

CANCER IN TENNESSEE

2005-2009

February 2013

Tennessee Department of Health
Division of Policy, Planning and Assessment



EXECUTIVE SUMMARY

BACKGROUND

This report presents cancer statistics for the State of Tennessee (TN) for the period 2005-2009. Cancer is a group of more than 100 diseases characterized by uncontrolled growth and spread of abnormal cells. Cancer is the second leading cause of death nationally and in Tennessee. It is thought that cancer will soon become the leading cause of death nationally, surpassing heart disease, currently the leading cause of death. About two-thirds of all cancer cases could potentially be prevented with better lifestyle choices, e.g. increasing physical activity, better nutrition, not using tobacco products. Catching cancer early through regular cancer screening is also an important method of cancer prevention. Currently accepted screening practices when performed on a regular basis in a suitably targeted population can successfully detect breast, colorectal, uterine cervix and melanoma skin cancers.

TENNESSEE RANKINGS

Nationally, for the period 2005-2009, TN has the 16th highest cancer incidence and the 6th highest cancer mortality rate, among the total population. Among blacks nationally, TN has the 17th highest cancer incidence and the 4th highest cancer mortality rate in the U.S. Among whites nationally, TN has the 16th highest cancer incidence and the 4th highest cancer mortality rate in the U.S. Thus, based on presented national rankings for both new cancer cases and deaths, TN residents experience a disproportionate share of the national cancer burden.

TENNESSEE CANCER REGISTRY

The TN Cancer Registry (TCR) is legislatively mandated to collect all reportable cancer diagnoses in TN, including non-residents diagnosed in TN, and to annually provide a statistical report to the TN General Assembly on cancer in TN. The TCR is currently a gold-certified registry, the highest level of certification by the North American Association of Central Cancer Registries. The TCR had never met national standards of data completeness

and quality until the 2004 diagnosis year. Since then, the TCR has met these standards for 6 consecutive years, 2004-2009. It should, be noted that data collected during the 2004 diagnosis year was less than 95% complete, the level needed to attain gold-certified status, whereas 2005-2009 data exceeded the 95% completeness threshold level.

CANCER INCIDENCE AND MORTALITY

During 2005-2009, a total of 158,393 new cases of invasive cancer were diagnosed in TN residents, an incidence rate of 476.8 new cases of cancer per 100,000 Tennesseans; this number excludes all *in situ* cases except for urinary bladder cancer. There were 65,604 cancer deaths recorded as the principal cause of death in TN residents during the same period, a mortality rate of 199.8 cancer deaths per 100,000 Tennesseans.

Cancer incidence (i.e. new cases) and mortality (i.e. deaths) rates were significantly higher in males compared to females and were generally significantly higher in black compared to white individuals. Cancer incidence rates remained stable, whereas cancer mortality rates decreased significantly during 2005-2009.

IMPACT OF CANCER

Fifty-six percent of cancers were diagnosed at early stages, when treatment is usually more effective. About 556,000 years of potential life were lost in TN residents due to premature cancer deaths during the five-year reporting period; therefore, on average, each person who died of cancer during the five-year period lost more than 11% of the average lifespan (75 years of age as used in this report). Nationally in 2005, the about 600,000 cancer deaths cost the U.S. about \$135 billion dollars in lost lifetime wages since most of these deaths occurred prematurely, which is about \$225,000 during each person's lifetime. TN has about 13,400 deaths due to cancer each year, which means that the TN economy loses about \$301,000,000 in lost lifetime wages for all cancer deaths combined.

REGIONAL AND COUNTY DIFFERENCES IN CANCER

There were regional and county differences in cancer rates. TN is divided into 8 regions by the TN Department of Health (TDH): Northwest, Southwest, South Central, Mid-Cumberland, Upper Cumberland, Southeast, East and Northeast. The East (does NOT include the upper northeast corner of TN) and Upper Cumberland regions displayed the highest overall cancer incidence rates, whereas the Northeast region displayed the lowest. The Northwest region displayed the highest overall cancer mortality rate, whereas the Mid-Cumberland and Southeast regions displayed the lowest.

At the county level, Rhea, Macon, Perry, Morgan and Fentress counties had the highest overall cancer incidence rates statewide. The lowest overall cancer incidence rates were observed in Moore, Hancock, Johnson, Sequatchie and Chester counties. The highest overall cancer mortality rates were observed in Lake, Macon, Fentress, Marion and Scott counties. The lowest overall cancer mortality rates were observed in Moore, Bledsoe, Williamson, Cumberland and Van Buren counties.

TOP 10 CAUSES OF CANCER INCIDENCE

The 10 most common incident cancers, by number of cases, found in TN and the United States from 2005 to 2009 in decreasing order were: ¹

Rank	Tennessee	United States
1	Lung and Bronchus	Prostate
2	Prostate	Female Breast
3	Female Breast	Lung and Bronchus
4	Colon and Rectum	Colon and Rectum
5	Melanoma of the Skin	Melanoma of the Skin
6	Urinary Bladder	Urinary Bladder
7	Non-Hodgkin Lymphoma	Non-Hodgkin Lymphoma
8	Kidney and Renal Pelvis	Kidney and Renal Pelvis
9	Oral Cavity and Pharynx	Corpus and Uterus, NOS
10	Leukemia	Leukemia

¹ The U.S. data were queried from the Surveillance, Epidemiology, and End Results (SEER) Program SEER*Stat Database: Incidence - SEER 18 Regs Research Data + Hurricane Katrina Impacted Louisiana Cases, Nov 2011 Sub, Vintage 2009 Pops (2000-2009) <Katrina/Rita Population Adjustment> - Linked To County Attributes - Total U.S., 1969-2010 Counties, National Cancer Institute, DCCPS, Surveillance Research Program, Surveillance Systems Branch, released April 2012, based on the November 2011 submission.

TOP 10 CAUSES OF CANCER MORTALITY

The following 10 cancers caused the greatest numbers of deaths, in decreasing order, in TN and the United States from 2005-2009: ²

Rank	Tennessee	United States
1	Lung and Bronchus	Lung and Bronchus
2	Colon and Rectum	Colon and Rectum
3	Female Breast	Female Breast
4	Pancreas	Pancreas
5	Prostate	Prostate
6	Leukemia	Leukemia
7	Non-Hodgkin Lymphoma	Non-Hodgkin Lymphoma
8	Liver and Intrahepatic Bile Duct	Liver and Intrahepatic Bile Duct
9	Brain and Other Nervous System	Ovary
10	Ovary	Urinary Bladder

LUNG CANCER

Lung cancer incidence has decreased in recent years, with the exception of a slight rebound in incidence during the 2009 diagnosis year. Lung cancer mortality significantly decreased from 2005-2009. TN had the 3rd highest incidence and the 4th highest mortality rate in the U.S. Lung cancer is the leading cause of new cases of cancer and the leading cause of cancer deaths in TN. Only about 22% of cases were diagnosed in early stages. Incidence and mortality rates are comparable among blacks and whites.

PROSTATE CANCER

Prostate cancer incidence rates had been increasing from 2005-2008; however, there was a substantial, unexplained drop in the incidence rate during the 2009 diagnosis year. Death rates statistically significantly decreased during 2005-2009. TN had the 27th highest incidence rate and the 25th highest mortality rate in the U.S. Prostate cancer is the leading cause of

² The U.S. data were queried from the Surveillance, Epidemiology, and End Results (SEER) Program SEER*Stat Database: Mortality - All COD, Aggregated With State, Total U.S. (1969-2009) <Katrina/Rita Population Adjustment>, National Cancer Institute, DCCPS, Surveillance Research Program, Surveillance Systems Branch, released April 2012. Underlying mortality data provided by NCHS (www.cdc.gov/nchs).

new cases and the 3rd leading cause of death in TN males. About 82% of cases are diagnosed at early stages, which is probably partially attributable to prostate cancer screening and to the slow progressive course prostate cancer typically displays compared to most other cancers. Black males are disproportionately affected by this disease compared to white males; black men experience a mortality rate that is almost 3 times as high as that for white men.

FEMALE BREAST CANCER

Female breast cancer incidence rates remained stable during the 5-year period covered by this report, whereas mortality rates have generally decreased. TN females experienced the 29th highest breast cancer incidence rate and the 12th highest breast cancer mortality rate in the U.S. It is the 1st leading cause of new cases and the 2nd leading cause of cancer deaths in TN females. About 66% of all cases are diagnosed at early stages when treatment is more effective. The high percentage of early stage disease is attributable to screening. Incidence rates tend to be comparable in black and white women; however, black women have a mortality rate that is 64% higher compared to white women.

COLORECTAL CANCER

Colorectal cancer incidence rates have statistically significantly decreased over the time period covered by this report. Mortality rates have remained stable. TN experienced the 25th highest incidence rate and the 8th highest mortality rate in the U.S. for colorectal cancer. Colorectal cancer is the 4th leading cause of cancer incidence and the 2nd leading cause of cancer deaths in TN. Colorectal cancer screening is recommended for the early detection of this cancer. Only 45% of cases are diagnosed at early stages in TN. Blacks demonstrate statistically significantly greater incidence and mortality rates for this cancer compared to white individuals.

MELANOMA OF THE SKIN

Melanoma incidence and mortality were generally stable over the 5-year period covered by this report; however, there is an unexplained increase in incidence observed in 2009 compared to most of the prior years. Melanoma

is the 5th leading cause of new cancer cases in TN; however, mortality rates are low. TN experienced the 14th highest incidence rate and the 30th highest mortality rate in the U.S. for this disease. Cancer screening is very effective at diagnosing the disease in the early stages, and 86% of all new cases during 2005-2009 were diagnosed in the early stages of disease.

PANCREATIC CANCER

Pancreatic cancer is the 11th leading cause of new cancer cases and the 4th leading cause of cancer death in TN. Incidence and mortality rates were stable over the 5-year period covered by this report. TN experienced the 12th highest pancreatic cancer incidence rate and the 23rd highest pancreatic cancer mortality rate in the U.S. It is the most deadly form of cancer in the U.S. and currently there is no effective screening method. Only about 13% of cases are diagnosed at early stages in TN. In general, blacks display statistically significantly higher incidence and mortality rates compared to white individuals.

CHILDHOOD CANCER

There were 1,399 new invasive cancer cases and 209 deaths due to cancer in children less than 20 years of age in TN during the 5-year period covered by this report. TN experienced the 8th highest childhood cancer incidence rate and the 13th highest childhood cancer mortality rate in the U.S.³ Only about 39% of all new cases are diagnosed in early stages of the disease. There is currently no effective screening method/s for most childhood-related cancers. In general, white children tend to have a slightly higher cancer incidence rate compared to black children, but the difference is not statistically significant.

³ <http://statecancerprofiles.cancer.gov>

TENNESSEE DEPARTMENT OF HEALTH ORGANIZATION

The mission of the Tennessee Department of Health is to protect, promote and improve the health and prosperity of people in Tennessee.

John J. Dreyzehner, MD, MPH, FACOEM, *Commissioner*

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This publication and additional data are available on the Tennessee Cancer Registry web site: <http://health.state.tn.us/TCR/index.htm>

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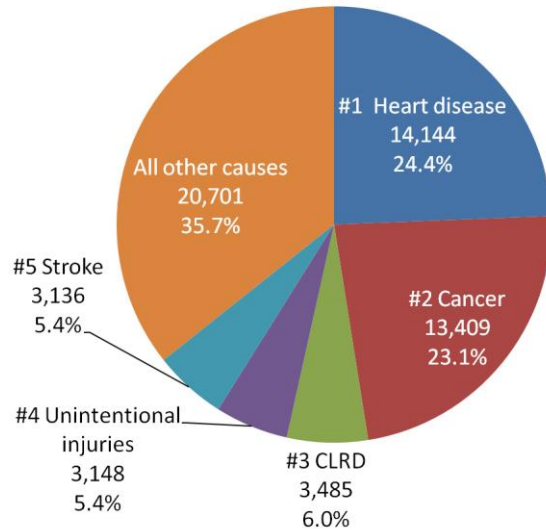
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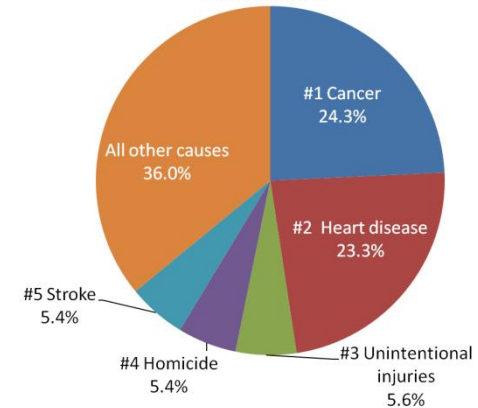
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TOP FIVE LEADING CAUSES OF DEATH IN TENNESSEE, 2009

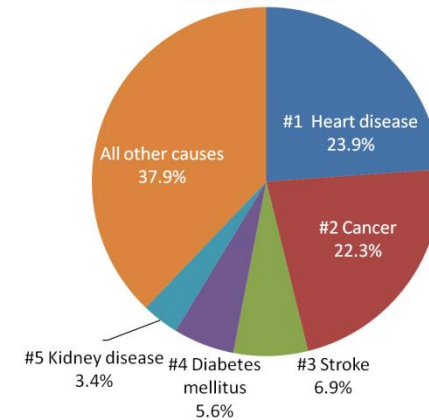
Total Population



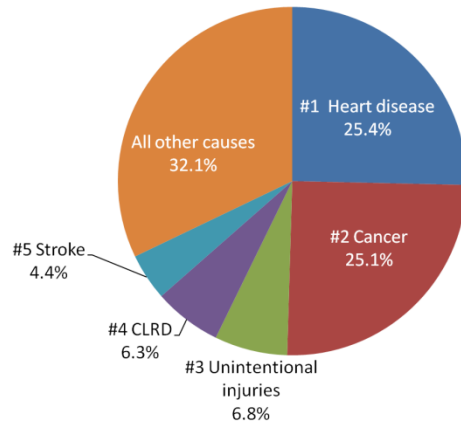
Black Males



Black Females

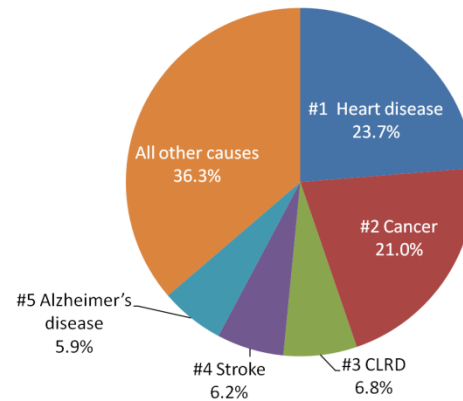


White Males



Note: CLRD stands for chronic lower respiratory diseases

White Females

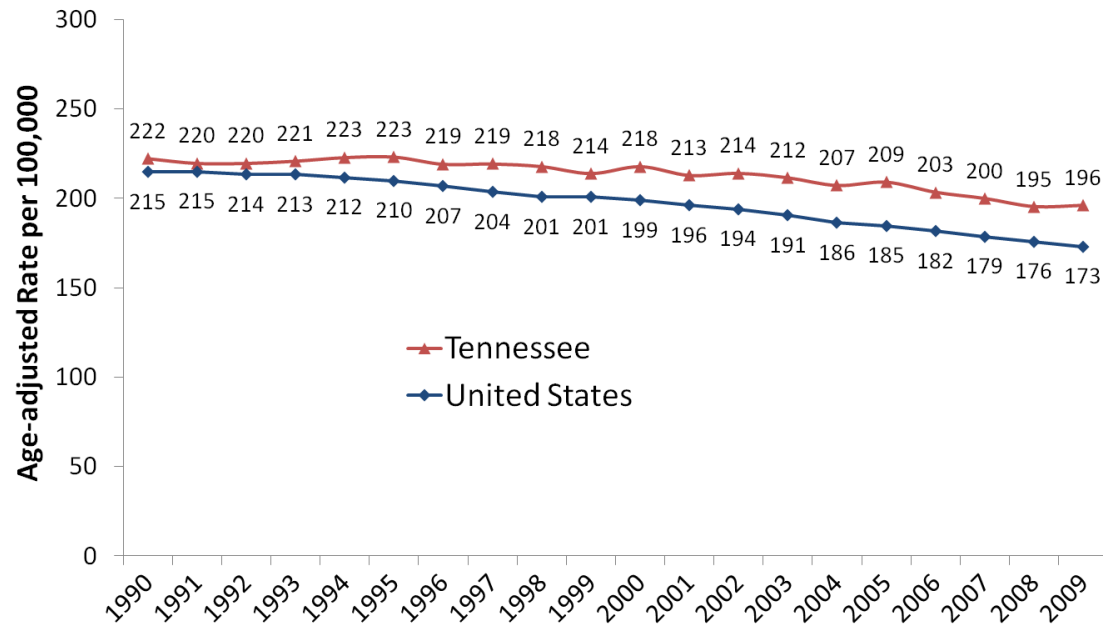


- Heart disease was the 1st leading cause of death for all Tennesseans
- Cancer was the 2nd leading cause of death for the total population, claiming 13,409 lives in 2009
- Cancer was the 2nd leading cause for white males, white females and black females
- Cancer was the 1st leading cause of death for black males

TENNESSEE COMPARED TO THE UNITED STATES

CANCER MORTALITY TREND, 1990-2009

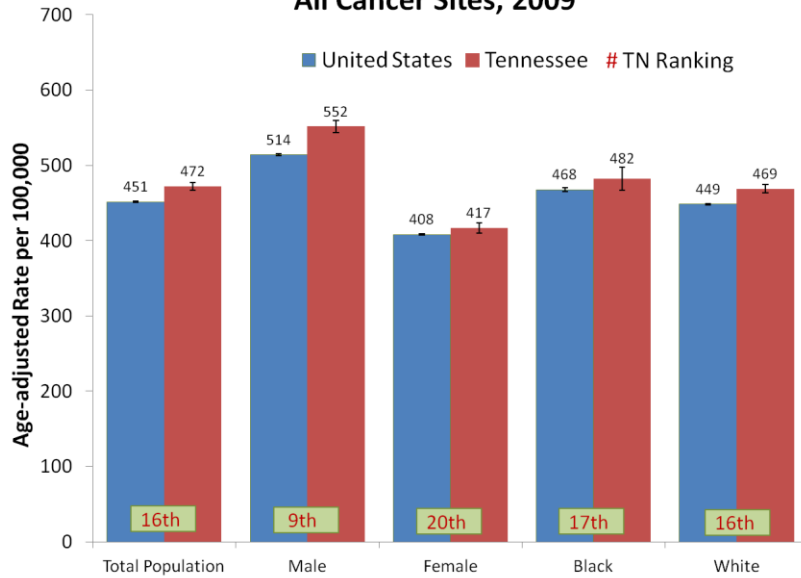
**Cancer Mortality Rate in Tennessee and United States
1990-2009**



Data source: statecancerprofiles.cancer.gov

- The age-adjusted cancer mortality in Tennessee and the U.S. decreased over time, by 12% and 20%, respectively, from 1990 to 2009
- Cancer mortality in Tennessee was consistently higher than that in the U.S.
- The gap between Tennessee and the U.S. widened over time: TN was 3% higher than U.S. in 1990 and 13% higher than U.S. in 2009

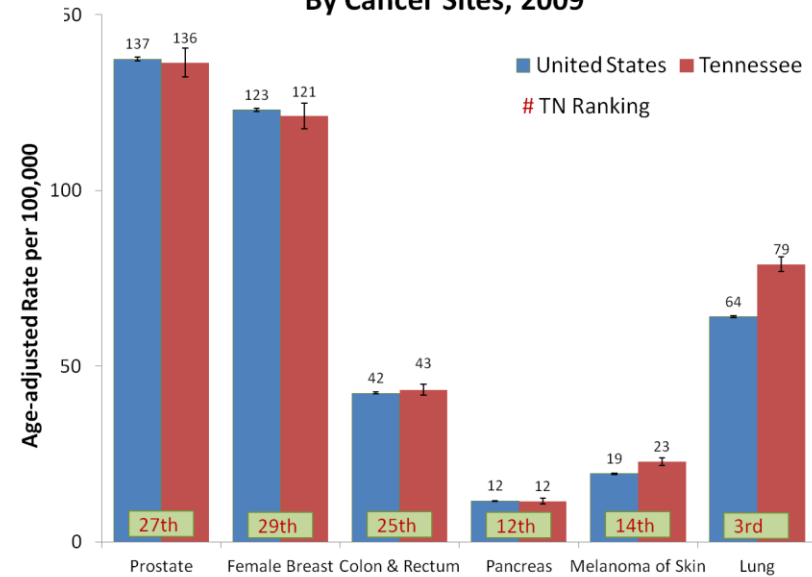
**Incidence Rates for United States and Tennessee
All Cancer Sites, 2009**



