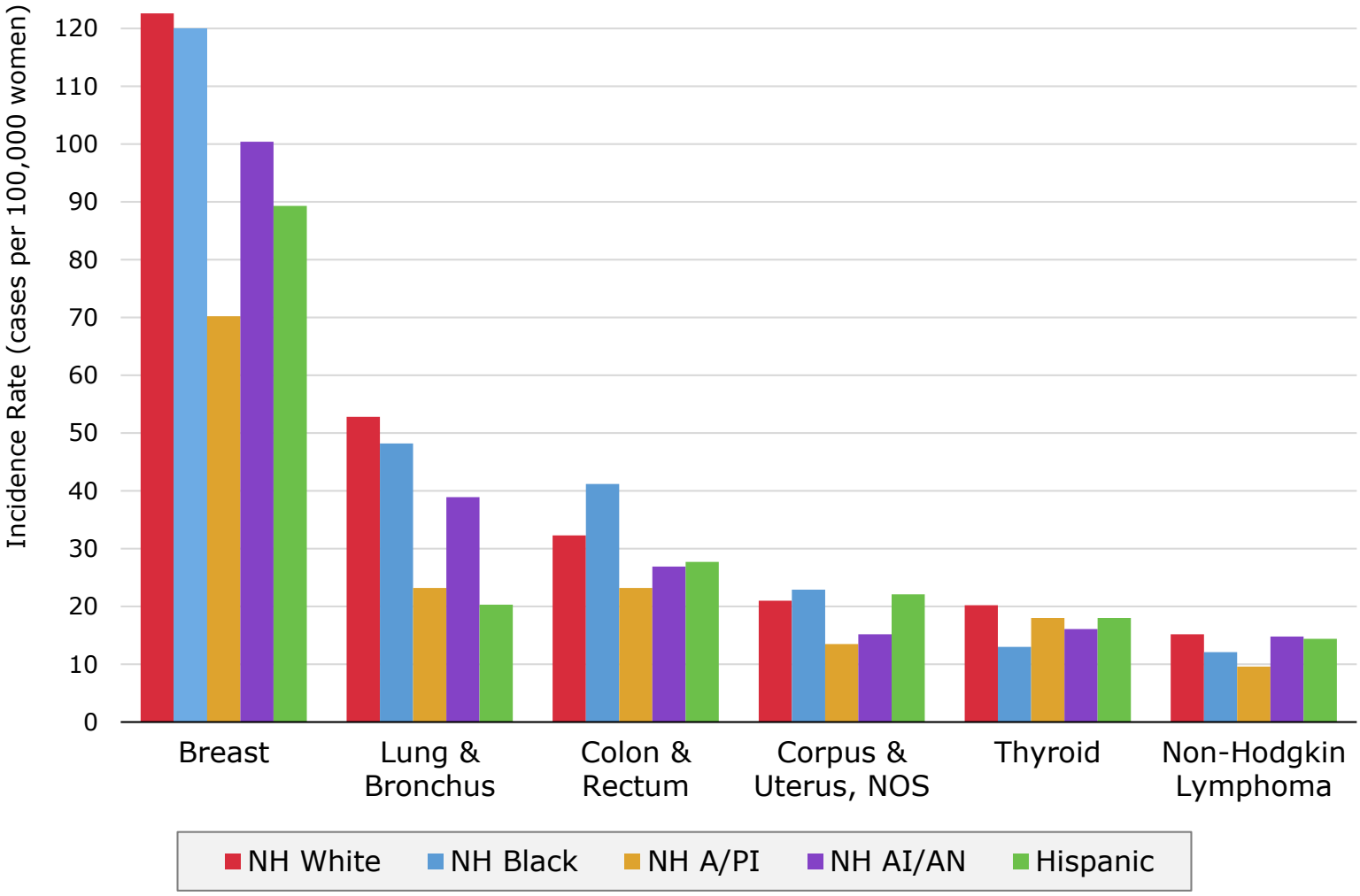
For more information, visit https://www.dshs.texas.gov/tcr/data/incidence-and-mortality.aspx.

New Cancers in Women by Race/Ethnicity

From 2011–2015, breast cancer was the most common new cancer diagnosed in Texas women for all race/ethnicity groups. Lung and bronchus cancer was the second most common site for new cancer diagnoses in women in all race/ethnicity groups except for non-Hispanic (NH) Asian/Pacific Islanders, whose incidence rates for lung and bronchus and colon & rectum cancers were the same.

NH whites had the highest incidence rate of all race/ethnicity groups for breast and lung and bronchus cancers. NH blacks had the highest incidence rate for colon and rectum and corpus and uterus cancers.

Age-Adjusted Incidence Rates Among Texas Women, 2011–2015



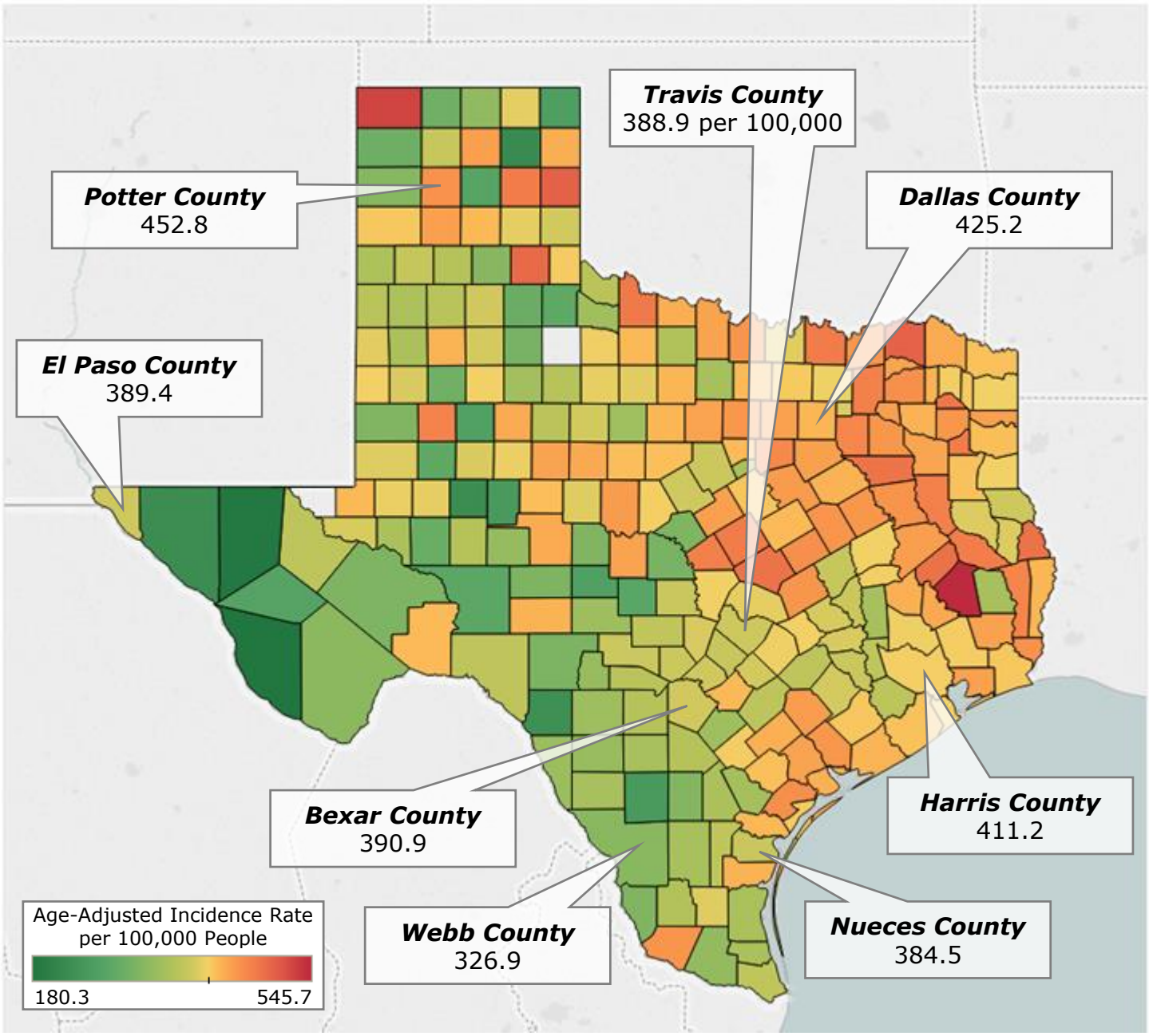
NH = Non-Hispanic; A/PI = Asian/Pacific Islander; AI/AN = American Indian/Alaska Native