- The age-adjusted cancer incidence rate in Tennessee was higher than the U.S. for the total population and for by gender and race groups; all differences were statistically significant except for blacks
- Overall the cancer incidence rate in Tennessee ranked 16th highest in the U.S.
- Tennessee males had the worst ranking, the 9th highest, among all gender and race groups

- Among common cancers, Tennessee had higher incidence rates of lung cancer and melanoma skin cancer than U.S. average
- The lung cancer incidence rate in Tennessee ranked 3rd in the U.S.
- Pancreatic cancer and melanoma skin cancer ranked 12th and 14th, respectively
- Prostate, female breast and colorectal cancers ranked 27th, 29th and 25th, respectively

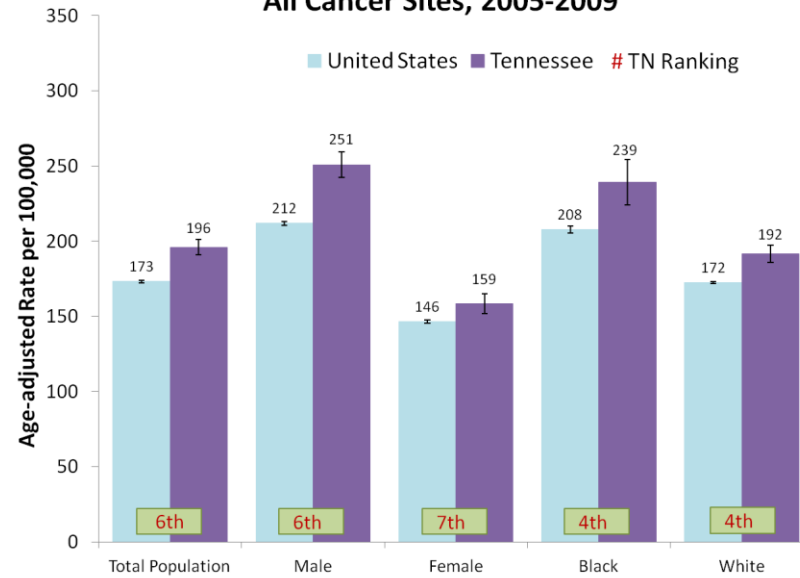
**Incidence Rates for United States and Tennessee
By Cancer Sites, 2009**



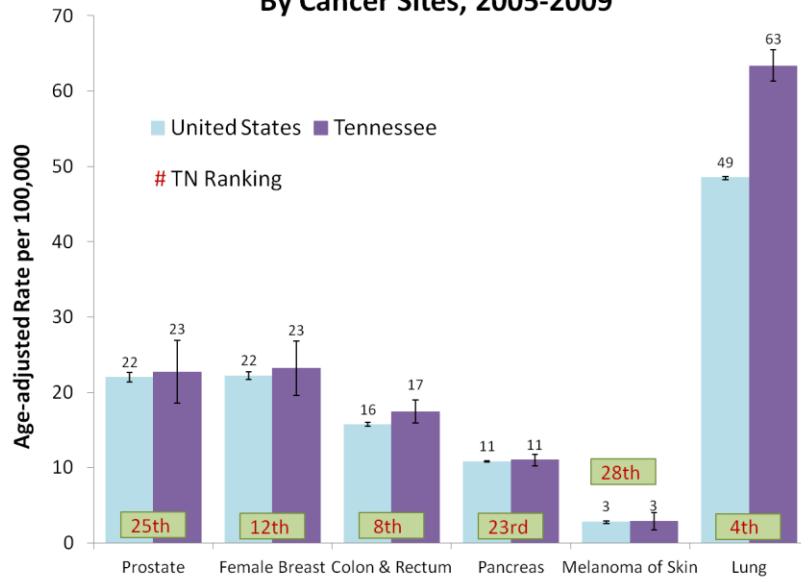
TENNESSEE RANKINGS CONTINUED

- The age-adjusted cancer mortality rate in Tennessee was higher than that in the U.S. for the total population and for all by gender or race groups examined and all differences were statistically significant
- Tennessee ranked the 6th highest in the U.S. for the total population, and between 4th to 7th for by gender or race groups examined

Mortality Rates for United States and Tennessee All Cancer Sites, 2005-2009



Mortality Rates for United States and Tennessee By Cancer Sites, 2005-2009

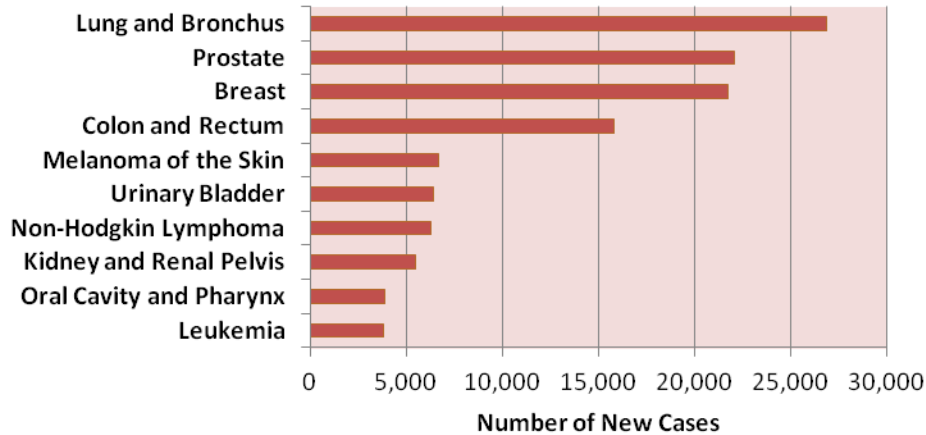


- Tennessee’s lung cancer mortality rate ranked the 4th highest in the U.S.
- The colorectal cancer mortality rate in Tennessee ranked the 8th highest
- The breast cancer mortality rate among female Tennesseans ranked the 12th highest

TYPES OF CANCERS IN TENNESSEE

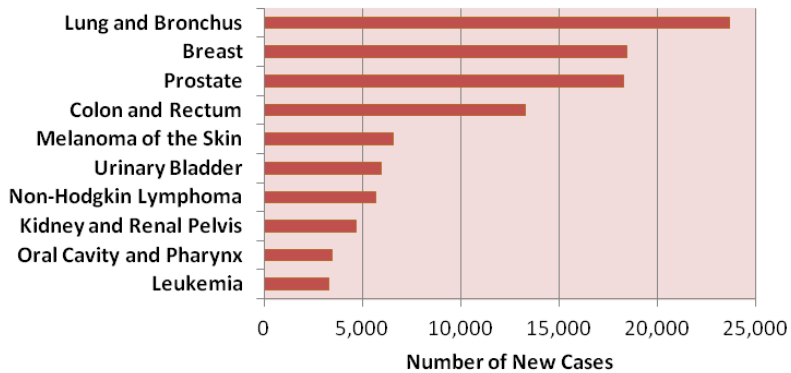
LEADING CAUSES OF CANCER INCIDENCE, 2005-2009

Total Population

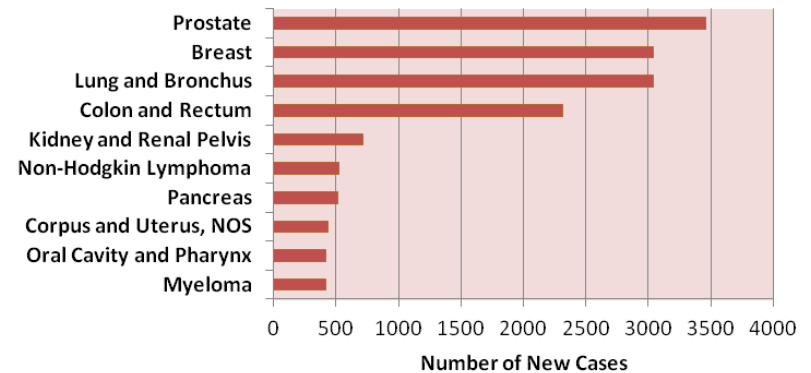


- Lung cancer was the 1st leading cause of cancer incidence in Tennessee, followed by cancers of prostate (2nd), breast (3rd), and colon and rectum (4th)
- Melanoma of skin was the 5th leading cause of cancer incidence
- The order of leading causes among whites were the same as that for the Tennessee population
- Among blacks, prostate cancer was the 1st leading cause of incidence, followed by the cancers of breast (2nd), lung (3rd), colon and rectum (4th), and kidney (5th)

White

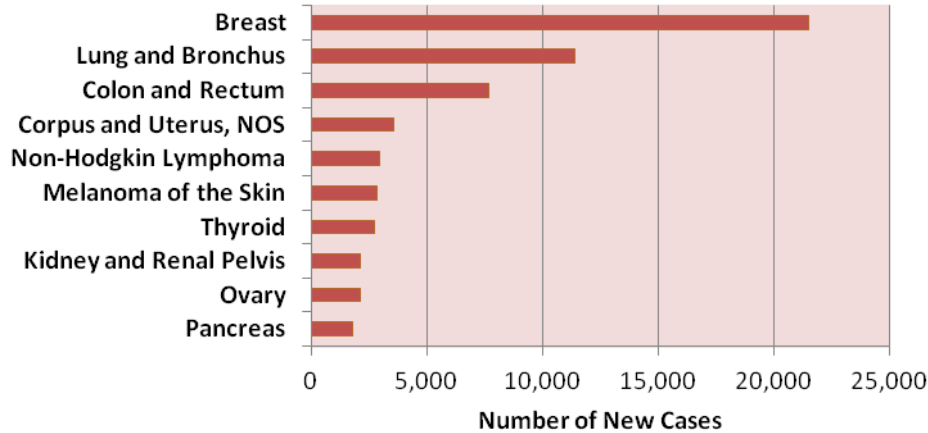


Black



LEADING CAUSES OF CANCER INCIDENCE CONTINUED

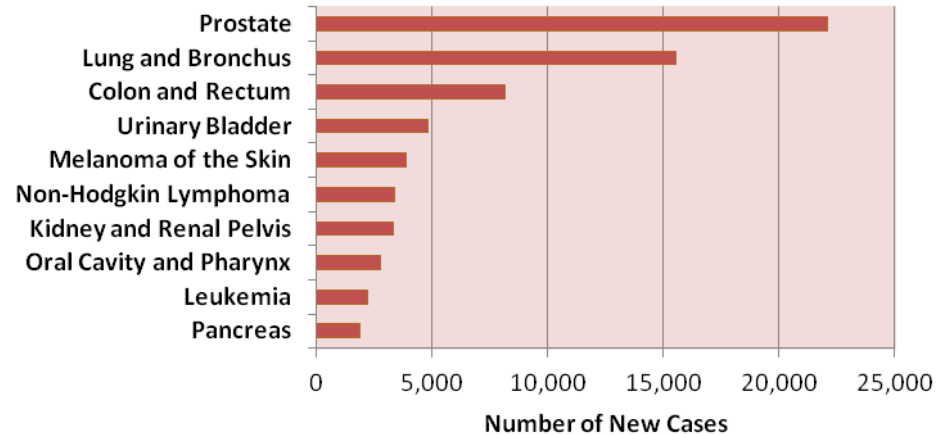
Female



- Breast cancer was the 1st leading cause of cancer incidence among Tennessee females
- Lung cancer was the 2nd leading cause , followed by colorectal cancer (3rd), uterus cancer (4th), and non-Hodgkin lymphoma (5th)
- Three cancers of female reproductive system—breast, uterus and ovary—were among the top 10 leading causes of cancer incidence among women

- Prostate cancer was the 1st leading cause of cancer incidence among Tennessee males
- Lung cancer was the 2nd leading cause, followed by colorectal cancer (3rd), bladder cancer (4th), and melanoma of skin (5th)

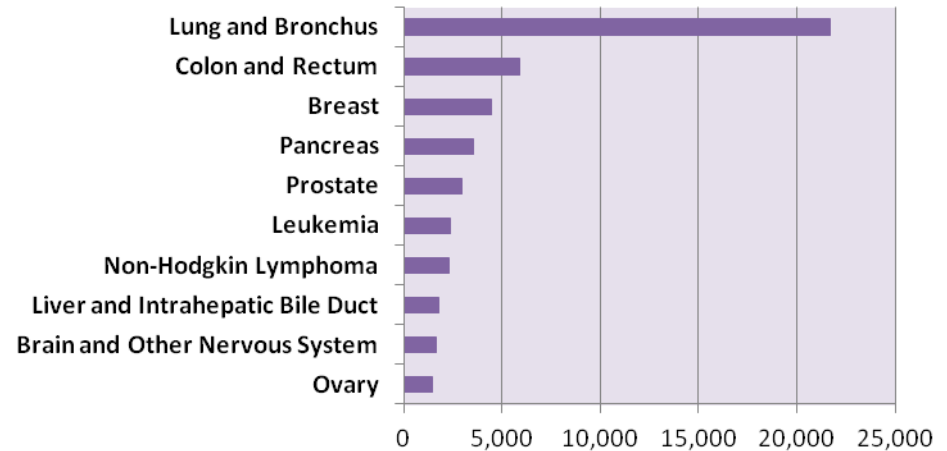
Male



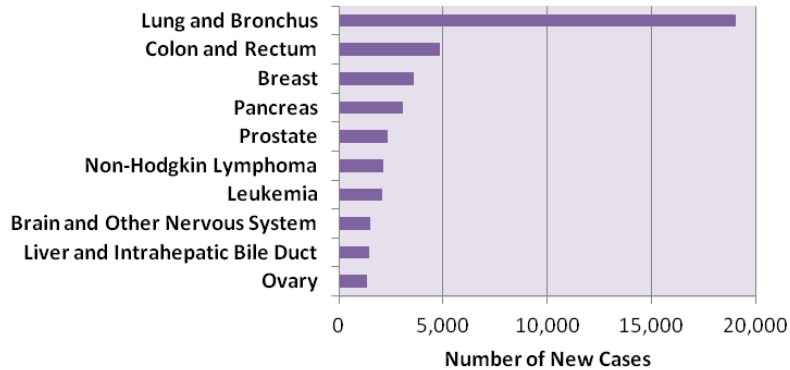
LEADING CAUSES OF CANCER MORTALITY, 2005-2009

- Lung cancer was the 1st leading cause of cancer mortality in the Tennessee population. It was also the 1st leading cause of cancer mortality for whites, blacks, males and females
- Colorectal cancer was the 2nd leading cause of cancer death for the Tennessee population and for whites, blacks and males, but not for females, among which breast cancer was the 2nd leading cause
- Breast cancer, pancreatic cancer and prostate cancer were the 3rd to 5th leading causes of cancer death, respectively, in the Tennessee population

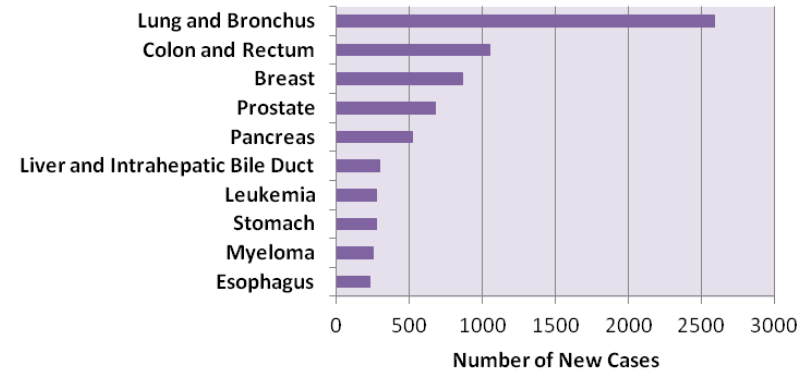
Total Population



White



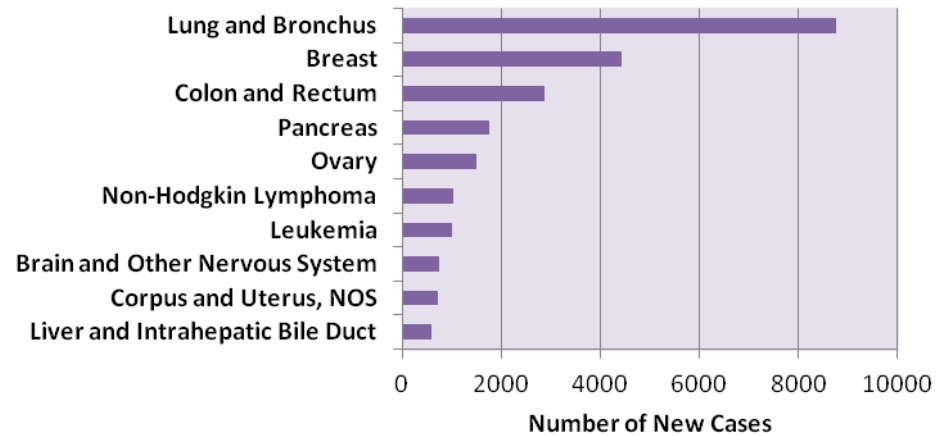
Black



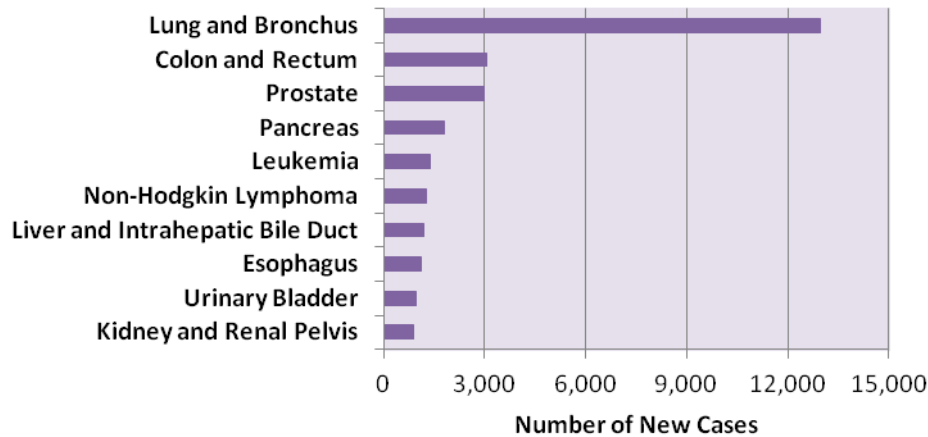
LEADING CAUSES OF CANCER MORTALITY CONTINUED

- Lung cancer was the 1st leading cause of cancer death among females
- Breast cancer was the 2nd leading cause, followed by colorectal cancer (3rd), pancreatic cancer (4th), and ovary cancer (5th)

Female



Male



- Lung cancer was the 1st leading cause of cancer mortality among males
- Colorectal cancer was the 2nd leading cause, followed by prostate cancer (3rd), pancreatic cancer (4th), and leukemia (5th)