For more information, visit https://www.dshs.texas.gov/tcr/data/incidence-and-mortality.aspx.

Cancer Incidence in Texas by County

The Texas statewide cancer incidence rate for 2011–2015 was 410.5 cases per 100,000. Counties with lower incidence rates than the statewide rate are shown in green on the map below; counties with higher rates than the statewide rate are shown in red. The incidence rates by county map below shows that in general, North and East Texas have higher incidence rates than the statewide average, whereas South and West Texas have lower incidence rates than the statewide rate.

Age-Adjusted Cancer Incidence Rates by County, All Sites, 2011–2015



Rates for King and Loving Counties are not shown due to risk populations of less than 1,000.

Top 10 Cancer Deaths in Texas, 2011–2015

Mortality measures the number of deaths during a specific time period in a population. The cancer mortality rate is the number of deaths, with cancer as the underlying cause of death, occurring in a specified population during a year, usually expressed as the number of deaths due to cancer per 100,000 people.

Lung cancer was the leading cause of cancer-related death for both men and women, at 49.7 and 30.5 cases per 100,000, respectively. Overall, Texas has seen mortality rates from cancer drop by 9.2 percent from 2010 to 2015, translating to approximately 10,707 averted deaths. However, liver cancer mortality rates have increased and were 2.5 times higher in men than women.

***39,018** Texans died as a result of cancer in 2015.*

Cancer Deaths in Men

Rank	Cancer	Rate	Deaths
1	Lung & Bronchus	49.7	5,360
2	Prostate	18.1	1,695
3	Colon & Rectum	17.9	1,970
4	Liver & IHBD	11.8	1,448
5	Pancreas	11.6	1,280
6	Leukemia	8.9	913
7	Non-Hodgkin Lymphoma	7.0	727
8	Kidney & Renal Pelvis	6.4	708
9	Urinary Bladder	6.4	618
10	Esophagus	5.8	668

Cancer Deaths in Women

Rank	Cancer	Rate	Deaths
1	Lung & Bronchus	30.5	4,100
2	Breast	20.1	2,760
3	Colon & Rectum	11.5	1,582
4	Pancreas	8.9	1,204
5	Ovary	6.4	878
6	Leukemia	4.9	652
7	Liver & IHBD	4.8	649
8	Non-Hodgkin Lymphoma	4.3	567
9	Corpus & Uterus, NOS	4.0	555
10	Brain & ONS	3.4	469

Rates are per 100,000 and age-adjusted to the 2000 U.S. Standard Population. Deaths are average annual deaths averaged over the total 5-year period, 2011–2015.

For more information, visit https://www.dshs.texas.gov/tcr/data/incidence-and-mortality.aspx.

Childhood and Adolescent Cancer

Each year in Texas, over 1,700 children and adolescents younger than 20 years are diagnosed with cancer. Approximately 200 children and adolescents die of cancer each year, making cancer the most common cause of disease-related mortality for Texans younger than 20.

Among children ages 0–14, incidence rates were highest for leukemia, myeloproliferative diseases, and myelodysplastic diseases at 59.4 cases per 1,000,000. For adolescents ages 15–19, incidence rates were highest for central nervous system and miscellaneous intracranial/ intraspinal neoplasms at 56.4 per 1,000,000.

Age-Adjusted Childhood and Adolescent Cancer Incidence Rates by ICCC Site Group and Age at Diagnosis, Texas, 2006–2015

Major ICCC Site Groups	*Childhood (Age 0–14)*		*Adolescent (Age 15–19)*	
	Rate	*Cases*	*Rate*	*Cases*
I Leukemia, myeloproliferative diseases, and myelodysplastic diseases	59.4	3,451	38.7	724
II Lymphomas and reticuloendothelial neoplasms	21.4	1,222	44.2	827
III CNS and miscellaneous intracranial/intraspinal neoplasms	50.2	2,890	56.4	1,055
IV Neuroblastoma and other peripheral nervous cell tumors	10.4	619	0.6	12
V Retinoblastoma	4.3	258	0.1	1
VI Renal tumors	8.2	481	2.2	42
VII Hepatic tumors	3.0	180	1.0	18
VIII Malignant bone tumors	7.8	441	15.6	291
IX Soft tissue and other extraosseous sarcomas	11.2	647	14.6	273
X Germ cell tumors, trophoblastic tumors, and neoplasms of gonads	6.8	393	34.7	650
XI Other malignant epithelial neoplasms and melanomas	7.9	447	48.7	911
XII Other and unspecified malignant neoplasms	0.9	53	2.5	46
Total Childhood and Adolescent Cancer	**191.7**	**11,082**	**259.3**	**4,850**

Rates are per 1,000,000 children/adolescents and age-adjusted to the 2000 U.S. Standard Population.
ICCC = International Classification of Childhood Cancer; CNS = Central Nervous System

For more information, visit https://www.dshs.texas.gov/tcr/data/childhood.aspx.