CANCER INCIDENCE AND MORTALITY IN TENNESSEE, 2005-2009

CANCER INCIDENCE AND MORTALITY, ALL SITES COMBINED

Cancer Incidence and Mortality, All Sites Combined, Tennessee, 2005-2009

Gender	Race	Incidence			Mortality			M:I Ratio [‡]
		Count ^{**}	Rate ^{***}	Confidence Interval	Count ^{**}	Rate ^{***}	Confidence Interval	
Both [†]	All Races [†]	158,393	476.8	474.4 - 479.2	65,604	199.8	198.3 - 201.4	0.42
	Black	19,594	480.9	474.0 - 487.9	9,329	246.5	241.4 - 251.7	0.51
	White	136,748	475.7	473.1 - 478.2	55,949	194.8	193.1 - 196.4	0.41
Female	All Races [†]	74,925	414.7	411.7 - 417.7	30,065	161.2	159.4 - 163.0	0.39
	Black	9,624	400.1	392.0 - 408.2	4,463	194.3	188.5 - 200.1	0.49
	White	64,269	416.7	413.4 - 420.0	25,431	157.1	155.2 - 159.1	0.38
Male	All Races [†]	83,468	567.0	563.1 - 571.0	35,539	257.2	254.4 - 260.0	0.45
	Black	9,970	611.8	599.0 - 624.7	4,866	338.7	328.5 - 349.0	0.55
	White	72,479	560.9	556.7 - 565.1	30,518	249.5	246.7 - 252.4	0.44
Age at Diagnosis or Death								
	0-19	1,399	16.9	16.1 - 17.9	209	2.6	2.2 - 2.9	0.15
	20-44	12,232	120.1	118.0 - 122.2	2,218	21.9	21.0 - 22.8	0.18
	45-64	61,741	738.1	732.3 - 744.0	19,959	236.6	233.3 - 239.9	0.32
	65+	83,021	2090.6	2076.4 - 2104.9	43,218	1096.3	1086.0 - 1106.7	0.52
Year of Diagnosis or Death								
	2005	29,974	474.4	469.0 - 479.8	12,970	208.7	205.1 - 212.3	0.44
	2006	30,650	472.4	467.1 - 477.8	13,007	202.7	199.2 - 206.3	0.43
	2007	31,777	477.8	472.5 - 483.1	13,112	199.2	195.8 - 202.6	0.42
	2008	32,588	478.4	473.1 - 483.6	13,108	194.5	191.2 - 197.9	0.41
	2009	33,404	481.1	475.9 - 486.4	13,407	195.0	191.6 - 198.3	0.41

*Excluded hermaphrodites and transsexuals

**Total counts from 2005-2009

***Age-adjusted annual rate per 100,000

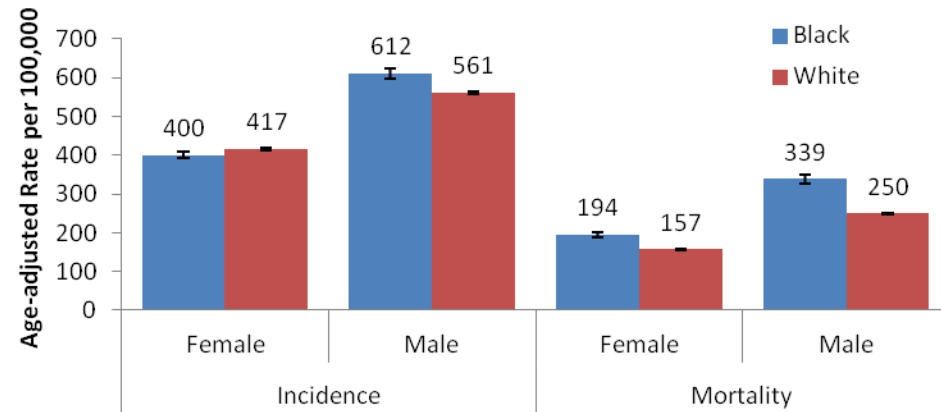
[†]Included whites, blacks, other races and those missing race information, which was less than 0.5% of all cases diagnosed during the period from 2005-2009

[‡]Mortality incidence ratio. See Technical Notes for details

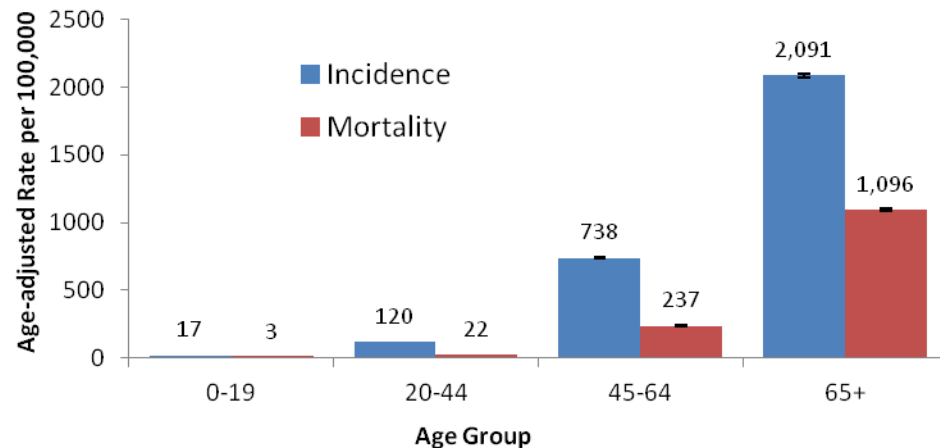
CANCER INCIDENCE AND MORTALITY, ALL SITES COMBINED CONTINUED

- From 2005 to 2009, a total of 158,393 Tennesseans were newly diagnosed with cancer, an average of 31,679 a year, or one case every 17 minutes
- During that same time period, 65,604 Tennesseans died from cancer, or one death every 40 minutes
- Males had higher incidence and mortality rates than females regardless of race
- Black females had a lower cancer incidence rate but a higher mortality rate than white females
- Black males had higher incidence and mortality rates than white males
- Both incidence and mortality rates of cancer increased with age, with the highest rates among people 65 years and older.
- The ratio of mortality and incidence rates also increased with age, from 0.15 for 0-19 year-olds to 0.52 for 65 and older

Cancer Incidence and Mortality, All Sites Combined
By Gender and Race, Tennessee, 2005-2009

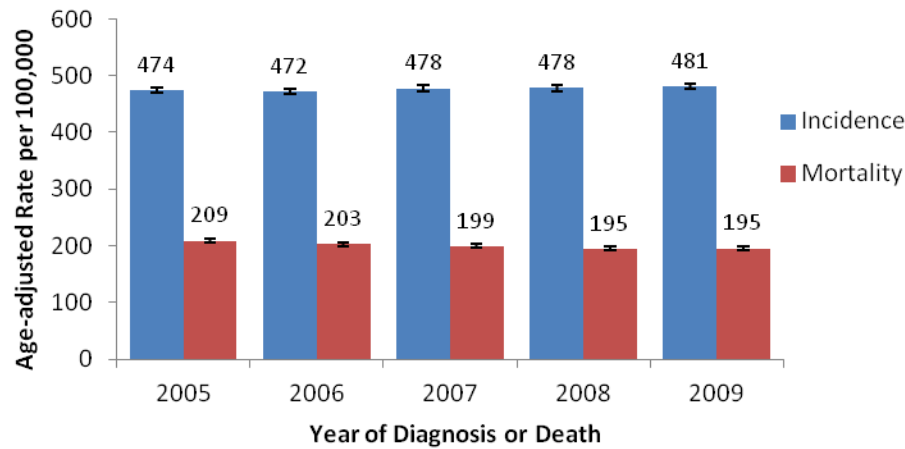


Cancer Incidence and Mortality, All Sites Combined
By Age Group, Tennessee, 2005-2009



CANCER INCIDENCE AND MORTALITY, ALL SITES COMBINED CONTINUED

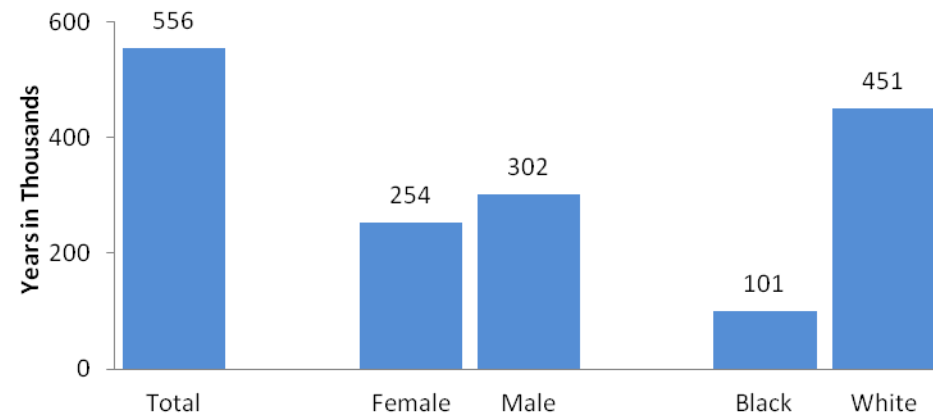
**Cancer Incidence and Mortality Time Trends
All Sites Combined, Tennessee, 2005-2009**



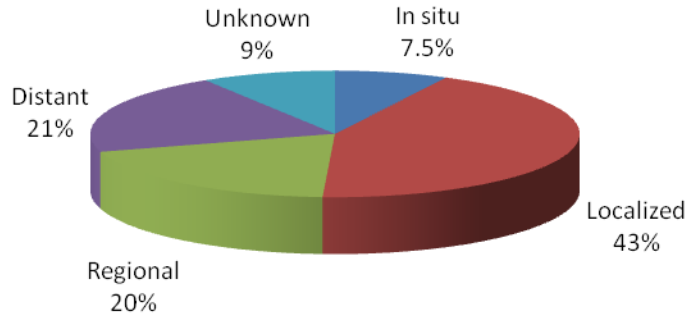
- The cancer incidence rate in Tennessee increased slightly over time, from 474/100,000 in 2005 to 481/100,000 in 2009. However, the change was not statistically significant
- The cancer mortality rate in Tennessee decreased over time, from 209/100,000 in 2005 to 195/100,000 in 2009, and the change was statistically significant

- In the five-year period from 2005-2009, a total of 556,000 years of potential life lost (YPLL) were due to premature cancer deaths (death before 75 years of age) for the total population; 254,000 years for females and 302,000 for males; 101,000 years for blacks and 451,000 for whites

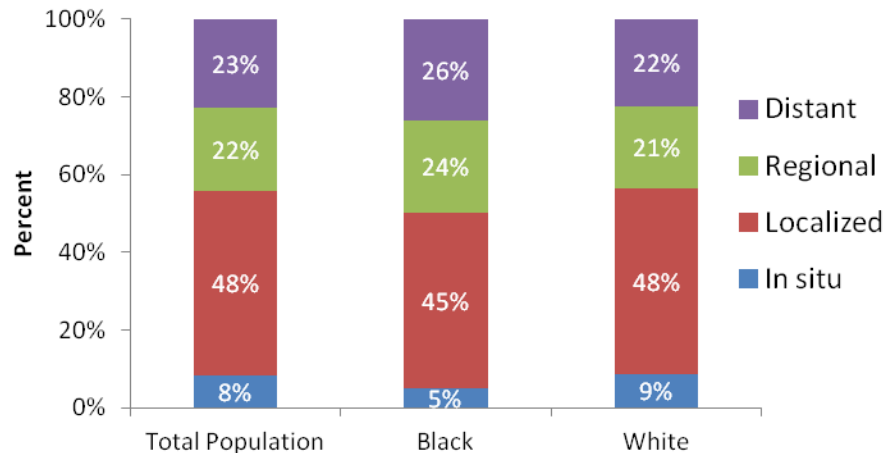
**Years of Potential Life Lost to Cancer
Tennessee, 2005-2009**



**Cancer Stage, All Sites Combined
Tennessee, 2005-2009**



**Cancer Stage, All Sites Combined
By Race, Tennessee, 2005-2009**



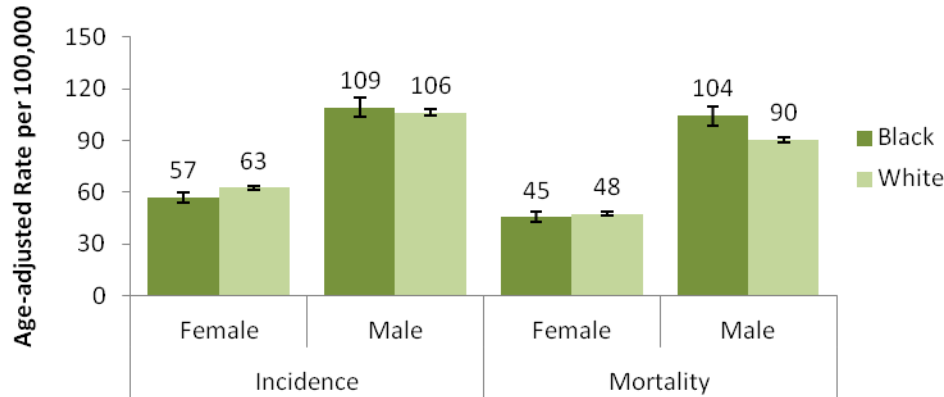
Cases with unknown stage were excluded. Numbers may not sum to 100% due to rounding errors

- 7.5% of new cancer cases were diagnosed at in situ stage; 43% at localized stage; 20% at regional stage, and 21% at distant stage. 9% of cases did not have sufficient information on stage at diagnosis
- Among those with known stage information, 8%, 48%, 22% and 23% were diagnosed at the stage of in situ, localized, regional and distant, respectively
- Black patients were more likely to be diagnosed at later stages than whites: 50% at regional or distant stage in blacks compared to 43% in whites

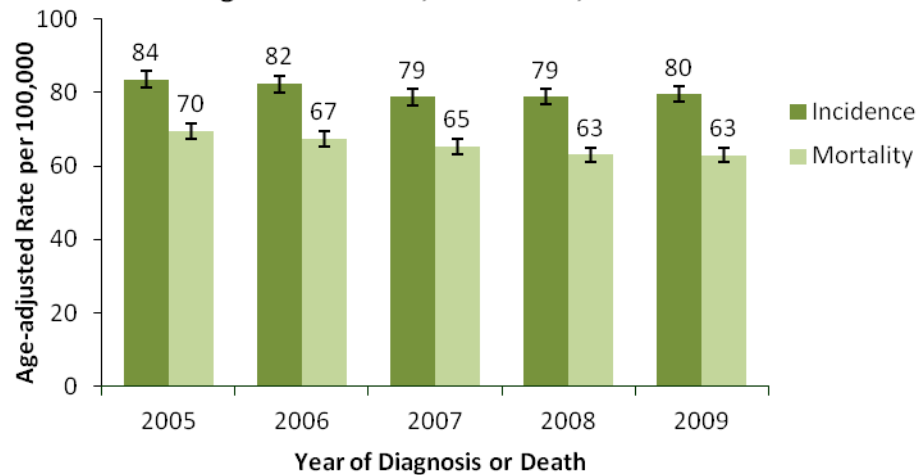
COMMON CANCERS IN TENNESSEE, 2005-2009

CANCER OF LUNG AND BRONCHUS

**Cancer Incidence and Mortality, Lung and Bronchus
By Gender, Tennessee, 2005-2009**



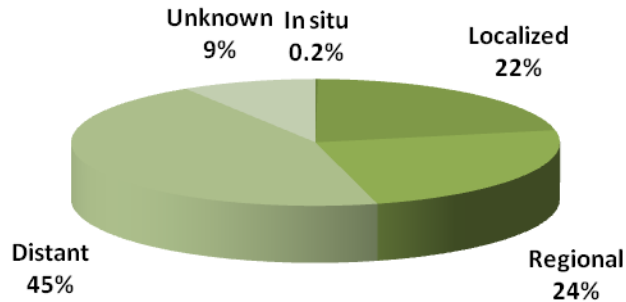
**Cancer Incidence and Mortality Time Trends
Lung and Bronchus, Tennessee, 2005-2009**



- There were 26,912 cases of newly diagnosed lung cancer in 2005-2009 among Tennesseans, resulting in an age-adjusted rate of 80.5/100,000
- In the same time period, 21,693 Tennesseans died from lung cancer, with an age-adjusted rate of 65.5/100,000
- Males had higher incidence and mortality rates than females regardless of race
- White females had a higher incidence rate than black females but no statistically significant difference in incidence rate was found between race groups for males
- Black males had a higher mortality rate than white males but no statistically significant difference in mortality rate was found between race groups for females
- Lung cancer incidence rates decreased slightly over time from 2005 to 2009 but the change was not statistically significant
- Cancer mortality rates also decreased from 2005-2009 and the change was statistically significant

CANCER OF LUNG AND BRONCHUS CONTINUED

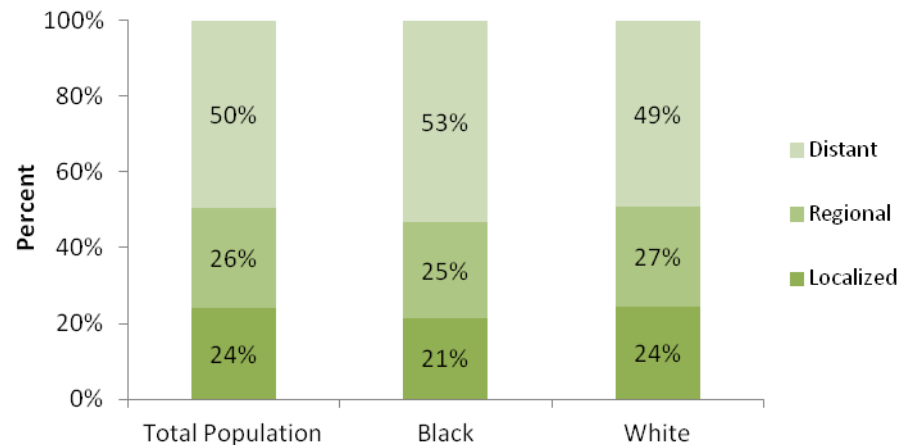
Cancer Stage, Lung and Bronchus
Tennessee, 2005-2009



- A very small proportion (0.2%) of lung cancer cases was diagnosed at the in situ stage
- About one in five cases (22%) was diagnosed at localized stage
- About one in four (24%) was diagnosed at regional stage
- Almost half of the cases (45%) were diagnosed at distant stage
- 9% cases were with unknown stage information

- Among cases with known stage information, three out of four (76%) were diagnosed at either regional or distant stage
- A slightly higher percentage of black patients was diagnosed at late stages (78%) than whites (76%), and the difference was statistically significant

Cancer Stage, Lung and Bronchus
By Race, Tennessee, 2005-2009

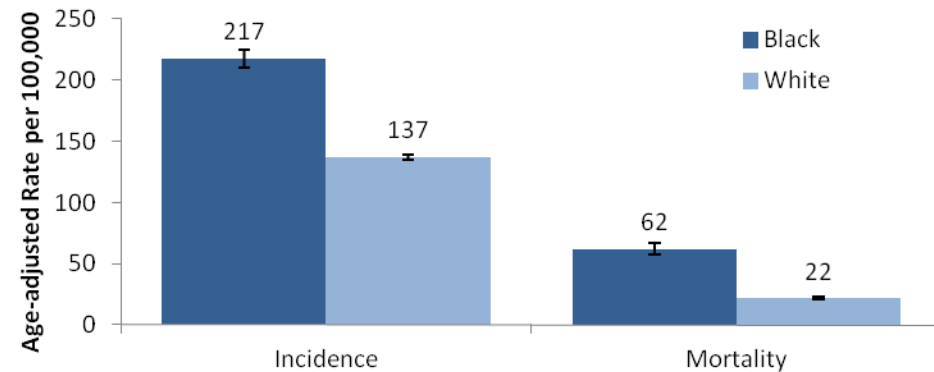


Cases with unknown stage were excluded. Numbers may not sum to 100% due to rounding errors

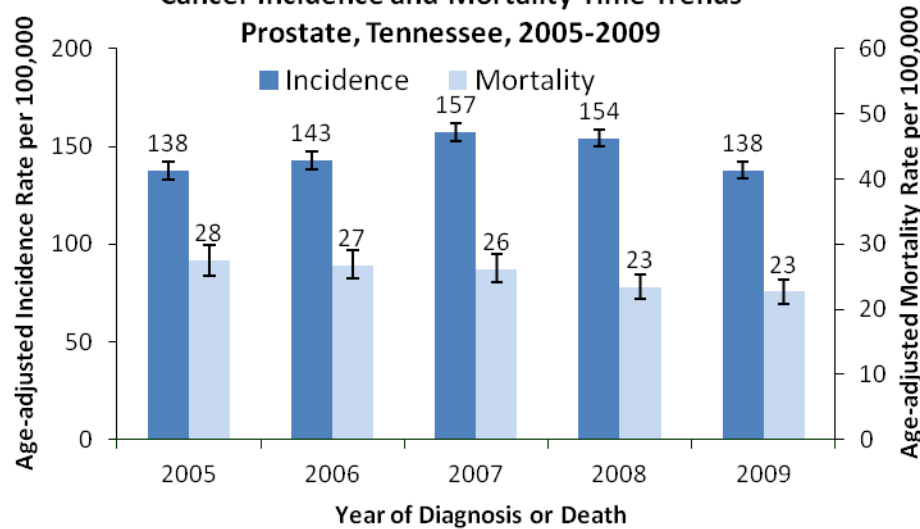
CANCER OF PROSTATE

- A total of 22,076 newly diagnosed prostate cancer cases were reported among Tennessee men from 2005-2009. The age-adjusted incidence rate was 146.0/100,000
- In the same time period, 2,977 prostate cancer deaths were reported, giving an age-adjusted mortality rate of 25.2/100,000
- The mortality to incidence ratio was 0.17, making prostate cancer the 2nd least deadly among the top 10 cancers
- Blacks had higher incidence and mortality rates than whites