Adolescent and Young Adult Cancer

About 7,200 adolescents and young adults (ages 15–39) are diagnosed with cancer each year in Texas; this is about six times the number of cancers diagnosed in children ages 0–14. Approximately 800 adolescents and young adults in Texas die of cancer each year, making cancer the leading cause of disease-related death in this population. Cancers affecting adolescents and young adults differ from those affecting children and older adults. Adolescents and young adults are more likely to be diagnosed with certain cancers, such as Hodgkin lymphoma, melanoma, testicular cancer, thyroid cancer, and sarcomas.

In the 15– to 24–year age group, incidence rates were highest for lymphomas at 4.9 cases per 100,000. In the 25– to 39–year age group, incidence rates were highest for carcinomas at 56.9 cases per 100,000.

Age-Adjusted Adolescent and Young Adult (AYA) Cancer Incidence Rates by SEER AYA Site Group and Age at Diagnosis, Texas, 2011–2015

Major AYA Site Groups	*Age 15–24*		*Age 25–39*	
	Rate	*Cases*	*Rate*	*Cases*
1 Leukemias	3.3	627	3.9	1,082
2 Lymphomas	4.9	955	7.7	2,118
3 CNS and Other Intracranial and Intraspinal Neoplasms (all behaviors)	3.5	673	8.0	2,191
4 Osseous and Chondromatous Neoplasms	1.2	234	0.8	219
5 Soft Tissue Sarcomas	1.3	255	3.1	871
6 Germ Cell and Trophoblastic Neoplasms	4.4	869	6.1	1,762
7 Melanoma and Skin Carcinomas	1.3	256	6.1	1,662
8 Carcinomas	7.4	1,449	56.9	15,114
9 Miscellaneous Specified Neoplasms, NOS	1.2	226	3.5	926
10 Unspecified Malignant Neoplasms	0.7	131	2.8	760
Total AYA Cancer	**29.1**	**5,675**	**98.9**	**26,705**

Rates are per 100,000 adolescents/young adults and age-adjusted to the 2000 U.S. Standard Population.
CNS = Central Nervous System

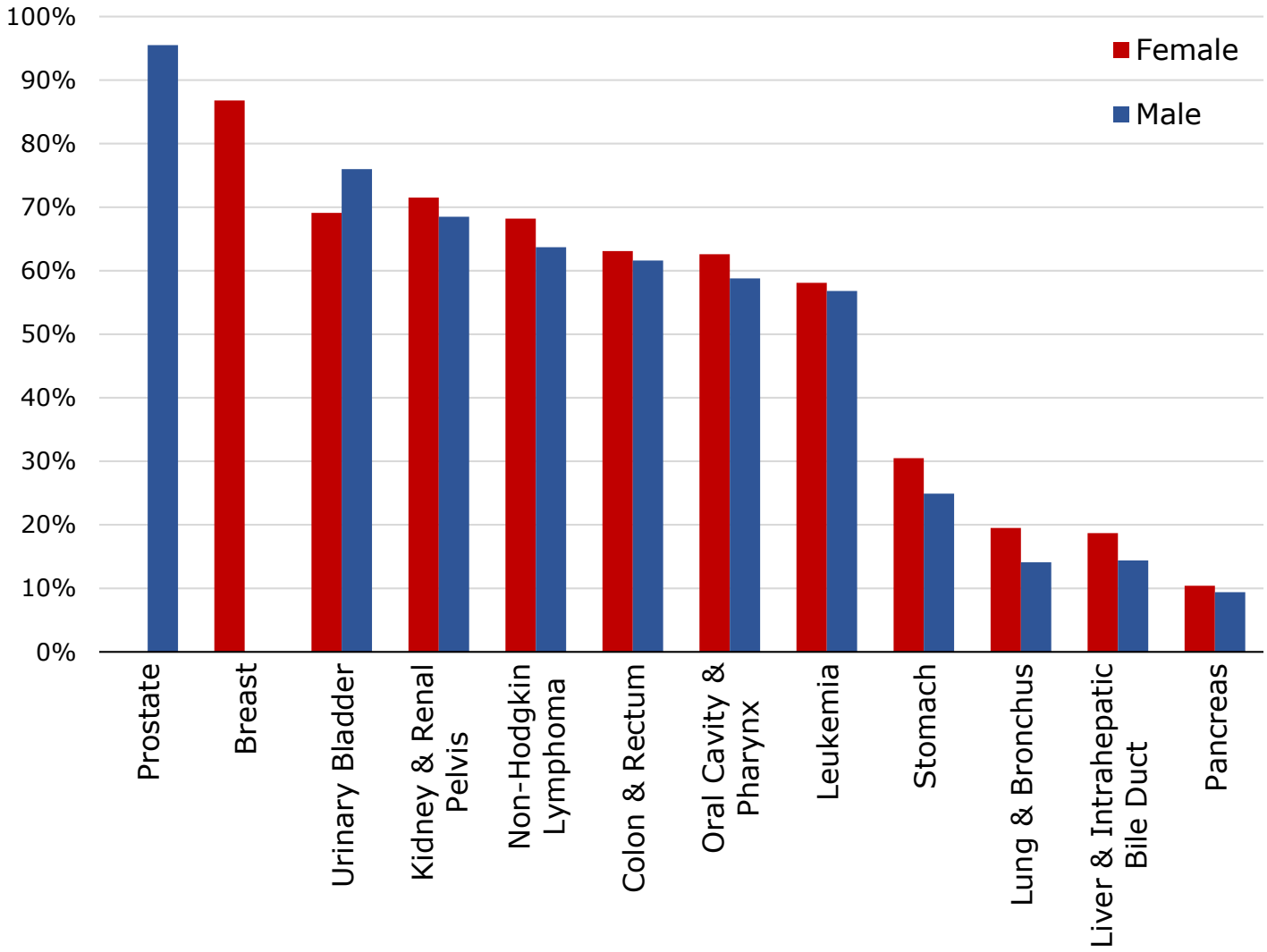
For more information, visit https://www.dshs.texas.gov/tcr/data/childhood.aspx.

Cancer Survival Rates in Texas

Cancer survival rates are the proportion of patients alive at some point subsequent to the diagnosis of their cancer. Relative survival presents cancer survival adjusted for other causes of death by comparing the survival among patients with cancer to the expected survival rates in a comparable population (by age, sex, and race) without cancer. It estimates the percentage of patients who would be expected to survive their cancer during the specific time frame.

Five-year relative survival rates were higher among females than males across leading cancer sites except for bladder cancer, in which relative survival was 76% in males and 69.1% in females.

Five-Year Relative Survival Rates for Leading Cancer Sites by Sex, 1995–2014



Cancers diagnosed 1995–2014 followed through December 2015. Cases were of a first primary malignant cancer (except urinary bladder which included in situ cases), of known age, and of male or female sex. Cases diagnosed by death certificate only or autopsy only were excluded. *invasive breast cancer only.

For more information, visit https://www.dshs.texas.gov/tcr/data/survival.aspx.

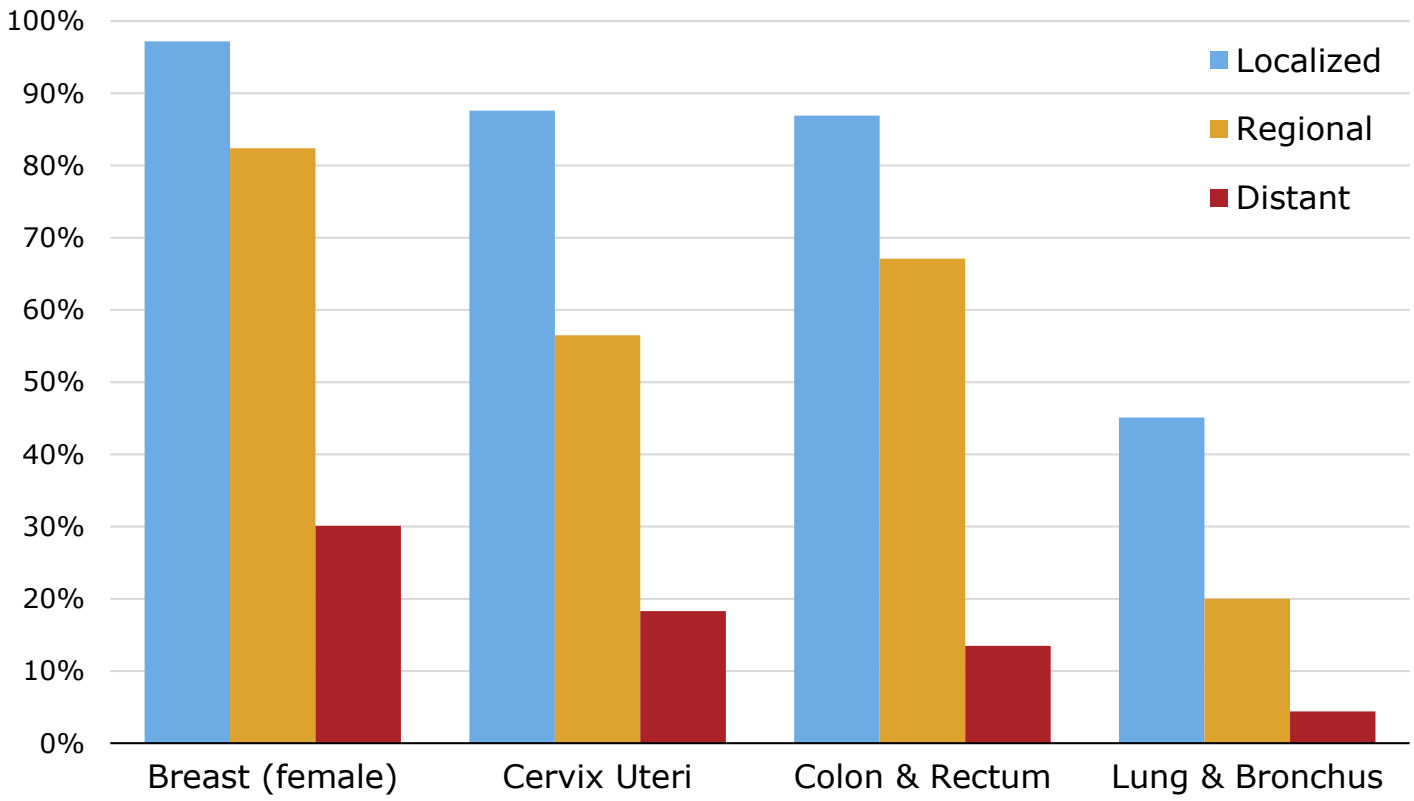
Cancer Survival Rates in Texas

Cancer survival varies greatly by stage at diagnosis and cancer type. Typically, the earlier stage a cancer is diagnosed, the greater the chance of long-term survival, making stage at diagnosis is a significant predictor of cancer survival.

Survival by stage at diagnosis is presented below, with stage categorized into *localized*, *regional*, and *distant*. Stage describes the extent of spread of cancer. Staging is essential to assess prognosis and determine the treatment options. If cancer cells have spread no farther than the organ in which the cancer started, the stage is *localized*. If cancer cells have penetrated beyond the limits of the organ of origin to nearby lymph nodes, tissues, or organs, the stage is *regional*. If cancer cells have spread away from the primary tumor, traveled to other parts of the body, and begun to grow at the new location, the stage is *distant*. When this happens, it is called metastatic cancer. Proper staging is essential to assess prognosis and determine the treatment options.

For the selected cancers, survival rates for cancer diagnosed at the localized stage had survival rates nearly 90% or higher, with the exception of lung cancer. At the regional stage, survival rates were 50% or higher, again with the exception of lung cancer. However, when cancer is diagnosed at the distant stage, survival rates are 30% or less.

Five-Year Survival Rates for Selected Cancer Sites by Stage, 1995–2014



Cancers diagnosed 1995–2014 followed through December 2015. Cases were of a first primary malignant cancer, of known age, and of male or female sex. Cases diagnosed by death certificate only or autopsy only were excluded.

For more information, visit https://www.dshs.texas.gov/tcr/data/relative-survival.aspx.

Overweight/Obesity-Associated Cancers

Excess body weight is usually caused by consuming more calories than are used through metabolic processes and physical activity. Body weight is also linked to our genetics, environment, and presence of disease. Rates of overweight and obesity also vary with race, ethnicity, and socioeconomic status.

Body Mass Index (BMI), which divides weight (in kilograms) by height (in meters squared), is the most widely used proxy for body fat, providing a better measure than weight alone.