**Cancer Incidence and Mortality, Prostate
By Race, Tennessee, 2005-2009**



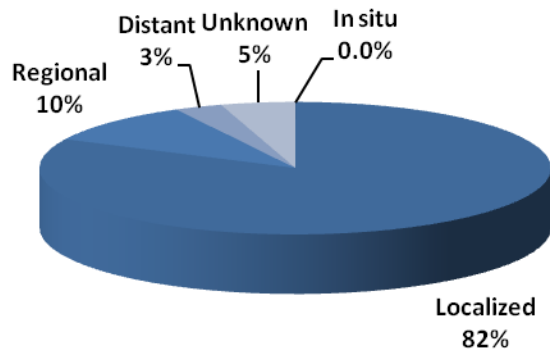
**Cancer Incidence and Mortality Time Trends
Prostate, Tennessee, 2005-2009**



- Prostate cancer incidence rate increased from 2006 to 2007 but decreased from 2008 to 2009.
- Prostate cancer mortality rates decreased by 18% from 2005 to 2009 and the decrease was statistically significant

CANCER OF PROSTATE CONTINUED

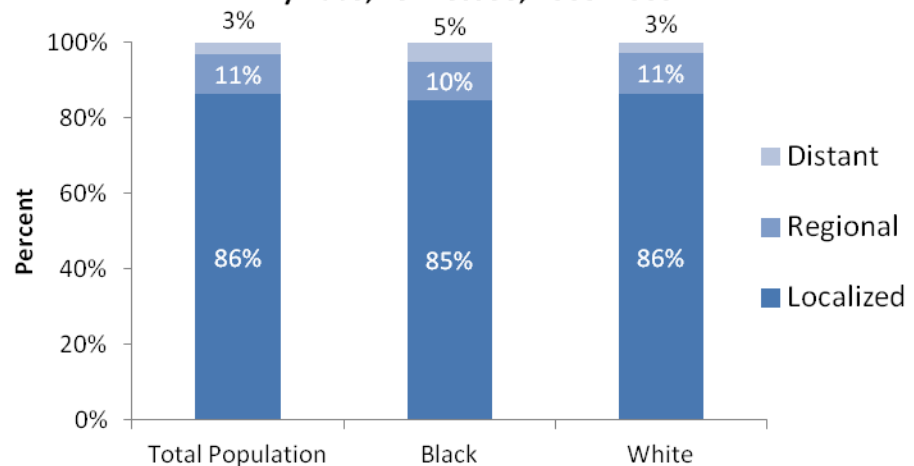
**Cancer Stage, Prostate
Tennessee, 2005-2009**



- Only 3 cases of prostate cancer cases were diagnosed at the in situ stage
- About four out of five cases (82%) were diagnosed at localized stage
- Another one in ten were diagnosed at regional stage
- 3% of cases were diagnosed at distant stage
- 5% of cases were with unknown stage

- Among cases with known stage information, only 14% to 15% of cases were diagnosed at late stages
- A slightly higher percentage of black patients were diagnosed at late stages (15%) than whites (14%), and the difference was statistically significant
- Early diagnosis of prostate cancer is believed to contribute to the low mortality to incidence ratio

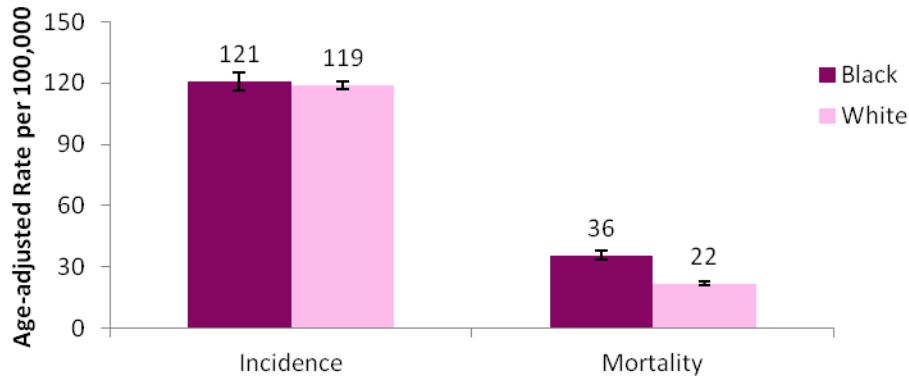
**Cancer Stage, Prostate
By Race, Tennessee, 2005-2009**



Cases with unknown stage were excluded

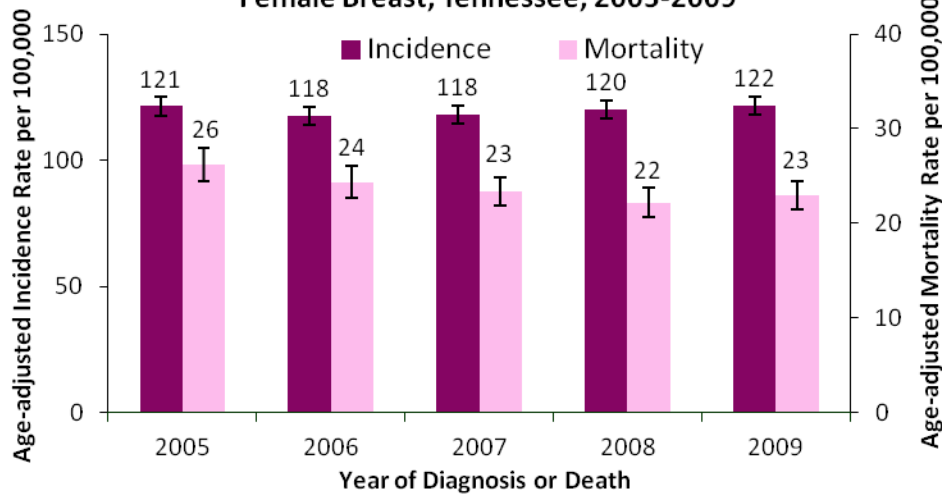
CANCER OF BREAST AMONG FEMALES

Cancer Incidence and Mortality, Female Breast
Tennessee, 2005-2009



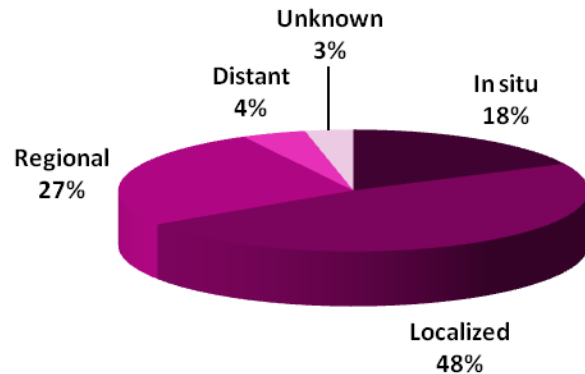
- A total of 21,535 new breast cancer cases were diagnosed among Tennessee women during 2005-2009. The age-adjusted rate was 119.8/100,000
- In the same time period, 4,411 Tennessee women died from breast cancer, giving an age-adjusted rate of 23.8/100,000
- Black women and white women had almost the same incidence rate but black women had a higher mortality rate than their white counterparts
- Female breast cancer incidence rates were stable from 2005 to 2009 while mortality rates decreased slightly from 26/100,000 in 2005 to 23/100,1000 in 2009

Cancer Incidence and Mortality Time Trends
Female Breast, Tennessee, 2005-2009

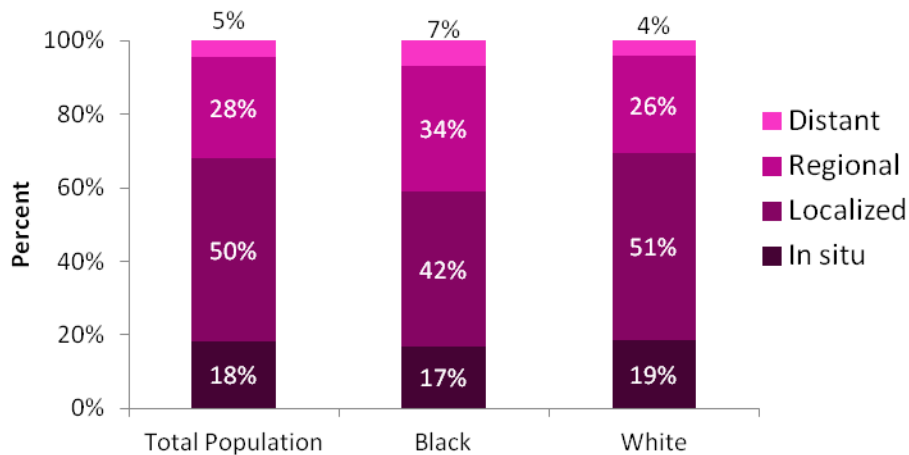


CANCER OF BREAST AMONG FEMALES CONTINUED

**Cancer Stage, Female Breast Cancer
Tennessee, 2005-2009**



**Cancer Stage, Female Breast
By Race, Tennessee, 2005-2009**



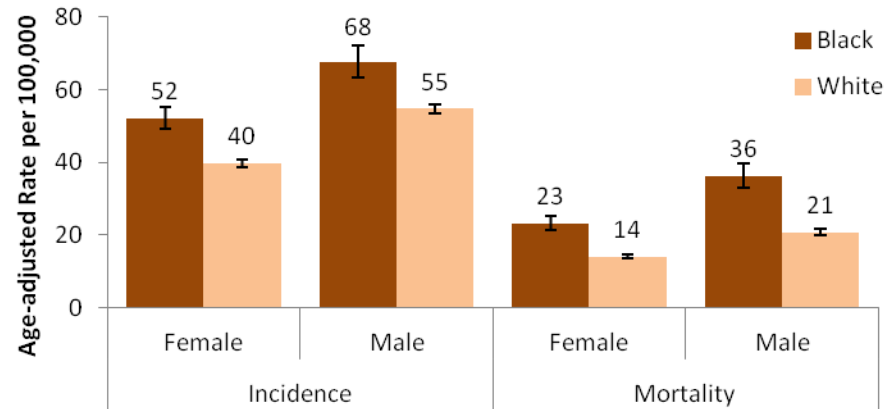
Cases with unknown stage were excluded. Numbers may not sum to 100% due to rounding errors

- Almost one in five (18%) female breast cancer cases were diagnosed at the in situ stage
- Almost half of the cases (48%) were diagnosed at localized stage
- About one in four cases (27%) were diagnosed at regional stage
- 4% of cases were diagnosed at distant stage
- 3% of cases had unknown stage
- Among those with known stage, one-third (33%) were diagnosed at late stages, either at regional or distant stage
- Black women had a higher proportion (41%) of cases diagnosed at late stages than white women (30%). This may partially explain the higher breast cancer mortality among black women

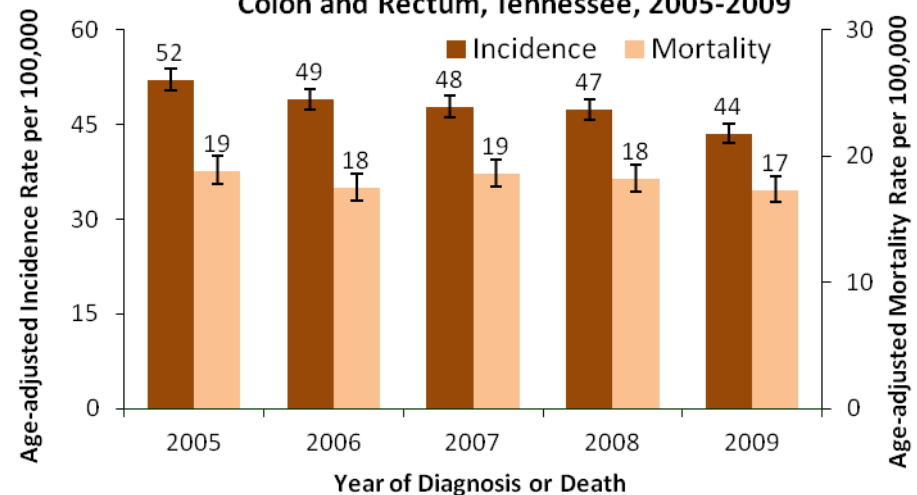
CANCER OF COLON AND RECTUM

- A total of 15,822 new cases of colorectal cancer were reported during 2005-2009 among Tennesseans. The age-adjusted rate was 47.8/100,000
- In the same time period, 5,917 colorectal cancer deaths were reported, resulting in an age-adjusted rate of 18.1/100,000
- Males had higher incidence and mortality rates than females regardless of race
- Blacks had higher incidence and mortality rates than whites regardless of gender
- Black males had the highest mortality rate among four gender-race groups while white females had the lowest; and the same pattern was also observed for incidence rates
- Colorectal cancer incidence rate decreased statically significantly from 2005 to 2009 while the decrease in mortality rate was not statistically significant

**Cancer Incidence and Mortality
Colon and Rectum, Tennessee, 2005-2009**

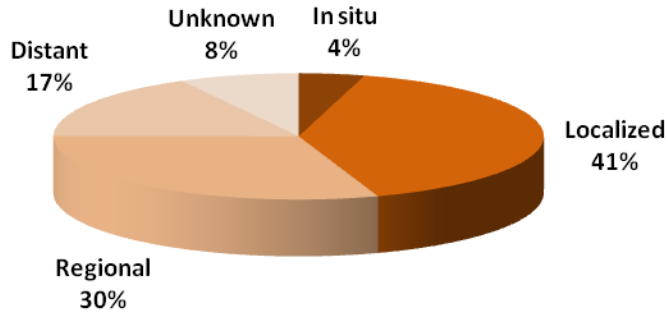


**Cancer Incidence and Mortality Time Trends
Colon and Rectum, Tennessee, 2005-2009**



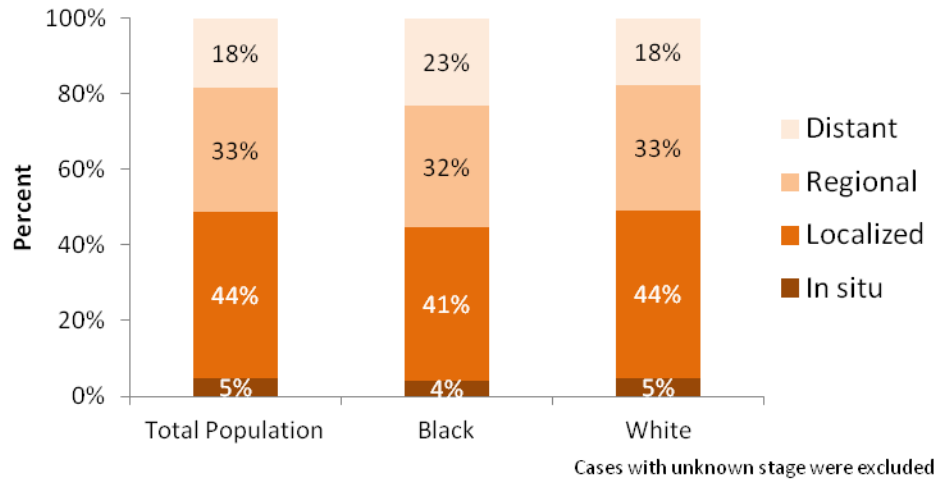
CANCER OF COLON AND RECTUM CONTINUED

**Cancer Stage, Colon and Rectum
Tennessee, 2005-2009**



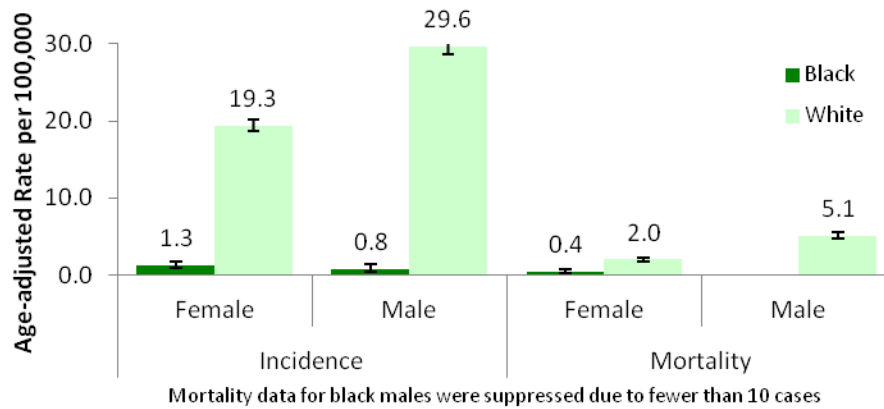
- 4% of the colorectal cancer incidence cases were diagnosed at the in situ stage
- 41% were diagnosed at localized stage
- 30% were diagnosed at regional stage
- 17% of cases were diagnosed at distant stage
- 8% of cases were with unknown stage
- Among those with known stage, 51% were diagnosed at regional or distant stage
- Black Tennesseans had a higher proportion (55%) of cases diagnosed at late stages than whites (51%)
- Almost one-fourth (23%) of blacks were diagnosed at distant stage, compared to less than one-fifth (18%) of whites

**Cancer Stage, Colon and Rectum
By Race, Tennessee, 2005-2009**

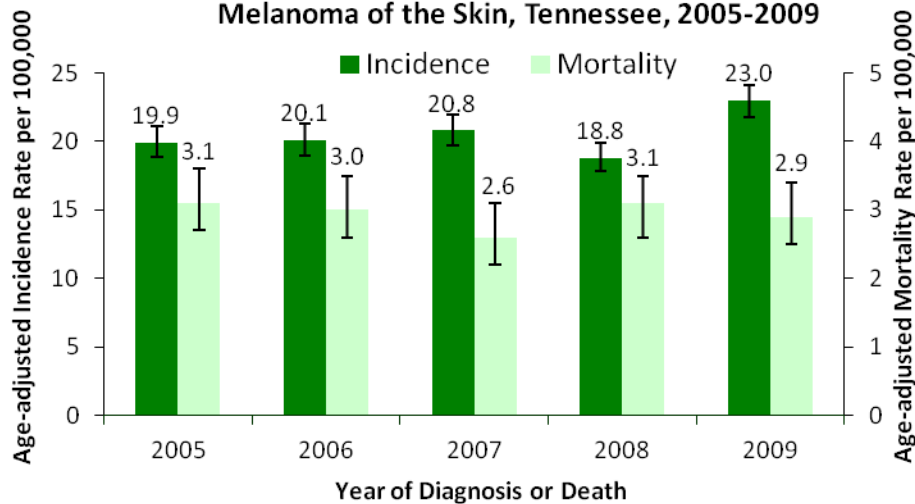


MELANOMA OF THE SKIN

**Cancer Incidence and Mortality, Melanoma of the Skin
Bt Gender and Race, Tennessee, 2005-2009**



**Cancer Incidence and Mortality Time Trends
Melanoma of the Skin, Tennessee, 2005-2009**

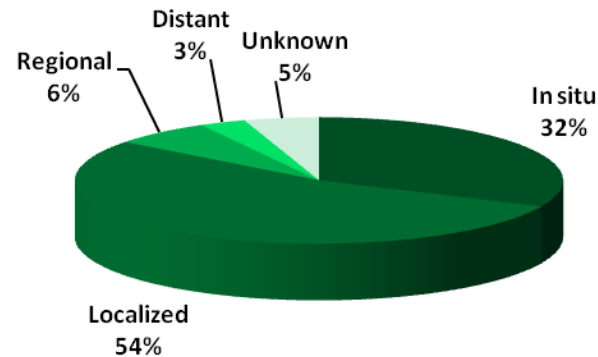


- There were 6,725 newly diagnosed melanoma skin cancer cases among Tennesseans during 2005-2009 and the age-adjusted rate was 20.6/100,000
- In the same time period, 964 melanoma skin cancer patients died, giving an age-adjusted rate of 3.0/100,000
- The mortality to incidence ratio was 0.15 for the total population, making melanoma skin cancer the least deadly among top 10 common cancers
- However, the mortality to incidence ratio for blacks was 0.45, more than three times as high as that for the whites (0.14). (See appendix I)
- Whites had a much higher melanoma skin cancer incidence rate than blacks regardless of gender
- Males had a higher incidence rate than females regardless of race
- White females had a higher mortality rate than black females
- Melanoma skin cancer incidence rate was the lowest in 2008
- Melanoma skin cancer mortality rates did not change statistically significantly over time

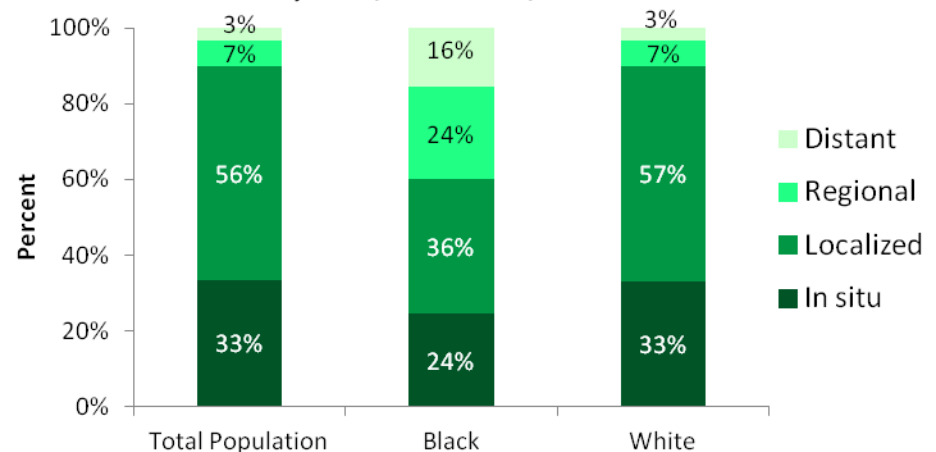
MELANOMA OF THE SKIN CONTINUED

- About one-third (32%) of melanoma skin cancer incidence cases were diagnosed at the in situ stage
- 54% of cases were diagnosed at localized stage
- 6% of cases were diagnosed at regional stage
- 3% of cases were diagnosed at distant stage
- 5% of cases were with unknown stage
- Among those with known stage, only one in ten were diagnosed at regional or distant stage, which may explain why melanoma skin cancer was least deadly among top 10 common cancers
- There was an evident racial disparity in stage of diagnosis: four in ten cases among blacks were diagnosed at late stages, compared to one in ten among whites. This may have contributed to the much higher mortality to incidence ratio among blacks

**Cancer Stage, Melanoma of the Skin
Tennessee, 2005-2009**



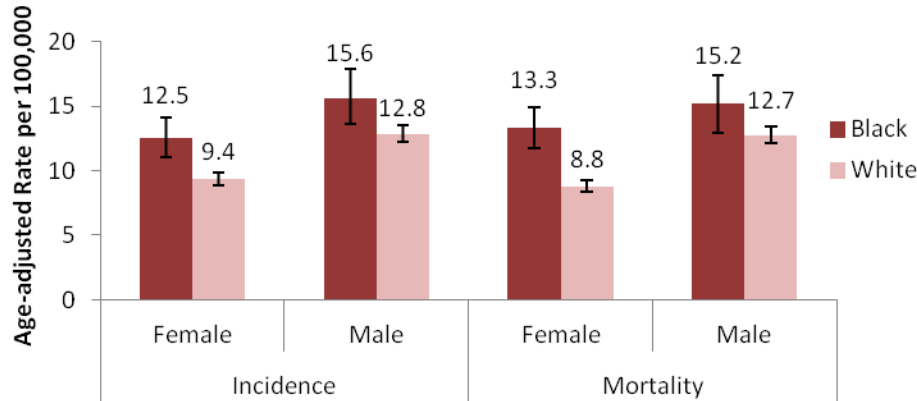
**Cancer Stage, Melanoma of the Skin
By Race, Tennessee, 2005-2009**



Cases with unknown stage were excluded. Numbers may not sum to 100% due to rounding errors

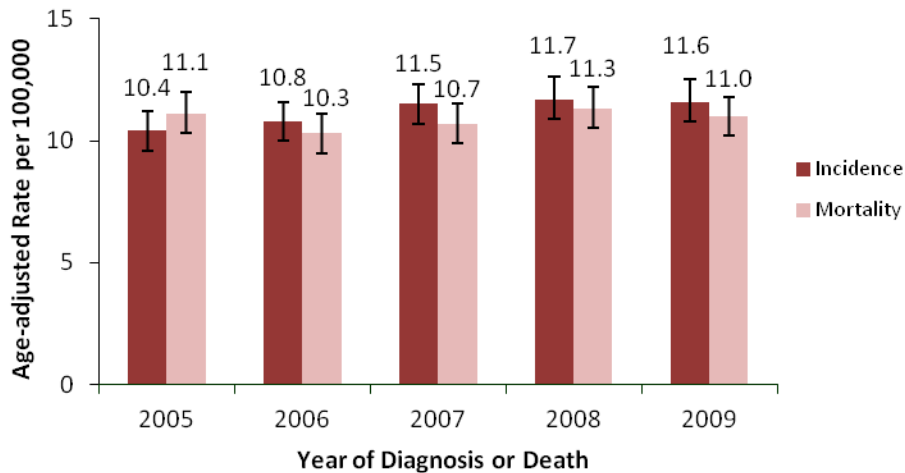
CANCER OF PANCREAS

**Cancer Incidence and Mortality, Pancreas
By Gender and Race, Tennessee, 2005-2009**



- From 2005-2009, there were 3,686 new pancreatic cancer cases and the age-adjusted rate was 11.2/100,000
- During that period, 3,563 deaths were reported, giving an age-adjusted mortality rate of 10.9/100,000
- The mortality to incidence ratio was 0.97, making pancreatic cancer the most deadly among the top 10 leading causes of cancer mortality in Tennessee
- There were no statistically significant changes in either incidence rate or mortality rate from 2005-2009

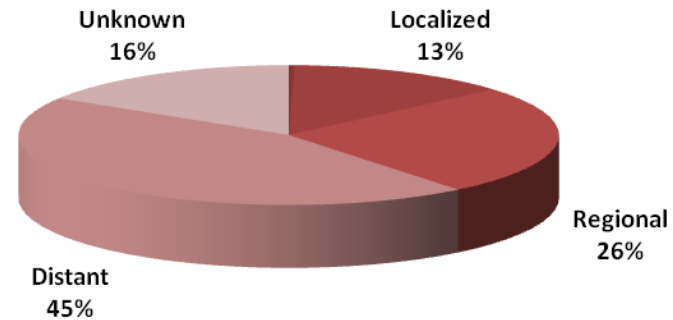
**Cancer Incidence and Mortality Time Trends
Pancreas, Tennessee, 2005-2009**



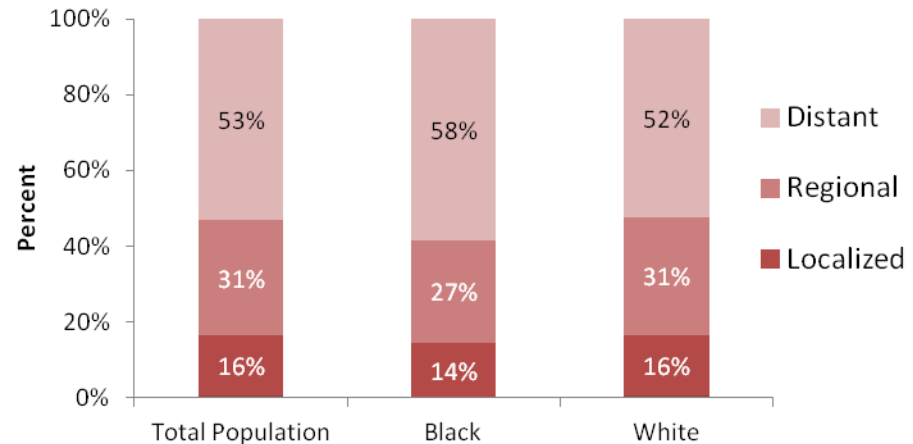
CANCER OF PANCREAS CONTINUED

- Only 12 pancreatic cancer cases were diagnosed at the in situ stage
- 13% of cases were diagnosed at localized stage
- 26% of cases were diagnosed at regional stage
- 45% of cases were diagnosed at distant stage
- 16% of cases did not have sufficient information on stage
- Among those with known stage, 84% were diagnosed at regional or distant stage for the total population
- There was no statistically significant difference in percentage of cases diagnosed at late stages between blacks and whites

Cancer Stage, Pancreas
Tennessee, 2005-2009



Cancer Stage, Pancreas
By Race, Tennessee, 2005-2009

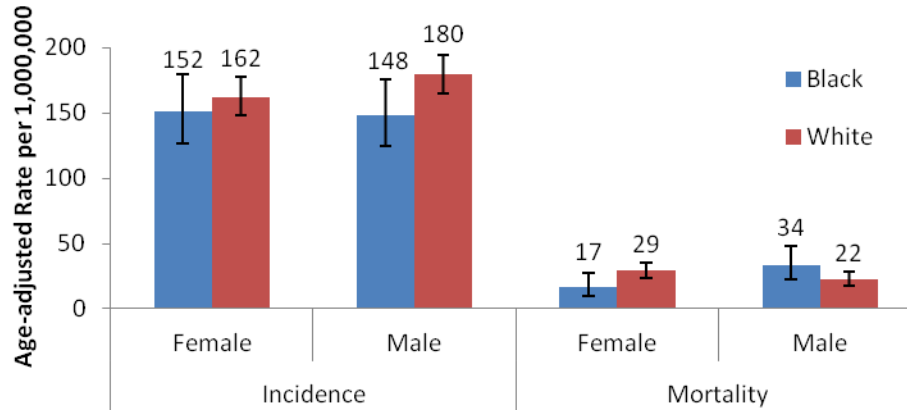


Cases with unknown stage were excluded. Numbers may not sum to 100% due to rounding errors

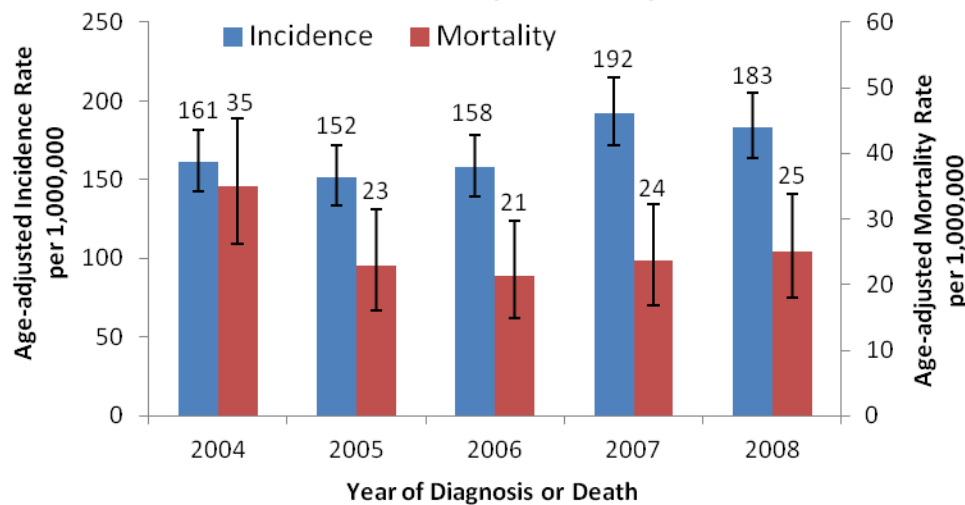
CHILDHOOD CANCER IN TENNESSEE, 2005-2009

CHILDHOOD CANCER BY GENDER AND RACE, AND TIME TREND

**Cancer Incidence and Mortality
Children 0-19 Years Old, Tennessee, 2005-2009**



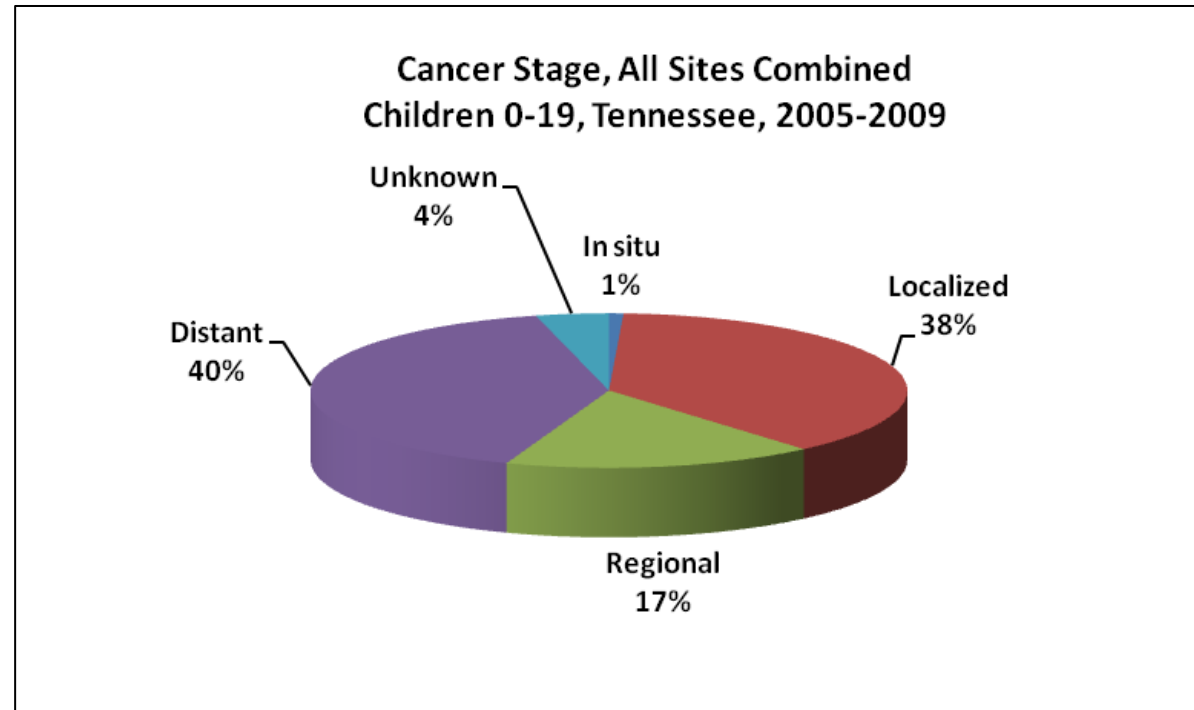
**Cancer Incidence and Mortality Time Trends
Children 0-19 Years Old, Tennessee, 2005-2009**



- A total of 1,399 new cancer cases in Tennessee were reported among children 19 years and younger from 2005-2009. The age-adjusted rate was 169.5/1,000,000
- A total of 209 children 19 and younger died of cancer in that five-year period, giving an age-adjusted annual mortality rate of 25.5/1,000,000
- There were no statistically significant differences between gender and/or race groups for either incidence or mortality rate
- There were no statistically significant changes in either incidence rate or mortality rate among children from 2005-2009

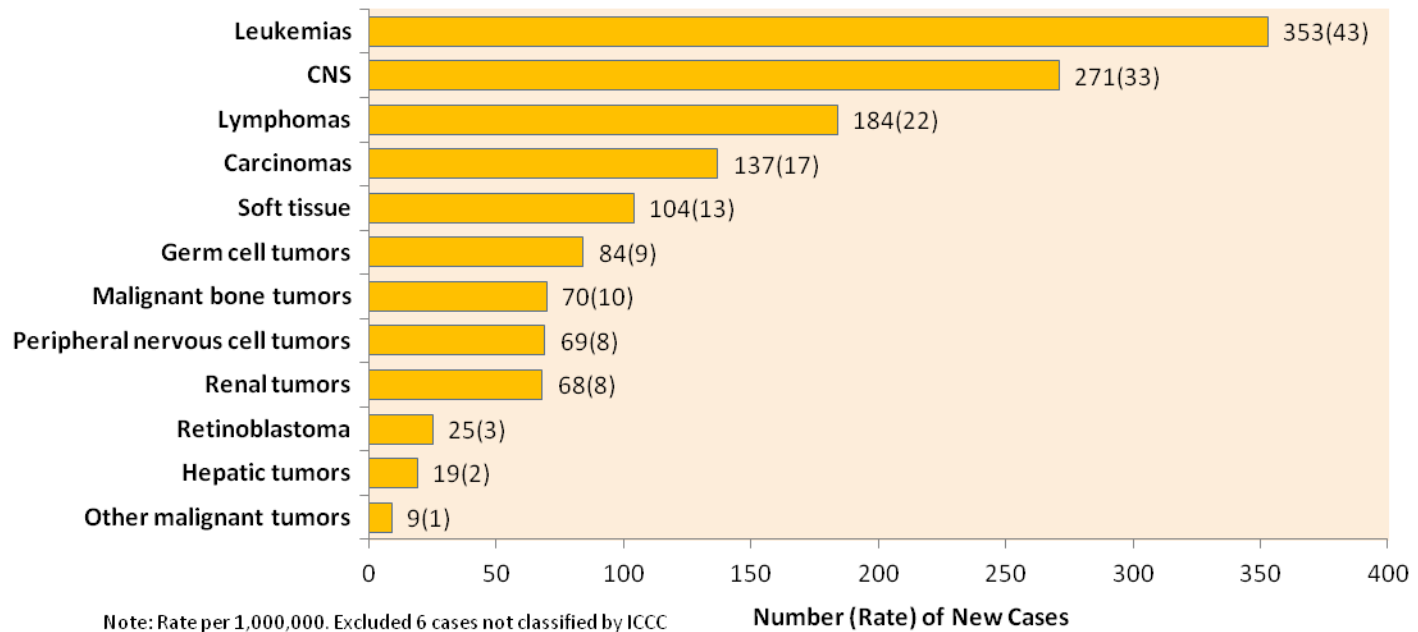
CHILDHOOD CANCER BY STAGE

- Eleven childhood cancer cases (1%) were diagnosed at the in situ stage
- 38% of cases were diagnosed at localized stage
- 17% of cases were diagnosed at regional stage
- 40% of cases were diagnosed at distant stage
- 4% of cases did not have information on stage



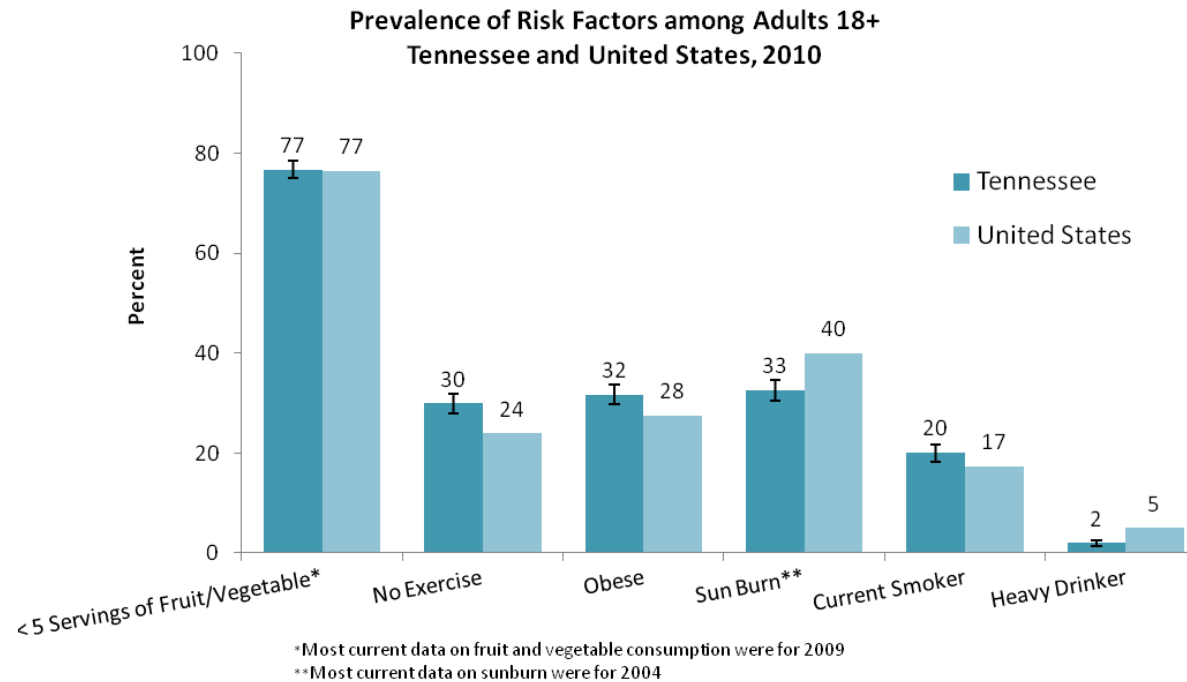
LEADING CAUSES OF CHILDHOOD CANCER INCIDENCE

Leading Causes of Cancer Incidence
Children 0-19 Years Old, Tennessee, 2005-2009



- Leukemia was the 1st leading cause of cancer incidence among children in Tennessee
- The second leading cause was central nervous system cancer, followed by lymphomas (3rd), carcinomas (4th), and soft tissue tumors (5th)

CANCER RISK FACTOR PREVALENCE IN TENNESSEE, 2010



- In 2010, 77% of adult Tennesseans reported that they did not eat a minimum of 5 servings of fruits and vegetables a day, the same as the U.S. median
- 30% of adult Tennesseans did not participate in any physical activities during the past month, compared to 24% nationwide
- Of adult Tennesseans, 32% were obese compared to U.S. median of 28%
- In 2004, the most current year for which state-level data are available, 33% of adult Tennesseans reported having had sunburns in the past 12 months, compared to U.S. median of 40%
- 20% of adult Tennesseans were current cigarette smokers compared to U.S. median of 17%
- 2% of Tennessee adults were heavy drinkers (i.e. adult men having more than two drinks per day and adult women having more than one drink per day), compared to U.S. median of 5%

TECHNICAL NOTES

DEFINITION OF TERMS

Incidence Rate: The cancer incidence rate is the number of new cases of cancer diagnosed in a specified population during a specified time period, usually expressed as the number of new cases per 100,000 persons at risk. That is,

Incidence rate = (Number of new cases / Population at risk) * 100,000.