BMI	Weight Status
<18.5	Underweight
18.5–24.9	Normal/Healthy Weight
25.0–29.9	Overweight
≥30.0	Obese

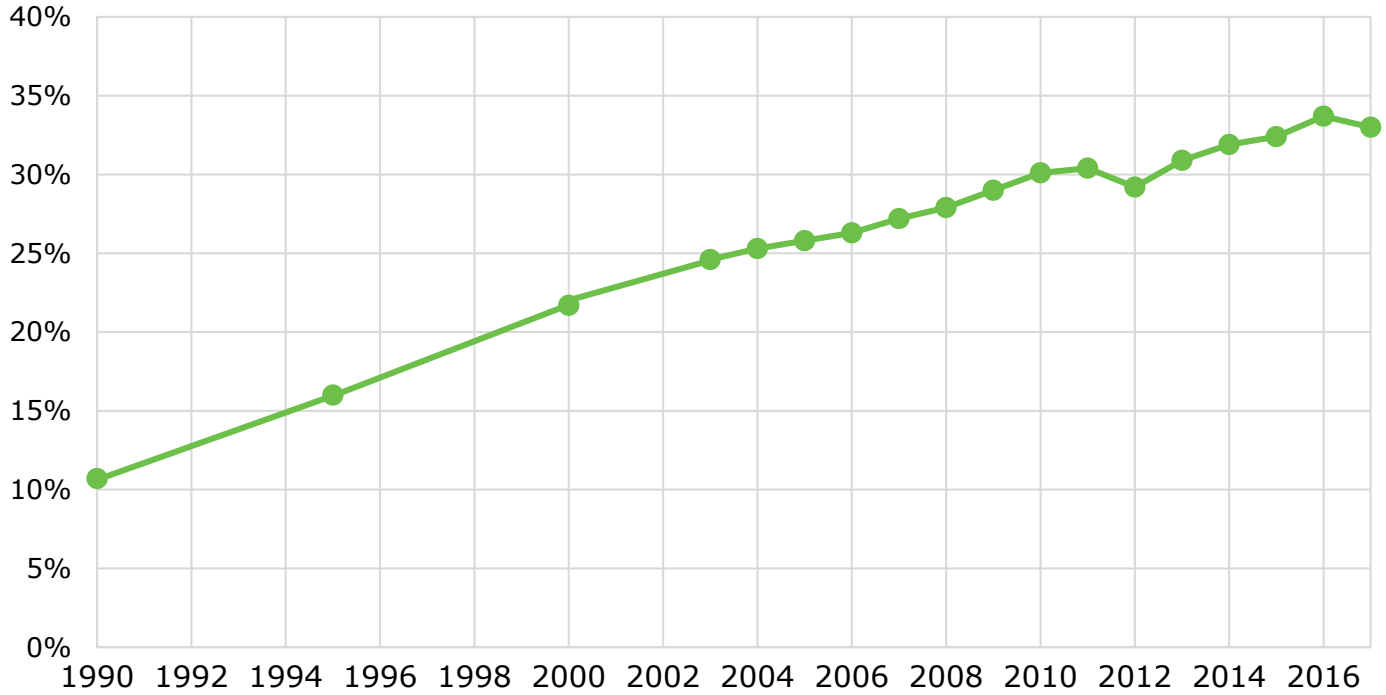
Overweight and obesity are associated with an increased risk of certain cancers and other diseases, including type II diabetes, stroke, hypertension, and cardiovascular disease.

Rates of overweight and obesity in the United States have almost tripled since the 1960s. In 2016, 69% of Texas adults were classified as overweight or obese, with Texas having the 8th highest rate of obesity in the United States. An estimated 33% of 10–17 year olds are overweight or obese.

Texas also has the 17th highest rate of inactivity, a contributor to overweight/obesity, with one-quarter of adults considered to be physically inactive.

Given current rates of increase, 75% of Texas adults are projected to be overweight or obese by 2040.

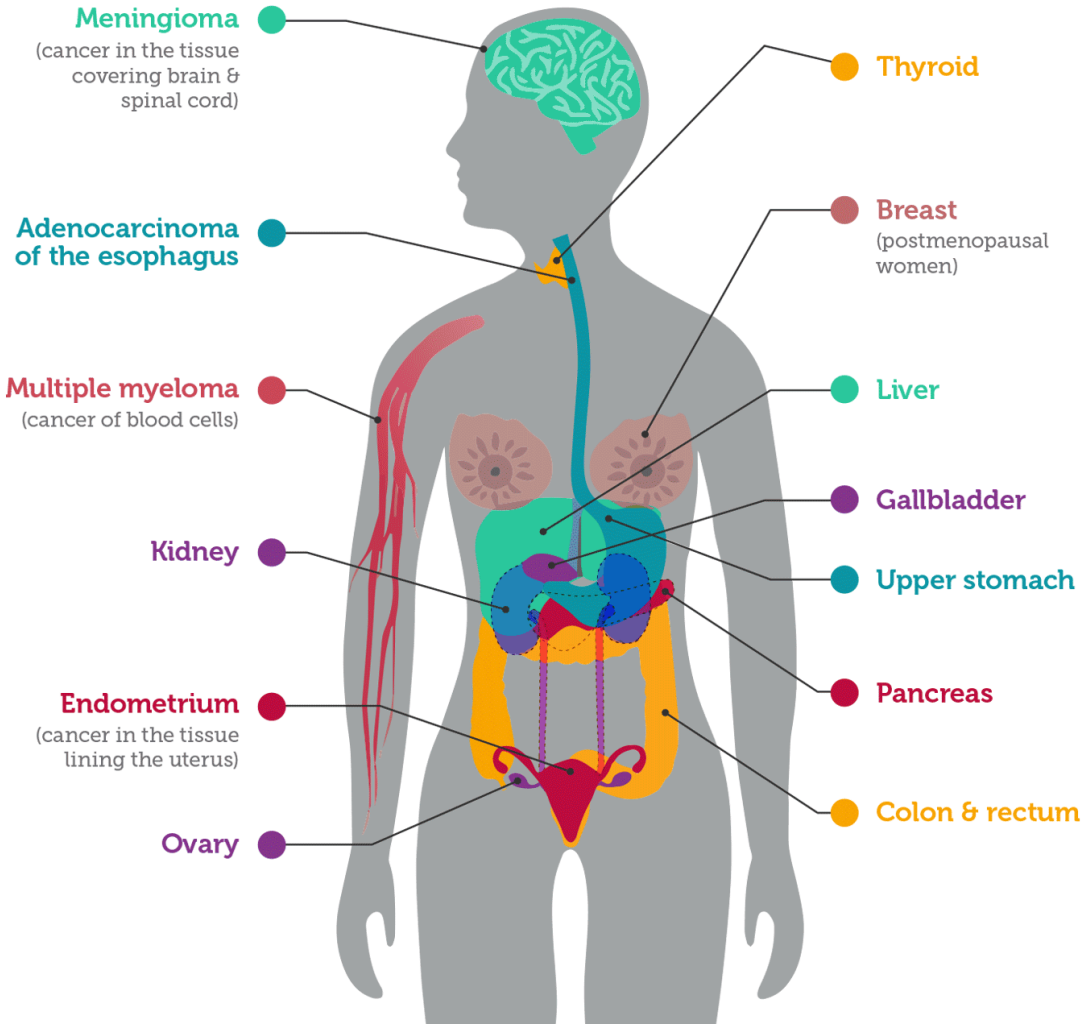
Obesity Rates among Adults in Texas, 1990–2017



Source: Trust for America's Health and Robert Wood Johnson Foundation. The State of Obesity 2017.

For more information, visit https://www.dshs.texas.gov/tcr/data/obesity-associated-cancers.aspx.

Overweight/Obesity-Associated Cancers



Being overweight or obese increases the risk of 13 different types of cancer.

While not all cases of these cancers can be attributed to overweight or obesity, excess body weight is a key modifiable risk factor, contributing approximately 8% of all cancer cases and 7% of all cancer deaths. Excess body weight is second only to tobacco use in preventable causes of cancer. The link between overweight/obesity and cancer risk is complex and varies with the specific type of cancer, but is thought to involve increased insulin and hormone levels, and chronic inflammation.

Endometrium, gallbladder, liver, kidney, and adenocarcinoma of the esophagus are the cancer sites most strongly linked to overweight/obesity, with at least a third of cases thought to be attributed to excess body weight. An estimated 10-20% of stomach cancer, pancreatic cancer, thyroid cancer, multiple myeloma, and breast cancer cases, an estimated 5% of colorectal cancer and 4% of ovarian cancer cases are thought to be caused by excess body weight.

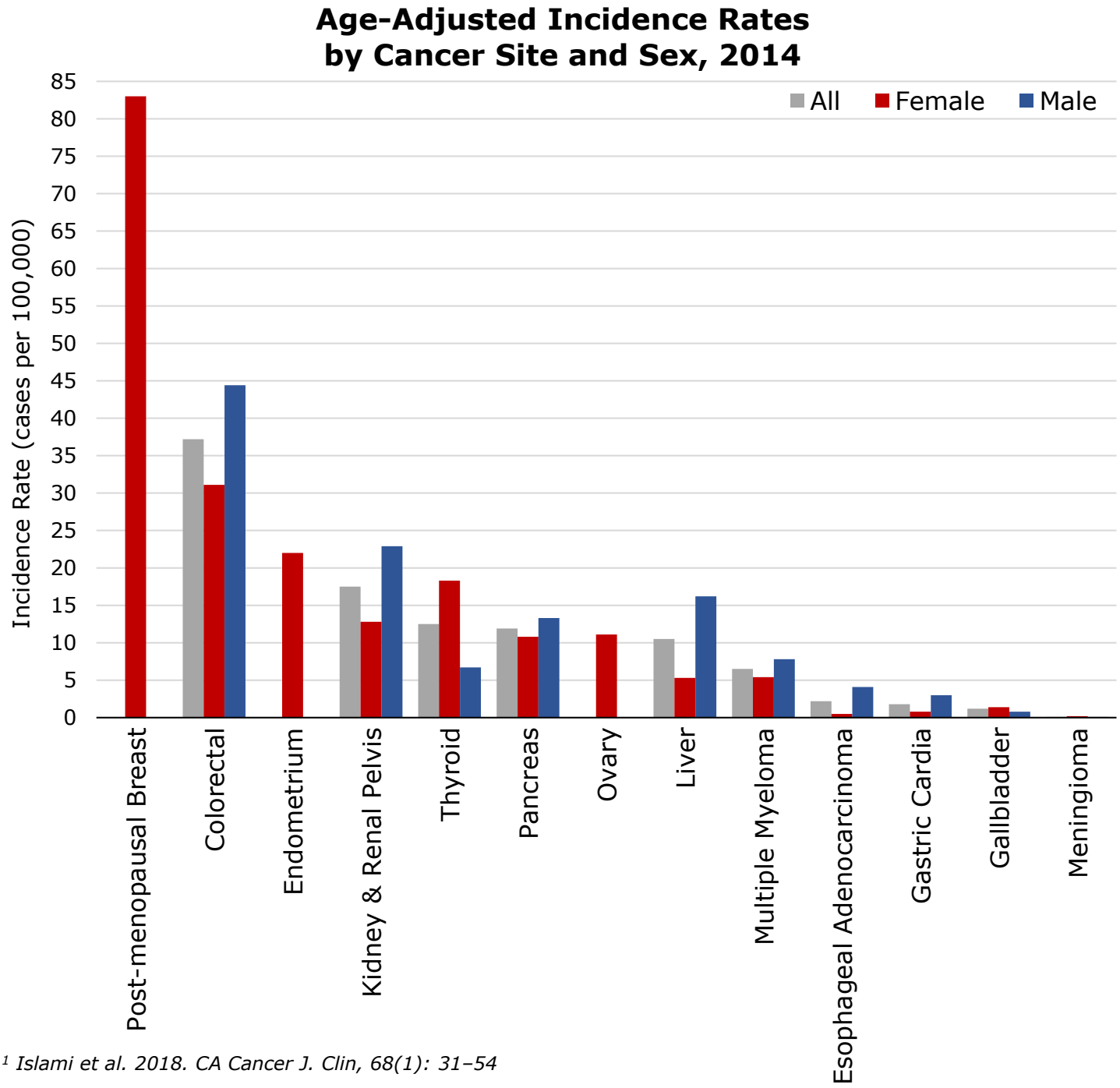
Image Source: Obesity and Cancer. National Cancer Institute (NCI), 2017.

For more information, visit https://www.dshs.texas.gov/tcr/data/obesity-associated-cancers.aspx.

Overweight/Obesity-Associated Cancers

Some overweight/obesity-associated cancers, like post-menopausal breast cancer and colorectal cancer, are common. Others are relatively rare. For example, meningioma and gallbladder cancer occur in fewer than 2 people per 100,000.

The proportion attributable to excess body weight at each site also varies with sex.[1] Incidence rates differed significantly between males and females for all sites except for meningioma.



[1] *Islami et al. 2018. CA Cancer J. Clin, 68(1): 31–54*

For more information, visit https://www.dshs.texas.gov/tcr/data/obesity-associated-cancers.aspx.

Overweight/Obesity-Associated Cancers

The incidence rates of some overweight/obesity-associated cancer sites increased from 2005 to 2014, while rates at other sites decreased.

The largest increase was for liver cancer, followed by thyroid cancer and endometrial cancer. The largest decrease was for colorectal cancer, followed by ovarian cancer and post-menopausal breast cancer.

Out of the 105,821 new invasive cancers diagnosed in 2014 in Texas, 41% were at overweight/obesity-associated sites; 56% of cancers in females and 28% of cancers in males.

While the incidence rate of non-obesity-associated cancers declined by 2.6% per year from 2005 to 2014, the incidence rate of obesity-associated cancers (after excluding colorectal cancer*) increased by 0.3% per year. This increase was significant in males (1% increase per year) but not in females (0.2% increase per year).