The numerator of the incidence rate is the number of newly diagnosed cancer cases; the denominator of the incidence rate is the size of the population at risk. The number of new cancers may include multiple primary cancers occurring in one patient. The primary site reported is the site of origin and not the metastatic site, the distant site to which the cancer has spread. In general, the incidence rate does not include recurrences. The incidence rate can be computed for a given type of cancer or for all cancers combined. Incidence rates presented in this report are for invasive cancers and both invasive and in situ bladder cancer only, unless otherwise specified. When cancer stage was considered, cases diagnosed at any stage, including the in situ stage, were included in the analyses.

Mortality Rate: The cancer mortality rate is the number of deaths with cancer as the underlying cause of death in a specified at-risk population in a given time period, usually expressed as the number of deaths due to cancer per 100,000 persons at risk. That is,

Mortality rate = (Number of cancer deaths / Population at risk) * 100,000.

Age-adjusted Rate: An age-adjusted incidence or mortality rate is a weighted average of the age-specific incidence or mortality rates, where the weights are the counts of persons in the corresponding age groups of a standard million population. Aging is an important risk factor for the development of cancer. Hence, if one population has a significantly greater proportion of older people than another population, one would expect a larger number of cancers in the older population. Therefore, rates need to be age-adjusted to remove the confounding effect of age before comparisons are made between populations with different age distributions. In this report, incidence and mortality rates are age-adjusted to the 2000 United States Standard Population with 19 age groups.

Mortality-Incidence Ratio (M:I): In this report, mortality-incidence ratio was calculated as the ratio of age-adjusted mortality and incidence rates. In a general sense, the higher the ratio, the higher fatality of the cancer or the lower the survival. However, for some cancers with very high fatality, e.g. pancreatic cancer, the M:I ratio may exceed 1 because the incidence and mortality cohorts are not exactly the same. In addition, the age-adjustment process may also make this possible because the age of a patient at death is likely greater than that at diagnosis; therefore, the patient may be accounted for at one age group for incidence and at an older age group for mortality.

Years of potential life lost: Years of potential life lost (YPLL) is another indicator often used to describe disease burden. It is an estimate of the years a person would have lived if he or she had not died prematurely. YPLL highlights the loss to society as a result of deaths in childhood, adolescence and early adult life and is calculated as the number of years of potential life lost by each death occurring before a predetermined end point, set at age 75 years in this report⁴.

Confidence Interval: The confidence interval is a range of values that has a specified probability of containing the true rate of interest in the population. The width of a confidence interval reflects the amount of variability in the estimated rate. In this report the 95% confidence intervals were

⁴ Premature Mortality in the United States: Public Health Issues in the Use of Years of Potential Life Lost. MMWR. 1986 Dec 19;35(2 Suppl.):1S-11S.

calculated using a gamma distribution method developed by Fay and Feuer⁵ and modified by Tiwari, Clegg, and Zou⁶.

Suppression of Rates and Counts: Due to concerns regarding statistical reliability, statistics were suppressed when there were 1-9 reported cases. Counts or rates that were suppressed in this report were denoted by “^”.

Cancer Coding: Tennessee Cancer Registry uses the International Classification of Diseases for Oncology, 3rd Edition (ICD-O-3), to code site (topography), histology (morphology), and behavior (e.g. whether malignant or not) of incident cases⁷. Cases are categorized according to the 2003 revised recodes of the Surveillance, Epidemiology and End Results (SEER) program of the National Cancer Institute (NCI). These recodes define standard groupings of primary cancer sites. Following CDC’s National Program of Cancer Registries (NPCR) and SEER cancer registries’ guidelines, the TCR considers as reportable all incident cases with a behavior code of 2 (in situ, noninvasive) or 3 (invasive, primary site only) in ICD–O–3 terminology with the exception of in situ cancer of the cervix. Benign brain tumors are also reportable but not included in this report. When reporting childhood cancers, the

⁵ Fay MP, Feuer EJ. Confidence Intervals for Directly Standardized Rates: A Method Based on the Gamma Distribution. *Statistics in Medicine* 1997; 16(7):791-801.

⁶ Tiwari RC, Clegg LX, Zou Z. Efficient Interval Estimation for Age-adjusted Cancer Rates. *Statistical Methods in Medical Research* 2006; 15(6):547-69.

⁷ Young JL Jr, Roffers SD, Ries LAG, Fritz AG, Hurlbut AA (eds). SEER Summary Staging Manual - 2000: Codes and Coding Instructions, National Cancer Institute, NIH Pub. No. 01-4969, Bethesda, MD, 2001.

International Classification of Childhood Cancer, 3rd Edition (ICCC-3) is used. For cancer mortality data, the International Classification of Diseases, 10th Revision (ICD-10), is used.

Cancer Staging: Stage provides a measure of disease progression, detailing the degree to which the cancer has advanced. The SEER summary stage method is used in this report, which describes cancers in five stages⁸:

- In situ: Abnormal cells are present only in the layer of cells in which they developed.
- Localized: Cancer is limited to the organ in which it began, without evidence of spread.
- Regional: Cancer has spread beyond the primary site to nearby lymph nodes or organs and tissues.
- Distant: Cancer has spread from the primary site to distant organs or distant lymph nodes.
- Unknown: There is not enough information to determine the stage.

Tennessee counties and regions: In this report, Tennessee's 95 counties are grouped into eight regions. Metropolitan counties are grouped into the regions where they are located.

STATISTICAL METHODS

SAS 9.2 was used to prepare the incidence and mortality data⁹ and SEER*Stat 7.1.0¹⁰ was used for counting numbers of new

⁸ SEER Program Coding and Staging Manual 2010. National Cancer Institute. <http://seer.cancer.gov/tools/codingmanuals/>.

⁹ SAS software is a trademark of SAS Institute Inc., 2011, SAS Campus Drive, Cary, North Carolina 27513, USA.

cases and deaths due to cancer and calculating age-adjusted rates and confidence intervals.

Confidence intervals were used to test if the difference in incidence or mortality rates between two groups or two years, e.g. blacks vs. whites or 2005 vs. 2009, was statistically significant. If the 95% confidence intervals did not overlap, the difference was determined to be statistically significant at the 0.05 level. The comparison of confidence intervals method is a conservative test of statistical significance^{11,12}. Thus, findings of non-significant differences should be interpreted with caution, especially when the two confidence intervals overlap only slightly.

Chi Square tests were used to test the differences in cancer stages, i.e. late stages (regional and distant combined) versus early stages (in situ and localized combined) between blacks and whites.

DATA SOURCES

Tennessee Cancer Registry Data: Cancer incidence data contain records of cases of primary cancer that were first diagnosed among Tennessee residents between January 1, 2005 and December 31, 2009, and were reported to the TCR

¹⁰ Surveillance Research Program, National Cancer Institute SEER*Stat software (www.seer.cancer.gov/seerstat) version 7.1.0.

¹¹ Fay MP, Feuer EJ. Confidence Intervals for Directly Standardized Rates: A Method Based on the Gamma Distribution. *Statistics in Medicine* 1997; 16(7):791-801.

¹² Tiwari RC, Clegg LX, Zou Z. Efficient Interval Estimation for Age-adjusted Cancer Rates. *Statistical Methods in Medical Research* 2006; 15(6):547-69.

as of April 2012. Cases with unknown gender or gender reported as hermaphrodite or transsexual were not included in this report (4 cases without gender information and 10 cases were hermaphrodite or transsexual). Cases with unknown race (650 cases) were included in the “All Races” category. Five cases with unknown age were excluded from all analyses except the calculation of the leading causes of cancer incidence and cancer by stage. A total of 356 newly diagnosed cases that did not have information on resident county and region were included in the state level statistics.

Cancer Mortality Data: Record-level mortality data were provided by the Office of Health Statistics, Tennessee Department of Health. There were no cases with missing age or gender information. Six deaths had unknown race and were included in the “All Races” category.

The Behavioral Risk Factor Surveillance System (BRFSS) Data: BRFSS is a CDC-funded, state-administered, random-digit-dialed telephone survey of the U.S. non-institutionalized

population, 18 years of age and older that collects information on health risk behaviors, preventive health practices, and health care access primarily related to chronic disease and injury. BRFSS was established in 1984 by the Centers for Disease Control and Prevention (CDC); currently data are collected monthly in all 50 states, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, and Guam. The nationwide BRFSS data were the median for 50 states and Washington D.C.

State Cancer Profiles: State Cancer Profiles is a web-based, comprehensive, and interactive data query system provided by the National Cancer Institute (NCI) and the Centers for Disease Control & Prevention (CDC). Tennessee and United States cancer mortality trend data and Tennessee cancer rankings in incidence and mortality were based on age-adjusted rates of 50 states and Washington D.C. obtained online from this website:

<http://statecancerprofiles.cancer.gov>.

APPENDICIES

APPENDIX I. INCIDENCE AND MORTALITY OF COMMON CANCERS

1. CANCER INCIDENCE AND MORTALITY, LUNG AND BRONCHUS, TENNESSEE, 2005-2009

Gender	Race	Incidence			Mortality			M:I Ratio [‡]
		Count **	Rate ***	Confidence Interval	Count **	Rate ***	Confidence Interval	
Both [†]	All Races [†]	26,912	80.5	79.5 - 81.5	21,693	65.5	64.6 - 66.4	0.81
	Black	3,036	77.5	74.7 - 80.4	2,587	68.1	65.4 - 70.8	0.88
	White	23,702	81.1	80.1 - 82.2	19,021	65.6	64.6 - 66.5	0.81
Female	All Races [†]	11,404	61.6	60.5 - 62.8	8,739	47.0	46.0 - 48.0	0.76
	Black	1,308	56.9	53.8 - 60.1	1,023	45.4	42.6 - 48.3	0.80
	White	10,009	62.5	61.3 - 63.8	7,668	47.5	46.4 - 48.6	0.76
Male	All Races [†]	15,508	106.3	104.6 - 108.0	12,954	91.2	89.6 - 92.9	0.86
	Black	1,728	109.2	103.8 - 114.7	1,564	104.3	98.8 - 109.9	0.96
	White	13,693	106.3	104.5 - 108.1	11,353	90.3	88.6 - 92.0	0.85
Age at Diagnosis or Death								
0-19		^	^	^ - ^	0	0.0	0.0 - 0.0	^
20-44		554	5.6	5.1 - 6.0	341	3.4	3.1 - 3.8	0.61
45-64		9,626	113.4	111.1 - 115.7	6,807	80.0	78.1 - 81.9	0.71
65+		16,728	421.5	415.1 - 428.0	14,545	367.9	361.9 - 374.0	0.87
Year of Diagnosis or Death								
2005		5,289	83.5	81.2 - 85.8	4,365	69.5	67.4 - 71.6	0.83
2006		5,363	82.3	80.1 - 84.5	4,358	67.4	65.4 - 69.4	0.82
2007		5,261	78.8	76.6 - 80.9	4,325	65.3	63.3 - 67.3	0.83
2008		5,416	78.8	76.7 - 80.9	4,281	63.0	61.1 - 64.9	0.80
2009		5,583	79.5	77.4 - 81.6	4,364	62.9	61.1 - 64.9	0.79

*Excluded hermaphrodites and transsexuals

**Total counts from 2005-2009

***Age-adjusted annual rate per 100,000

†Includes whites, blacks, other races and those missing race information

‡Mortality incidence ratio. See Technical Notes for details

^Cell suppressed due to fewer than 10 cases

2. CANCER INCIDENCE AND MORTALITY, PROSTATE, TENNESSEE, 2005-2009

		Incidence			Mortality			M:I Ratio [‡]
		Count [*]	Rate ^{**}	Confidence Interval	Count ^{**}	Rate ^{***}	Confidence Interval	
Gender	Race							
Male	All Races [†]	22,076	146.0	144.0 - 147.9	2,977	25.2	24.3 - 26.1	0.17
	Black	3,462	217.3	209.7 - 225.1	677	61.8	57.1 - 66.8	0.28
	White	18,296	136.7	134.7 - 138.8	2,288	21.6	20.7 - 22.6	0.16
Age at Diagnosis or Death								
0-19		^	^	^ - ^	0	0.0	0.0 - 0.1	^
20-44		123	2.5	2.1 - 3.0	^	^	^ - ^	^
45-64		8,883	213.4	209.0 - 217.9	333	7.9	7.0 - 8.8	0.04
65+		13,066	772.5	759.1 - 786.0	2,642	185.5	178.3 - 192.8	0.24
Year of Diagnosis or Death								
2005		3,876	137.5	133.1 - 142.0	593	27.5	25.2 - 29.8	0.20
2006		4,163	142.7	138.3 - 147.2	601	26.8	24.7 - 29.1	0.19
2007		4,730	157.4	152.8 - 162.0	631	26.2	24.2 - 28.4	0.17
2008		4,845	154.3	149.8 - 158.8	571	23.4	21.5 - 25.4	0.15
2009		4,462	137.7	133.6 - 142.0	581	22.7	20.8 - 24.6	0.16

*Total counts from 2005-2009

**Age-adjusted annual rate per 100,000

†Includes whites, blacks, other races and those missing race information

‡Mortality incidence ratio. See Technical Notes for details

^Cell suppressed due to fewer than 10 cases

3. CANCER INCIDENCE AND MORTALITY, FEMALE BREAST, TENNESSEE, 2005-2009

Gender	Race	Incidence			Mortality			M:I Ratio [‡]
		Count [*]	Rate ^{**}	Confidence Interval	Count [*]	Rate ^{**}	Confidence Interval	
Female	All Races [†]	21,535	119.8	118.2 - 121.4	4,411	23.8	23.1 - 24.5	0.20
	Black	2,992	120.9	116.5 - 125.3	858	35.8	33.4 - 38.3	0.30
	White	18,253	119.0	117.3 - 120.8	3,527	22.0	21.2 - 22.7	0.18
Age at Diagnosis or Death								
	0-19	^	^	^ - ^	0	0.0	0.0 - 0.1	^
	20-44	2,487	49.2	47.3 - 51.2	285	5.6	5.0 - 6.3	0.11
	45-64	10,105	238.3	233.7 - 243.1	1,668	38.8	37.0 - 40.7	0.16
	65+	8,941	386.9	378.9 - 395.1	2,458	103.5	99.4 - 107.7	0.27
Year of Diagnosis or Death								
	2005	4,172	121.4	117.7 - 125.2	924	26.2	24.5 - 28.0	0.22
	2006	4,151	117.6	114.0 - 121.3	885	24.3	22.7 - 26.0	0.21
	2007	4,252	118.1	114.5 - 121.7	873	23.3	21.8 - 24.9	0.20
	2008	4,414	120.3	116.7 - 123.9	847	22.2	20.7 - 23.8	0.18
	2009	4,546	121.7	118.2 - 125.4	882	22.9	21.4 - 24.5	0.19

*Total counts from 2005-2009

**Age-adjusted annual rate per 100,000

†Includes whites, blacks, other races and those missing race information

‡Mortality incidence ratio. See Technical Notes for details

^Cell suppressed due to fewer than 10 cases

4. CANCER INCIDENCE AND MORTALITY, COLON AND RECTUM, TENNESSEE, 2005-2009

Gender	Race	Incidence			Mortality			M:I Ratio [‡]
		Count **	Rate ***	Confidence Interval	Count **	Rate ***	Confidence Interval	
Both [†]	All Races [†]	15,822	47.8	47.1 - 48.6	5,917	18.1	17.7 - 18.6	0.38
	Black	2,317	58.3	55.9 - 60.8	1,048	28.2	26.5 - 30.0	0.48
	White	13,306	46.3	45.5 - 47.1	4,840	16.9	16.4 - 17.4	0.37
Female	All Races	7,673	41.4	40.5 - 42.4	2,859	15.1	14.5 - 15.6	0.36
	Black	1,227	52.2	49.3 - 55.3	525	23.2	21.2 - 25.3	0.44
	White	6,350	39.7	38.7 - 40.7	2,322	14.0	13.5 - 14.6	0.35
Male	All Races	8,149	56.2	55.0 - 57.5	3,058	22.2	21.4 - 23.1	0.40
	Black	1,090	67.6	63.4 - 72.1	523	36.3	33.1 - 39.8	0.54
	White	6,956	54.7	53.4 - 56.0	2,518	20.7	19.9 - 21.6	0.38
Age at Diagnosis or Death								
0-19		^	^	^ - ^	^	^	^ - ^	^
20-44		857	8.5	8.0 - 9.1	227	2.3	2.0 - 2.6	0.27
45-64		5,749	68.8	67.0 - 70.6	1,739	20.7	19.8 - 21.7	0.30
65+		9,208	232.8	228.1 - 237.6	3,949	100.3	97.2 - 103.5	0.43
Year of Diagnosis or Death								
2005		3,271	52.1	50.3 - 53.9	1,160	18.8	17.8 - 20.0	0.36
2006		3,173	49.0	47.3 - 50.7	1,114	17.5	16.5 - 18.6	0.36
2007		3,169	47.8	46.1 - 49.5	1,229	18.6	17.6 - 19.7	0.39
2008		3,209	47.3	45.7 - 49.0	1,225	18.2	17.2 - 19.3	0.38
2009		3,000	43.5	42.0 - 45.1	1,189	17.3	16.4 - 18.4	0.40

*Excluded hermaphrodites and transsexuals.

**Total counts from 2005-2009

***Age-adjusted annual rate per 100,000

[†]Includes whites, blacks, other races and those missing race information

[‡]Mortality incidence ratio. See Technical Notes for details

^Cell suppressed due to fewer than 10 cases

5. CANCER INCIDENCE AND MORTALITY, MELANOMA OF THE SKIN, TENNESSEE, 2005-2009

Gender	Race	Incidence			Mortality			M:I Ratio [‡]
		Count ^{**}	Rate ^{***}	Confidence Interval	Count ^{**}	Rate ^{***}	Confidence Interval	
Both [†]	All Races [†]	6,725	20.6	20.1 - 21.1	964	3.0	2.8 - 3.1	0.15
	Black	40	1.1	0.8 - 1.5	18	0.5	0.3 - 0.8	0.45
	White	6,547	23.5	22.9 - 24.1	944	3.3	3.1 - 3.6	0.14
Female	All Races [†]	2,853	16.6	16.0 - 17.3	322	1.8	1.6 - 2.0	0.11
	Black	30	1.3	0.9 - 1.8	10	0.4	0.2 - 0.8	0.31
	White	2,749	19.3	18.6 - 20.1	311	2.0	1.8 - 2.3	0.10
Male	All Races [†]	3,872	26.4	25.6 - 27.3	642	4.6	4.2 - 5.0	0.17
	Black	10	0.8	0.4 - 1.5	^	^	^ - ^	^
	White	3,798	29.6	28.6 - 30.6	633	5.1	4.7 - 5.5	0.17
Age at Diagnosis or Death								
0-19		48	0.6	0.4 - 0.8	0	0.0	0.0 - 0.0	0.00
20-44		1,209	11.7	11.1 - 12.4	90	0.9	0.7 - 1.1	0.08
45-64		2,752	33.6	32.3 - 34.9	337	4.1	3.7 - 4.6	0.12
65+		2,716	68.5	66.0 - 71.2	537	13.6	12.5 - 14.8	0.20
Year of Diagnosis or Death								
2005		1,256	19.9	18.9 - 21.1	194	3.1	2.7 - 3.6	0.16
2006		1,290	20.1	19.0 - 21.3	195	3.0	2.6 - 3.5	0.15
2007		1,366	20.8	19.7 - 22.0	172	2.6	2.2 - 3.1	0.13
2008		1,254	18.8	17.8 - 19.9	204	3.1	2.6 - 3.5	0.16
2009		1,559	23.0	21.8 - 24.1	199	2.9	2.5 - 3.4	0.13

*Excluded hermaphrodites and transsexuals.

**Total counts from 2005-2009

***Age-adjusted annual rate per 100,000

[†]Includes whites, blacks, other races and those missing race information

[‡]Mortality incidence ratio. See Technical Notes for details

^Cell suppressed due to fewer than 10 cases

6. CANCER INCIDENCE AND MORTALITY, PANCREAS, TENNESSEE, 2005-2009

Gender	Race	Incidence			Mortality			M:I Ratio [‡]
		Count ^{**}	Rate ^{***}	Confidence Interval	Count ^{**}	Rate ^{***}	Confidence Interval	
Both*	All Races [†]	3,686	11.2	10.8 - 11.6	3,563	10.9	10.5 - 11.2	0.97
	Black	519	13.8	12.6 - 15.1	521	14.2	13.0 - 15.5	1.03
	White	3,137	10.9	10.5 - 11.3	3,026	10.5	10.1 - 10.9	0.96
Female	All Races [†]	1,811	9.7	9.3 - 10.2	1,746	9.3	8.9 - 9.7	0.96
	Black	279	12.5	11.1 - 14.1	293	13.3	11.8 - 14.9	1.06
	White	1,514	9.4	8.9 - 9.9	1,446	8.8	8.4 - 9.3	0.94
Male	All Races [†]	1,875	13.1	12.5 - 13.7	1,817	12.9	12.3 - 13.6	0.98
	Black	240	15.6	13.6 - 17.9	228	15.2	13.2 - 17.4	0.97
	White	1,623	12.8	12.2 - 13.5	1,580	12.7	12.1 - 13.4	0.99
Age at Diagnosis or Death								
0-19		^	^	^ - ^	^	^	^ - ^	^
20-44		131	1.3	1.1 - 1.6	73	0.7	0.6 - 0.9	0.54
45-64		1,224	14.5	13.7 - 15.3	1,036	12.2	11.5 - 13.0	0.84
65+		2,329	59.3	56.9 - 61.7	2,453	62.4	60.0 - 65.0	1.05
Year of Diagnosis or Death								
2005		650	10.4	9.6 - 11.2	691	11.1	10.3 - 12.0	1.07
2006		697	10.8	10.0 - 11.6	664	10.3	9.5 - 11.1	0.95
2007		754	11.5	10.7 - 12.3	699	10.7	9.9 - 11.5	0.93
2008		791	11.7	10.9 - 12.6	759	11.3	10.5 - 12.2	0.97
2009		794	11.6	10.8 - 12.5	750	11.0	10.2 - 11.8	0.95

*Excluded hermaphrodites and transsexuals

**Total counts from 2005-2009

***Age-adjusted annual rate per 100,000

[†]Includes whites, blacks, other races and those missing race information

[‡]Mortality incidence ratio. See Technical Notes for details

^Cell suppressed due to fewer than 10 cases

APPENDIX II. CANCER INCIDENCE AND MORTALITY, BY SITE, TENNESSEE, 2005-2009

Primary Cancer Site	Incidence			Mortality			M:I Ratio [†]
	Count [*]	Rate ^{**}	Confidence Interval	Count [*]	Rate ^{**}	Confidence Interval	
All Sites	158,393	476.8	474.4 - 479.2	65,604	199.8	198.3 - 201.4	0.42
Oral Cavity and Pharynx	3,919	11.6	11.2 - 11.9	973	2.9	2.7 - 3.1	0.25
Lip	238	0.7	0.6 - 0.8	^	^	^ - ^	^
Tongue	1,057	3.1	2.9 - 3.3	226	0.7	0.6 - 0.8	0.23
Salivary Gland	397	1.2	1.1 - 1.3	96	0.3	0.2 - 0.4	0.25
Floor of Mouth	230	0.7	0.6 - 0.8	12	0.0	0.0 - 0.1	0.00
Gum and Other Mouth	586	1.8	1.6 - 1.9	137	0.4	0.4 - 0.5	0.22
Nasopharynx	193	0.6	0.5 - 0.7	69	0.2	0.2 - 0.3	0.33
Tonsil	737	2.1	2.0 - 2.3	105	0.3	0.2 - 0.4	0.14
Oropharynx	165	0.5	0.4 - 0.5	78	0.2	0.2 - 0.3	0.40
Hypopharynx	227	0.7	0.6 - 0.7	28	0.1	0.1 - 0.1	0.14
Other Oral Cavity and Pharynx	89	0.3	0.2 - 0.3	213	0.6	0.6 - 0.7	2.00
Digestive System	27,301	82.3	81.3 - 83.3	14,469	44.0	43.3 - 44.7	0.53
Esophagus	1,600	4.7	4.5 - 5.0	1,398	4.2	3.9 - 4.4	0.89
Stomach	1,961	5.9	5.7 - 6.2	1,111	3.4	3.2 - 3.6	0.58
Small Intestine	686	2.0	1.9 - 2.2	131	0.4	0.3 - 0.5	0.20
Colon and Rectum	15,822	47.8	47.1 - 48.6	5,917	18.1	17.7 - 18.6	0.38
Colon excluding Rectum	11,415	34.6	34.0 - 35.3	4,793	14.7	14.3 - 15.1	0.42
Cecum	2,342	7.2	6.9 - 7.5	~	~	~ - ~	~
Appendix	224	0.7	0.6 - 0.8	~	~	~ - ~	~
Ascending Colon	2,341	7.1	6.8 - 7.4	~	~	~ - ~	~
Hepatic Flexure	544	1.7	1.5 - 1.8	~	~	~ - ~	~
Transverse Colon	945	2.9	2.7 - 3.1	~	~	~ - ~	~
Splenic Flexure	342	1.0	0.9 - 1.1	~	~	~ - ~	~
Descending Colon	700	2.1	2.0 - 2.3	~	~	~ - ~	~
Sigmoid Colon	3,008	9.0	8.7 - 9.4	~	~	~ - ~	~
Large Intestine, NOS	969	3.0	2.8 - 3.2	~	~	~ - ~	~
Rectum and Rectosigmoid Junction	4,407	13.2	12.8 - 13.6	1,124	3.4	3.2 - 3.6	0.26
Rectosigmoid Junction	1,261	3.8	3.6 - 4.0	~	~	~ - ~	~
Rectum	3,146	9.4	9.1 - 9.8	~	~	~ - ~	~
Anus, Anal Canal and Anorectum	600	1.8	1.7 - 1.9	91	0.3	0.2 - 0.3	0.17
Liver and Intrahepatic Bile Duct	1,881	5.5	5.3 - 5.8	1,756	5.2	5.0 - 5.5	0.95
Liver	1,739	5.1	4.9 - 5.4	1,415	4.2	4.0 - 4.4	0.82
Intrahepatic Bile Duct	142	0.4	0.4 - 0.5	341	1.0	0.9 - 1.2	2.50
Gallbladder	285	0.9	0.8 - 1.0	153	0.5	0.4 - 0.5	0.56
Other Biliary	435	1.3	1.2 - 1.4	149	0.5	0.4 - 0.5	0.38
Pancreas	3,686	11.2	10.8 - 11.6	3,563	10.9	10.5 - 11.2	0.97
Retroperitoneum	103	0.3	0.3 - 0.4	28	0.1	0.1 - 0.1	0.33
Peritoneum, Omentum and Mesentery	158	0.5	0.4 - 0.6	68	0.2	0.2 - 0.3	0.40
Other Digestive Organs	84	0.3	0.2 - 0.3	104	0.3	0.3 - 0.4	1.00

Continued on next page

Appendix II Continued

Primary Cancer Site	Incidence			Mortality			M:I Ratio [†]
	Count [*]	Rate ^{**}	Confidence Interval	Count [*]	Rate ^{**}	Confidence Interval	
Respiratory System	28,891	86.3	85.3 - 87.3	22,280	67.2	66.4 - 68.1	0.78
Nose, Nasal Cavity and Middle Ear	256	0.8	0.7 - 0.9	64	0.2	0.1 - 0.2	0.25
Larynx	1,664	4.8	4.6 - 5.1	495	1.5	1.3 - 1.6	0.31
Lung and Bronchus	26,912	80.5	79.5 - 81.5	21,693	65.5	64.6 - 66.4	0.81
Pleura	190	0.6	0.5 - 0.7	^	^	^ - ^	^
Trachea, Mediastinum and Other Respiratory Organs	53	0.2	0.1 - 0.2	23	0.1	0.0 - 0.1	0.50
Bones and Joints	301	1.0	0.9 - 1.1	158	0.5	0.4 - 0.6	0.50
Soft Tissue including Heart	1,019	3.1	2.9 - 3.3	422	1.3	1.2 - 1.4	0.42
Skin excluding Basal and Squamous	7,166	21.9	21.4 - 22.5	1,378	4.2	4.0 - 4.4	0.19
Melanoma of the Skin	6,725	20.6	20.1 - 21.1	964	3.0	2.8 - 3.1	0.15
Other Non-Epithelial Skin	441	1.4	1.2 - 1.5	414	1.3	1.1 - 1.4	0.93
Breast (Males Only)	249	1.7	1.5 - 2.0	42	0.3	0.2 - 0.4	0.18
Breast (Females Only)	21,535	119.8	118.2 - 121.4	4,411	23.8	23.1 - 24.5	0.20
Female Genital System	7,921	44.4	43.4 - 45.4	2,880	15.6	15.1 - 16.2	0.35
Cervix Uteri	1,434	8.8	8.3 - 9.2	482	2.8	2.5 - 3.0	0.32
Corpus and Uterus, NOS	3,606	19.7	19.0 - 20.3	701	3.7	3.5 - 4.0	0.19
Corpus Uteri	3,445	18.8	18.2 - 19.5	288	1.5	1.4 - 1.7	0.08
Uterus, NOS	161	0.9	0.7 - 1.0	413	2.2	2.0 - 2.4	2.44
Ovary	2,125	11.7	11.2 - 12.2	1,490	8.0	7.6 - 8.4	0.68
Vagina	160	0.9	0.7 - 1.0	62	0.3	0.3 - 0.4	0.33
Vulva	495	2.8	2.5 - 3.0	105	0.6	0.5 - 0.7	0.21
Other Female Genital Organs	101	0.6	0.5 - 0.7	40	0.2	0.2 - 0.3	0.33
Male Genital System	22,941	151.8	149.8 - 153.9	3,054	25.7	24.8 - 26.7	0.17
Prostate	22,076	146.0	144.0 - 147.9	2,977	25.2	24.3 - 26.1	0.17
Testis	728	4.9	4.6 - 5.3	44	0.3	0.2 - 0.4	0.06
Penis	113	0.8	0.7 - 1.0	28	0.2	0.1 - 0.3	0.25
Other Male Genital Organs	24	0.2	0.1 - 0.2	^	^	^ - ^	^
Urinary System	12,144	36.7	36.0 - 37.4	2,836	8.7	8.4 - 9.0	0.24
Urinary Bladder	6,406	19.5	19.0 - 20.0	1,348	4.2	4.0 - 4.4	0.22
Kidney and Renal Pelvis	5,465	16.4	15.9 - 16.8	1,404	4.2	4.0 - 4.5	0.26
Ureter	197	0.6	0.5 - 0.7	40	0.1	0.1 - 0.2	0.17
Other Urinary Organs	76	0.2	0.2 - 0.3	44	0.1	0.1 - 0.2	0.50
Eye and Orbit	334	1.0	0.9 - 1.1	37	0.1	0.1 - 0.2	0.10
Brain and Other Nervous System	2,228	6.9	6.6 - 7.2	1,634	5.0	4.7 - 5.2	0.72
Brain	2,124	6.6	6.3 - 6.9	~	~	~ - ~	~
Cranial Nerves Other Nervous System	104	0.3	0.3 - 0.4	~	~	~ - ~	~
Endocrine System	3,836	12.0	11.6 - 12.4	267	0.8	0.7 - 0.9	0.07
Thyroid	3,606	11.3	10.9 - 11.7	160	0.5	0.4 - 0.6	0.04
Other Endocrine including Thymus	230	0.7	0.6 - 0.8	107	0.3	0.3 - 0.4	0.43
Lymphoma	7,092	21.8	21.3 - 22.3	2,436	7.5	7.2 - 7.8	0.34
Hodgkin Lymphoma	769	2.5	2.3 - 2.7	149	0.5	0.4 - 0.6	0.20
Hodgkin - Nodal	743	2.4	2.2 - 2.6	~	~	~ - ~	~
Hodgkin - Extranodal	26	0.1	0.1 - 0.1	~	~	~ - ~	~
Non-Hodgkin Lymphoma	6,323	19.3	18.8 - 19.8	2,287	7.1	6.8 - 7.4	0.37
NHL - Nodal	4,508	13.7	13.3 - 14.1	~	~	~ - ~	~
NHL - Extranodal	1,815	5.5	5.3 - 5.8	~	~	~ - ~	~

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Appendix II Continued

Primary Cancer Site	Incidence			Mortality			M:I Ratio [†]
	Count [*]	Rate ^{**}	Confidence Interval	Count [*]	Rate ^{**}	Confidence Interval	
Myeloma	1,943	5.9	5.6 - 6.1	1,254	3.9	3.7 - 4.1	0.66
Leukemia	3,797	11.8	11.4 - 12.2	2,351	7.3	7.0 - 7.6	0.62
Lymphocytic Leukemia	1,834	5.7	5.4 - 6.0	732	2.3	2.1 - 2.5	0.40
Acute Lymphocytic Leukemia	434	1.4	1.3 - 1.6	149	0.5	0.4 - 0.6	0.36
Chronic Lymphocytic Leukemia	1,279	3.9	3.7 - 4.1	539	1.7	1.6 - 1.8	0.44
Other Lymphocytic Leukemia	121	0.4	0.3 - 0.4	44	0.1	0.1 - 0.2	0.25
Myeloid and Monocytic Leukemia	1,740	5.4	5.1 - 5.6	1,085	3.4	3.2 - 3.6	0.63
Acute Myeloid Leukemia	1,171	3.6	3.4 - 3.8	900	2.8	2.6 - 3.0	0.78
Acute Monocytic Leukemia	78	0.2	0.2 - 0.3	19	0.1	0.0 - 0.1	0.50
Chronic Myeloid Leukemia	414	1.3	1.1 - 1.4	109	0.3	0.3 - 0.4	0.23
Other Myeloid/Monocytic Leukemia	77	0.2	0.2 - 0.3	57	0.2	0.1 - 0.2	1.00
Other Leukemia	223	0.7	0.6 - 0.8	534	1.7	1.5 - 1.8	2.43
Other Acute Leukemia	93	0.3	0.2 - 0.4	229	0.7	0.6 - 0.8	2.33
Aleukemic, Subleukemic and NOS	130	0.4	0.3 - 0.5	305	1.0	0.8 - 1.1	2.50
Mesothelioma	266	0.8	0.7 - 0.9	228	0.7	0.6 - 0.8	0.88
Kaposi Sarcoma	67	0.2	0.2 - 0.3	^	^	^ - ^	^
Miscellaneous	5,443	16.7	16.2 - 17.1	4,491	13.7	13.3 - 14.1	0.82

*Total counts from 2005-2009

**Age-adjusted annual rate per 100,000

† Mortality incidence ratio. See Technical Notes for details

^Cell suppressed due to fewer than 10 cases

~Corresponding disease categories not available in mortality data

APPENDIX III. CANCER INCIDENCE AND MORTALITY, ALL SITES COMBINED, BY GENDER, RACE AND RESIDENT REGION, TENNESSEE, 2005-2009

	Incidence			Mortality			M:I Ratio [†]
	Count [*]	Rate ^{**}	Confidence Interval	Count [*]	Rate ^{**}	Confidence Interval	
Total Population							
<i>Tennessee</i>	158,393	476.8	474.4 - 479.2	65,604	199.8	198.3 - 201.4	0.42
East Region	33,106	494.7	489.3 - 500.1	13,241	198.4	195.0 - 201.8	0.40
Mid-Cumberland Region	35,906	471.7	466.7 - 476.6	13,958	192.1	188.9 - 195.4	0.41
Northeast Region	14,319	461.0	453.3 - 468.7	6,292	200.4	195.5 - 205.5	0.43
Northwest Region	7,241	466.9	456.1 - 478.0	3,497	217.3	210.1 - 224.7	0.47
South Central Region	10,018	470.6	461.3 - 480.0	4,379	205.3	199.2 - 211.5	0.44
Southeast Region	18,000	477.3	470.2 - 484.4	7,181	189.9	185.5 - 194.4	0.40
Southwest Region	29,405	469.2	463.8 - 474.7	12,777	209.7	206.0 - 213.4	0.45
Upper-Cumberland Region	10,042	489.2	479.5 - 499.1	4,279	206.7	200.4 - 213.0	0.42
Female							
<i>Tennessee</i>	74,925	414.7	411.7 - 417.7	30,065	161.2	159.4 - 163.0	0.39
East Region	15,309	426.4	419.5 - 433.3	6,036	160.7	156.6 - 164.9	0.38
Mid-Cumberland Region	17,433	417.2	411.0 - 423.5	6,468	156.2	152.4 - 160.1	0.37
Northeast Region	6,953	418.6	408.6 - 428.8	2,879	163.6	157.5 - 169.8	0.39
Northwest Region	3,310	394.2	380.5 - 408.4	1,575	169.6	161.1 - 178.5	0.43
South Central Region	4,724	412.7	400.9 - 424.9	1,942	160.4	153.2 - 167.8	0.39
Southeast Region	8,351	410.0	401.1 - 419.0	3,173	148.6	143.4 - 154.0	0.36
Southwest Region	14,135	402.5	395.9 - 409.3	6,143	173.4	169.0 - 177.8	0.43
Upper-Cumberland Region	4,544	422.2	409.7 - 435.1	1,849	162.6	155.1 - 170.4	0.39
Male							
<i>Tennessee</i>	83,468	567.0	563.1 - 571.0	35,539	257.2	254.4 - 260.0	0.45
East Region	17,797	590.7	581.8 - 599.7	7,205	252.9	246.9 - 259.0	0.43
Mid-Cumberland Region	18,473	552.1	543.9 - 560.5	7,490	246.2	240.4 - 252.1	0.45
Northeast Region	7,366	525.1	512.9 - 537.5	3,413	254.7	246.0 - 263.6	0.49
Northwest Region	3,931	572.8	554.8 - 591.3	1,922	285.8	273.0 - 299.1	0.50
South Central Region	5,294	558.0	542.7 - 573.6	2,437	271.7	260.7 - 283.0	0.49
Southeast Region	9,649	573.3	561.6 - 585.1	4,008	250.1	242.3 - 258.2	0.44
Southwest Region	15,270	569.8	560.5 - 579.3	6,634	268.2	261.5 - 274.9	0.47
Upper-Cumberland Region	5,498	580.3	564.7 - 596.2	2,430	266.3	255.5 - 277.4	0.46