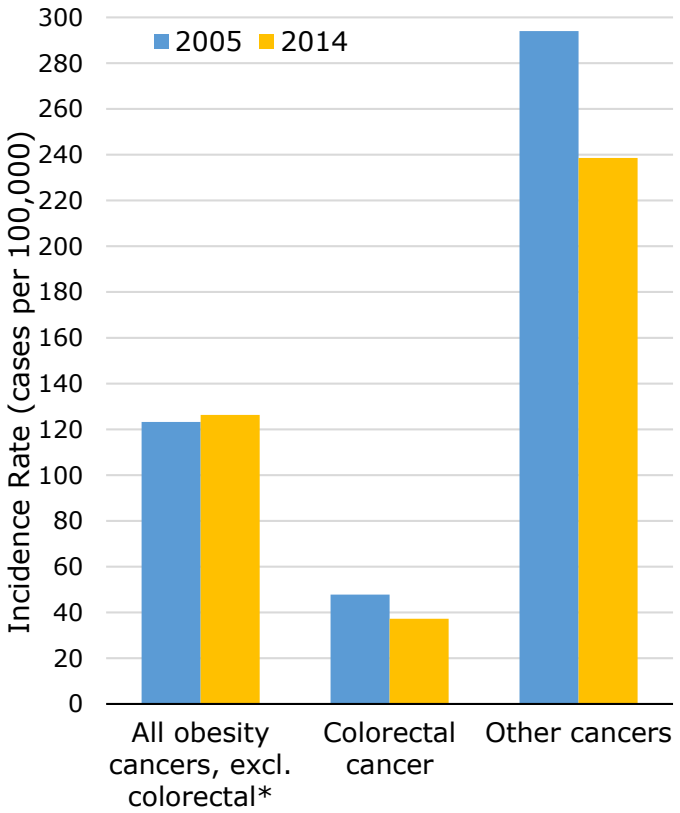
In males, rates of overweight/obesity-associated cancers were highest for Non-Hispanic blacks (147.1), followed by Hispanics (124.1). In females, rates were highest for Non-Hispanic blacks (216.5), and non-Hispanic whites (211.1). From 2005 to 2014 rates increased significantly in both Non-Hispanic white males (by 1.1% per year) and in Non-Hispanic black males (by 0.7% per year).

The largest percentage increase in adults was in 20–39 year olds, in which rates of overweight/obesity-associated cancers (excluding colorectal cancer*) increased by 3.3% per year.

Cancer Site	2005	2014
Post-menopausal Breast	86.2	83.0
Colorectal	47.8	37.2
Endometrium	18.8	22.0
Kidney	17.4	17.5
Thyroid	10.1	12.5
Pancreas	11.7	11.9
Ovary	13.0	11.1
Liver	7.6	10.5
Multiple Myeloma	6.5	6.5
Esophageal Adenocarcinoma	2.4	2.2
Gastric Cardia	1.7	1.8
Gallbladder	1.2	1.2
Meningioma	0.2	0.1

Key: Significant Decrease Significant Increase

Age-Adjusted Incidence Rates by Year



*Because colorectal cancer incidence rates have declined due to increased screening for precancerous polyps, trends for rates were analyzed without colorectal cancer.

For more information, visit https://www.dshs.texas.gov/tcr/data/obesity-associated-cancers.aspx.

TCR Data Use

The TCR provides data to support research impacting knowledge of the impact of cancer in Texas and across the nation.

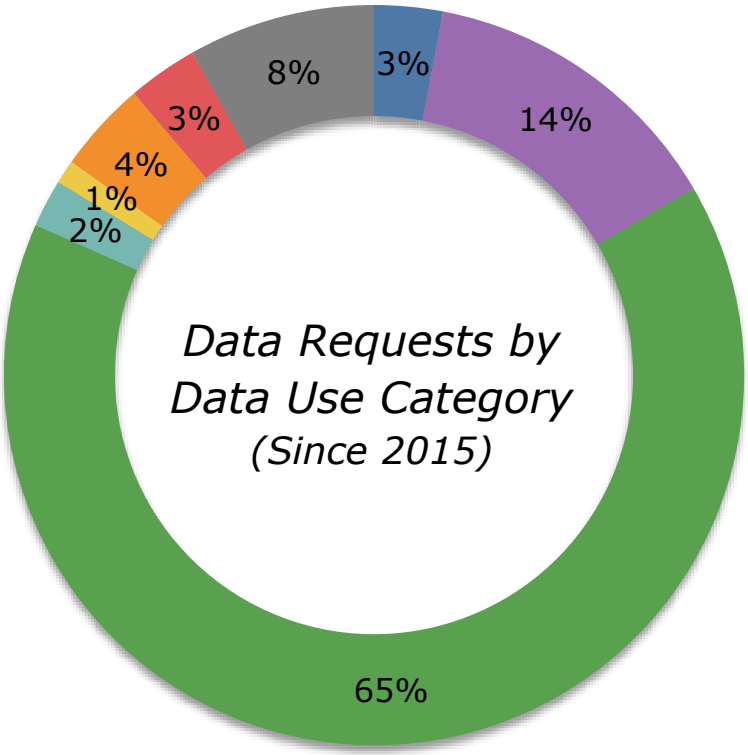
67 TCR data is being used in 67 active IRB-approved study protocols.

402 In the past five years, 402 published research journal articles used TCR data.

$94 million TCR data currently supports $94 million in grant funding.

TCR Data in Research Cohorts

- Adventist Health Study
- Black Women's Health Study
- Cancer Prevention Study-3
- Health Professionals Follow-Up Study
- HIV/AIDS Cancer Match Study
- Mexican American Cohort Study
- NIH-AARP Diet and Health Study
- Nurses' Health Study
- Transplant Cancer Match Study
- World Trade Center Health Registry



The TCR Epidemiology Group has responded to over **1,500** data requests since 2015.

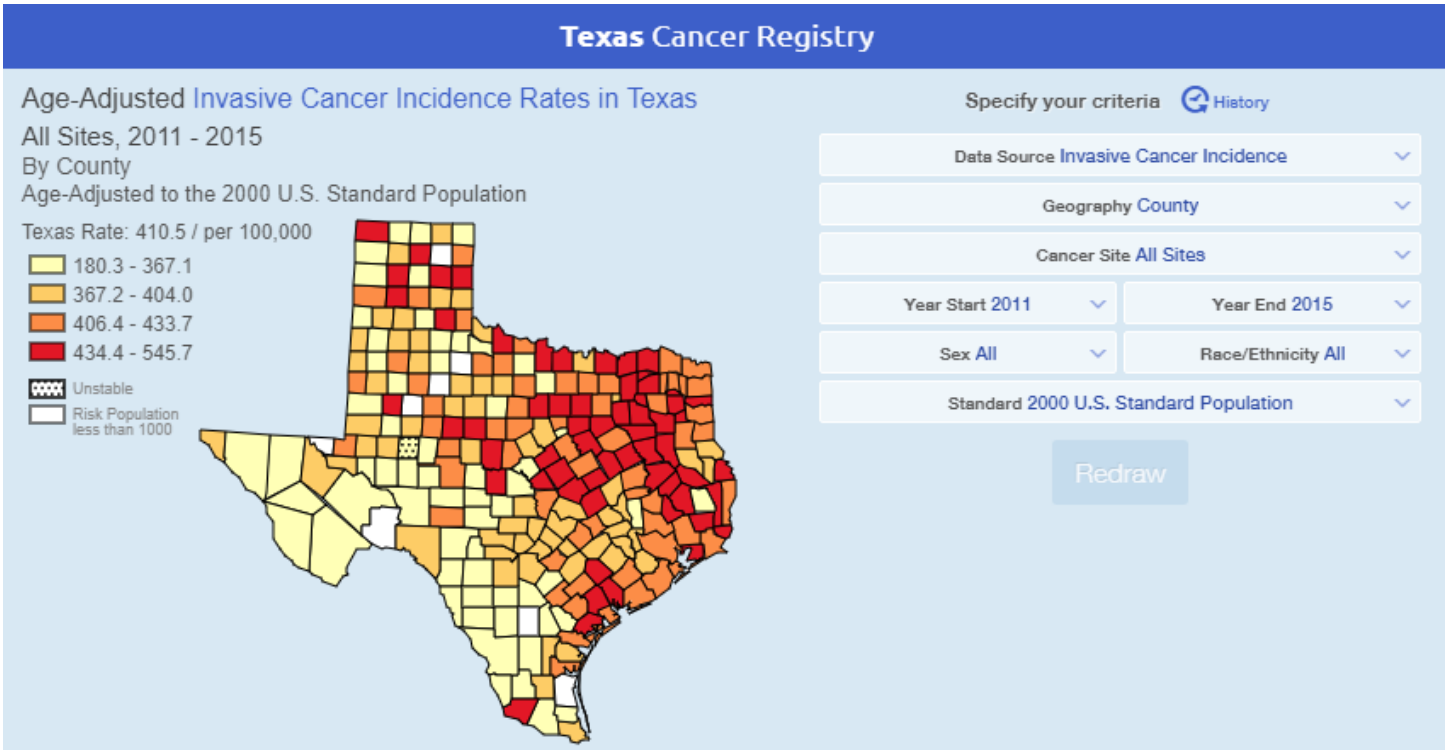
For more information, visit the TCR Data Use and Dissemination Dashboard.

Accessing TCR Data

The TCR strives to make data available and accessible to anyone with an interest in Texas cancer data. The TCR website provides statistical summaries and tables on cancer incidence and mortality, expected new cases and deaths, prevalence, survival rates, as well as many various reports on cancer in Texas. You can find these statistical summaries, tables, reports on the Statistics and Research Data section of the TCR website: https://www.dshs.texas.gov/tcr/data.aspx

Web Query Tool

The TCR Web Query Tool can be used to obtain Texas cancer incidence or mortality data at the state, region, county, Council of Government, Metro or Micro Statistical Area level. Rates and counts can be investigated by sex, cancer site, race/ethnicity, and year of diagnosis. In addition, rates/counts can be examined by early vs. late stage for breast, colorectal, and cervical cancer for all years. https://www.cancer-rates.info/tx/



TCR Data for Research

TCR data are also available for use in research. Those interested can request access to a TCR limited-use incidence dataset, containing incidence cancer cases among Texas residents diagnosed 1995–2015: https://www.dshs.texas.gov/tcr/data/limited-use.aspx.

Researchers may also request specialized cancer incidence datasets data linkages for research related to cancer etiology, prevention, and control—However, data may only be released under strict guidelines to ensure patient confidentiality. Learn more about this process on our website at https://www.dshs.texas.gov/tcr/data/research.aspx.

Technical Notes

Data Sources

All data are from TCR unless otherwise noted:

Incidence Data: Texas Cancer Registry SEER*Stat Database, 1995–2015 Incidence, Texas statewide, created December 2017, based on NPCR-CSS Submission, cut-off 11/13/2017.

Mortality Data: Texas Cancer Registry SEER*Stat Database, 1990–2015 Mortality, Texas statewide, created January 2018.

Cancer Site Classification

Cancer incidence data are classified by primary anatomic site and histologic type, according to the SEER Site Recode ICD-O-3/WHO 2008, which is based on ICD-O-3 and updated for Hematopoietic codes based on *WHO Classification of Tumours of Hematopoietic and Lymphoid Tissues* (2008).

Childhood and adolescent (ages 0–19) cancer incidence data are classified according to the International Classification of Childhood Cancer (ICCC), SEER ICCC Recode ICD-O-3/WHO 2008, which is based on ICD-O-3 tumor morphology and primary site with an emphasis on morphology (cell type), and updated for Hematopoietic codes based on *WHO Classification of Tumours of Hematopoietic and Lymphoid Tissues* (2008). These recodes are based on definitions presented in: Steliarova-Foucher E, Stiller C, Lacour B, Kaatsch P. International Classification of Childhood Cancer, Third Edition. *Cancer 2005*;103:1457–67.

Adolescent and Young Adult (AYA) cancer incidence data are classified according to the SEER AYA Site Recode ICD-O-3/WHO 2008, which is based on ICD-O-3 and updated for Hematopoietic codes based on *WHO Classification of Tumours of Hematopoietic and Lymphoid Tissues* (2008), and adapted from the classification scheme proposed by R.D. Barr and colleagues: Barr RD, Holowaty EJ, Birch JM. Classification Scheme for tumors diagnosed in adolescents and young adults. *Cancer 2006*;106(7):1425–30.

Expected New Cases and Deaths

Expected new cancer cases are estimated by applying 2011–2015 age-, race-, and sex-specific incidence rates to the Texas 2018 projected population. Expected deaths are estimated by applying age-, race-, and sex-specific mortality rates for Texas, 2011–2015, to the Texas 2018 projected population.

Survival Analysis

The TCR completes follow-up on all incident cancer cases, allowing generation of cancer survival estimates in Texas. Relative survival adjusts for other causes of death by dividing the observed survival by the expected survival, which itself is generated by using standard life tables for the U.S. population available in SEER*Stat software. Therefore, it is a measure of survival from cancer after discounting the other potential causes of death.