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Appendix III Continued

	Incidence			Mortality			M:I Ratio [†]
	Count [*]	Rate ^{**}	Confidence Interval	Count [*]	Rate ^{**}	Confidence Interval	
Black							
<i>Tennessee</i>	19,594	480.9	474.0 - 487.9	9,329	246.5	241.4 - 251.7	0.51
East Region	1,086	454.9	427.9 - 483.2	476	207.9	189.4 - 227.6	0.46
Mid-Cumberland Region	4,664	483.8	469.5 - 498.4	2,050	235.2	224.8 - 245.9	0.49
Northeast Region	187	342.7	294.5 - 396.2	105	205.3	167.4 - 248.8	0.60
Northwest Region	668	466.2	431.2 - 503.1	377	264.0	237.9 - 292.2	0.57
South Central Region	592	447.4	411.8 - 485.1	294	229.3	203.7 - 257.2	0.51
Southeast Region	1,725	469.9	447.7 - 492.9	753	211.2	196.3 - 227.0	0.45
Southwest Region	10,550	492.1	482.4 - 501.9	5,213	264.0	256.6 - 271.5	0.54
Upper-Cumberland Region	117	506.7	418.6 - 607.2	61	266.5	203.6 - 342.0	0.53
White							
<i>Tennessee</i>	136,748	475.7	473.1 - 478.2	55,949	194.8	193.1 - 196.4	0.41
East Region	31,715	496.3	490.8 - 501.9	12,713	199.0	195.5 - 202.5	0.40
Mid-Cumberland Region	30,716	472.3	467.0 - 477.7	11,788	187.8	184.4 - 191.3	0.40
Northeast Region	14,067	463.6	455.9 - 471.5	6,178	201.1	196.0 - 206.2	0.43
Northwest Region	6,518	465.7	454.3 - 477.4	3,112	213.1	205.6 - 220.9	0.46
South Central Region	9,363	472.1	462.5 - 481.8	4,073	204.3	198.0 - 210.7	0.43
Southeast Region	16,125	479.3	471.8 - 486.8	6,397	188.6	184.0 - 193.4	0.39
Southwest Region	18,318	455.0	448.3 - 461.7	7,485	185.0	180.8 - 189.3	0.41
Upper-Cumberland Region	9,860	488.6	478.8 - 498.5	4,203	206.3	200.1 - 212.8	0.42

*Total counts from 2005-2009

**Age-adjusted annual rate per 100,000

† Mortality incidence ratio. See Technical Notes for details

Note that the number of cases by region may not sum up to the state total due to records with missing region information

APPENDIX IV. CANCER INCIDENCE AND MORTALITY, ALL SITES COMBINED, BY RESIDENT COUNTY, TENNESSEE, 2005-2009

	Incidence			Mortality			M:I Ratio [†]
	Count *	Rate **	Confidence Interval	Count *	Rate **	Confidence Interval	
Tennessee	158,393	476.8	474.4 - 479.2	65,604	199.8	198.3 - 201.4	0.42
East Region	33,106	494.7	489.3 - 500.1	13,241	198.4	195.0 - 201.8	0.40
Anderson	2,446	521.9	501.1 - 543.4	1,027	208.9	196.2 - 222.3	0.40
Blount	3,556	495.2	478.8 - 512.0	1,287	178.7	168.9 - 188.8	0.36
Campbell	1,354	523.4	495.5 - 552.7	597	231.6	213.2 - 251.2	0.44
Claiborne	962	508.4	476.1 - 542.4	455	240.1	218.1 - 263.7	0.47
Cocke	1,039	472.5	443.6 - 502.9	452	207.3	188.2 - 227.8	0.44
Grainger	681	506.0	467.9 - 546.5	286	220.8	195.3 - 248.7	0.44
Hamblen	1,757	489.1	466.2 - 512.9	759	211.2	196.3 - 226.9	0.43
Jefferson	1,418	480.4	455.2 - 506.7	605	209.3	192.6 - 227.1	0.44
Knox	11,063	489.5	480.3 - 498.8	4,189	185.9	180.2 - 191.6	0.38
Loudon	1,553	474.6	450.3 - 500.1	587	185.7	170.6 - 202.0	0.39
Monroe	1,316	492.9	466.0 - 521.0	559	218.2	200.2 - 237.5	0.44
Morgan	611	545.6	502.5 - 591.5	263	240.1	211.6 - 271.6	0.44
Roane	1,782	502.2	478.7 - 526.7	762	210.5	195.6 - 226.3	0.42
Scott	602	516.0	474.9 - 559.7	283	242.2	214.4 - 272.7	0.47
Sevier	2,459	487.6	468.2 - 507.7	921	183.3	171.5 - 195.8	0.38
Union	507	484.3	442.3 - 529.4	209	204.7	177.4 - 235.1	0.42
Mid-Cumberland Region	35,906	471.7	466.7 - 476.6	13,958	192.1	188.9 - 195.4	0.41
Cheatham	945	490.4	458.8 - 523.6	358	195.9	175.6 - 218.0	0.40
Davidson	13,742	469.2	461.3 - 477.2	5,540	192.9	187.8 - 198.1	0.41
Dickson	1,263	508.3	480.4 - 537.5	510	212.1	193.9 - 231.6	0.42
Houston	244	466.2	408.2 - 530.6	114	208.6	171.5 - 251.9	0.45
Humphreys	583	507.7	466.5 - 551.7	242	208.3	182.6 - 236.9	0.41
Montgomery	2,752	459.0	441.6 - 476.8	1,142	205.3	193.3 - 217.8	0.45
Robertson	1,539	489.6	465.1 - 515.0	655	219.0	202.3 - 236.6	0.45
Rutherford	4,325	455.6	441.8 - 469.8	1,582	179.4	170.4 - 188.6	0.39
Stewart	397	502.6	453.6 - 555.8	170	215.7	184.1 - 251.5	0.43
Sumner	3,849	487.6	472.1 - 503.6	1,475	196.2	186.1 - 206.6	0.40
Trousdale	206	465.4	403.1 - 534.9	89	194.7	155.8 - 240.7	0.42
Williamson	3,498	465.9	449.9 - 482.3	1,088	163.4	153.5 - 173.7	0.35
Wilson	2,563	478.2	459.3 - 497.6	993	198.0	185.6 - 211.1	0.41

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Appendix IV Continued

	Incidence			Mortality			M:I Ratio [†]
	Count [*]	Rate ^{**}	Confidence Interval	Count [*]	Rate ^{**}	Confidence Interval	
Northeast Region	14,319	461.0	453.3 - 468.7	6,292	200.4	195.5 - 205.5	0.43
Carter	1,507	418.3	397.2 - 440.4	735	204.1	189.5 - 219.7	0.49
Greene	2,020	487.7	466.4 - 509.9	933	225.4	211.0 - 240.6	0.46
Hancock	159	382.4	324.1 - 448.7	91	220.5	177.0 - 272.1	0.58
Hawkins	1,678	480.8	457.6 - 504.8	705	203.0	188.1 - 218.8	0.42
Johnson	452	385.9	350.4 - 424.2	236	202.9	177.5 - 231.2	0.53
Sullivan	4,909	484.1	470.4 - 498.1	2,021	194.9	186.4 - 203.7	0.40
Unicoi	553	448.7	411.2 - 488.9	291	224.3	199.0 - 252.2	0.50
Washington	3,041	444.0	428.2 - 460.2	1,280	184.8	174.8 - 195.3	0.42
Northwest Region	7,241	466.9	456.1 - 478.0	3,497	217.3	210.1 - 224.7	0.47
Benton	594	524.2	481.2 - 570.2	271	223.7	197.4 - 253.1	0.43
Carroll	902	489.5	457.4 - 523.4	437	225.6	204.5 - 248.3	0.46
Crockett	377	444.7	400.3 - 492.7	162	184.0	156.4 - 215.2	0.41
Dyer	918	428.1	400.5 - 457.1	428	200.3	181.6 - 220.5	0.47
Gibson	1,416	466.7	442.4 - 492.1	731	228.9	212.4 - 246.4	0.49
Henry	1,025	465.9	437.2 - 496.2	476	209.2	190.5 - 229.4	0.45
Lake	178	459.8	394.3 - 533.4	110	273.6	224.5 - 330.6	0.60
Obion	949	477.8	447.4 - 509.9	449	217.4	197.5 - 238.8	0.46
Weakley	882	463.9	433.3 - 496.1	433	218.1	197.8 - 240.0	0.47
South Central Region	10,018	470.6	461.3 - 480.0	4,379	205.3	199.2 - 211.5	0.44
Bedford	1,017	457.3	429.4 - 486.6	457	209.5	190.5 - 229.8	0.46
Coffee	1,477	479.1	454.8 - 504.5	666	212.5	196.6 - 229.5	0.44
Giles	805	451.4	420.2 - 484.5	346	192.1	172.1 - 213.9	0.43
Hickman	667	508.6	470.4 - 549.1	293	223.6	198.5 - 251.0	0.44
Lawrence	1,095	448.6	422.1 - 476.4	499	200.2	182.9 - 218.8	0.45
Lewis	337	502.7	449.5 - 560.6	155	233.2	197.4 - 273.9	0.46
Lincoln	913	445.2	416.5 - 475.5	419	201.5	182.6 - 222.1	0.45
Marshall	820	523.5	487.9 - 561.1	323	209.4	187.0 - 233.9	0.40
Maury	1,992	465.7	445.3 - 486.8	823	195.8	182.6 - 209.8	0.42
Moore	146	370.6	312.0 - 437.9	56	141.7	106.7 - 185.6	0.38
Perry	278	553.9	488.3 - 626.4	120	236.1	194.6 - 284.3	0.43
Wayne	471	480.6	437.8 - 526.7	222	229.2	199.8 - 261.9	0.48

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Appendix IV Continued

	Incidence			Mortality			M:I Ratio [†]
	Count*	Rate**	Confidence Interval	Count*	Rate**	Confidence Interval	
Southeast Region	18,000	477.3	470.2 - 484.4	7,181	189.9	185.5 - 194.4	0.40
Bledsoe	314	418.2	371.9 - 468.9	115	162.5	133.3 - 196.4	0.39
Bradley	2,307	438.3	420.4 - 456.8	965	187.6	175.9 - 200.0	0.43
Franklin	1,241	490.1	462.8 - 518.6	492	191.7	175.0 - 209.7	0.39
Grundy	421	487.8	441.5 - 537.8	179	203.7	174.6 - 236.6	0.42
Hamilton	9,263	482.0	472.2 - 492.1	3,504	180.0	174.1 - 186.2	0.37
McMinn	1,383	437.4	414.3 - 461.4	620	195.1	179.9 - 211.4	0.45
Marion	869	520.4	485.5 - 557.1	395	242.6	218.7 - 268.4	0.47
Meigs	338	483.6	431.9 - 540.1	125	177.7	147.0 - 213.2	0.37
Polk	486	475.0	432.8 - 520.6	228	222.8	194.4 - 254.5	0.47
Rhea	1,075	599.7	563.7 - 637.4	390	214.5	193.4 - 237.3	0.36
Sequatchie	303	393.5	349.7 - 441.5	168	223.5	190.5 - 260.6	0.57
Southwest Region	29,405	469.2	463.8 - 474.7	12,777	209.7	206.0 - 213.4	0.45
Chester	358	401.1	360.2 - 445.5	164	180.5	153.8 - 210.7	0.45
Decatur	358	433.4	388.4 - 482.7	168	206.3	175.6 - 241.5	0.48
Fayette	1,036	495.9	465.6 - 527.8	393	194.9	175.7 - 215.6	0.39
Hardeman	734	480.9	446.4 - 517.3	316	206.6	184.3 - 231.0	0.43
Hardin	780	454.3	422.3 - 488.2	361	207.1	186.0 - 230.1	0.46
Haywood	479	451.8	411.8 - 494.7	228	213.9	186.8 - 243.9	0.47
Henderson	723	467.0	433.3 - 502.8	325	206.8	184.8 - 230.9	0.44
Lauderdale	628	460.0	424.3 - 497.9	317	232.2	207.1 - 259.6	0.50
McNairy	729	444.7	412.3 - 479.2	354	208.8	187.4 - 232.3	0.47
Madison	2,212	442.2	423.8 - 461.2	934	187.2	175.3 - 199.8	0.42
Shelby	19,953	473.7	467.0 - 480.4	8,603	212.6	208.1 - 217.2	0.45
Tipton	1,415	508.5	481.9 - 536.2	614	234.2	215.6 - 253.9	0.46
Upper-Cumberland Region	10,042	489.2	479.5 - 499.1	4,279	206.7	200.4 - 213.0	0.42
Cannon	353	434.9	390.2 - 483.6	150	185.5	156.7 - 218.2	0.43
Clay	237	448.5	391.5 - 512.1	103	205.9	167.4 - 251.2	0.46
Cumberland	2,250	519.7	496.9 - 543.5	774	172.6	160.1 - 186.0	0.33
DeKalb	485	445.4	406.1 - 487.5	236	216.3	189.3 - 246.3	0.49
Fentress	577	532.4	488.8 - 579.1	271	248.9	219.5 - 281.4	0.47
Jackson	371	512.9	460.7 - 569.8	153	209.5	177.1 - 246.6	0.41
Macon	644	554.0	511.5 - 599.2	288	251.1	222.6 - 282.3	0.45
Overton	651	488.1	450.5 - 528.1	304	227.2	202.0 - 254.8	0.47
Pickett	167	455.4	385.6 - 535.8	68	180.8	139.3 - 232.9	0.40
Putnam	1,823	475.0	453.2 - 497.7	787	202.5	188.5 - 217.3	0.43
Smith	474	466.1	424.6 - 510.6	241	239.4	209.9 - 272.0	0.51
Van Buren	145	426.6	357.6 - 505.7	57	172.8	129.8 - 226.3	0.41
Warren	1,088	472.1	444.2 - 501.3	517	222.7	203.8 - 242.9	0.47
White	777	497.9	462.9 - 534.9	330	212.5	189.9 - 237.2	0.43

*Total counts from 2005-2009

**Age-adjusted annual rate per 100,000

† Mortality incidence ratio. See Technical Notes for details

Note that the number of cases by county may not sum up to the state total due to records with missing county information

APPENDIX V. AGE-ADJUSTED RATE FOR TOP FIVE LEADING CAUSES OF CANCER INCIDENCE BY RESIDENT COUNTY, FEMALES, TENNESSEE, 2005-2009

Legend for Ranking

1	2	3	4	5
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Region	Lung and Bronchus	Breast	Colon and Rectum	Melanoma of the Skin	Non Hodgkin Lymphoma	Kidney and Renal Pelvis	Leukemia	Pancreas	Corpus and Uterus NOS	Thyroid	Ovary	Cervix Uteri
Tennessee	61.6	119.8	41.4	16.6	16.3	11.8	9.0	9.7	19.7	16.5	11.7	8.8
East Region	67.5	121.2	39.2	22.7	16.9	12.3	9.0	8.8	19.2	17.6	11.5	8.2
Anderson	80.0	124.1	52.0	19.2	15.6	10.1	9.1	7.8	22.0	16.1	11.0	9.6
Blount	61.2	128.7	35.7	25.0	16.0	10.5	9.9	6.8	17.4	22.7	12.8	5.6
Campbell	92.0	111.6	38.3	13.6	12.7	11.1	14.1	10.8	16.4	30.2	11.8	^
Claiborne	67.6	116.8	47.5	19.2	20.1	11.3	14.7	^	24.8	15.9	14.5	^
Cocke	71.1	94.9	43.9	19.5	10.5	11.0	12.1	9.7	18.2	18.7	10.0	18.3
Grainger	61.3	118.0	39.7	28.8	21.3	23.7	^	^	29.1	15.8	^	^
Hamblen	71.7	111.3	45.5	35.3	14.9	14.5	8.3	11.7	18.9	14.3	12.7	7.8
Jefferson	60.9	107.1	37.8	27.3	15.2	12.1	9.2	6.6	14.2	20.9	20.8	8.8
Knox	63.7	130.0	37.1	23.1	17.6	11.3	8.9	9.5	18.4	13.4	10.8	7.2
Loudon	63.0	111.9	31.2	16.4	19.5	13.9	9.8	6.3	19.0	24.0	9.8	10.6
Monroe	65.2	111.4	40.6	20.4	25.2	13.0	^	8.9	16.2	18.7	9.9	^
Morgan	73.7	120.7	41.4	^	16.1	24.9	^	^	16.1	28.4	^	^
Roane	66.4	133.4	39.1	20.6	16.0	12.4	5.6	9.4	23.2	21.7	10.0	10.4
Scott	81.8	112.2	38.1	18.1	16.2	^	^	^	18.1	24.8	18.0	^
Sevier	69.0	110.9	37.8	24.8	18.6	13.3	7.0	7.1	22.1	19.3	8.9	10.3
Union	67.2	100.5	37.3	^	^	20.0	^	^	19.2	^	^	^
Mid-Cumberland Region	61.5	120.8	40.9	14.6	17.2	11.8	8.9	10.2	18.6	21.1	10.7	7.3
Cheatham	59.9	106.9	51.2	12.8	14.4	16.2	13.8	10.4	14.8	19.6	11.7	10.1
Davidson	63.3	121.6	41.0	10.5	15.4	11.3	9.4	10.9	19.7	19.2	11.3	7.1
Dickson	69.3	114.2	52.0	15.4	17.7	8.0	^	9.1	19.1	15.5	^	9.0
Houston	74.1	108.5	51.5	^	^	^	^	^	^	^	^	^
Humphreys	74.2	133.1	46.9	17.1	22.5	18.6	^	^	19.6	26.0	^	^
Montgomery	64.8	113.1	40.0	17.7	18.9	11.1	8.6	9.1	15.8	26.3	9.1	9.0

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Appendix V Continued

Legend for Ranking

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Region	Lung and Bronchus	Breast	Colon and Rectum	Melanoma of the Skin	Non Hodgkin Lymphoma	Kidney and Renal Pelvis	Leukemia	Pancreas	Corpus and Uterus NOS	Thyroid	Ovary	Cervix Uteri
Robertson	59.0	121.7	48.2	22.7	17.8	11.9	10.2	9.1	18.3	19.1	12.5	7.4
Rutherford	63.6	111.7	41.1	14.6	20.2	15.0	7.3	11.0	17.5	20.4	10.3	7.2
Stewart	42.5	110.0	41.5	^	^	0.0	^	^	^	41.7	^	^
Sumner	58.9	123.8	35.8	19.5	19.1	12.0	9.1	12.0	19.2	23.3	10.8	6.2
Trousdale	77.7	95.4	^	^	^	^	^	^	^	^	^	^
Williamson	48.4	133.5	36.0	22.6	17.7	8.3	10.9	7.5	17.1	23.5	12.9	5.5
Wilson	65.5	128.4	42.1	13.7	20.2	14.0	7.3	9.1	19.2	20.5	10.1	6.4
Northeast Region	66.7	115.1	35.7	20.4	18.0	9.5	11.7	12.1	21.3	14.6	15.3	7.4
Carter	74.5	104.8	34.8	14.6	20.8	6.7	11.7	10.9	22.9	18.3	18.6	8.6
Greene	80.8	129.7	38.8	14.8	15.6	11.5	18.5	15.3	17.2	12.9	14.3	11.3
Hancock	49.0	105.3	^	^	^	^	^	^	^	0.0	^	^
Hawkins	69.7	106.8	38.1	29.0	18.9	6.2	10.1	13.5	23.1	18.1	9.5	8.8
Johnson	57.7	92.0	32.0	^	18.9	^	^	^	^	^	16.1	^
Sullivan	67.8	116.8	35.6	23.1	18.6	10.8	11.0	14.0	22.7	13.4	17.6	5.3
Unicoi	64.1	117.0	30.3	29.5	^	14.7	^	^	24.1	^	^	^
Washington	53.4	117.6	36.5	18.7	17.1	7.4	11.0	8.8	22.3	14.8	14.2	7.3
Northwest Region	61.9	110.0	44.1	9.6	14.7	10.4	8.1	8.9	20.4	12.0	12.3	10.9
Benton	84.9	113.7	34.9	^	19.8	^	^	^	18.3	^	17.1	^
Carroll	68.9	110.7	42.9	12.1	26.7	12.6	^	^	23.8	16.6	12.0	14.6
Crockett	49.7	147.9	57.0	^	^	^	^	^	^	^	^	^
Dyer	52.1	96.8	46.3	8.2	12.5	12.0	^	11.1	15.6	12.0	12.1	^
Gibson	60.6	113.0	41.6	7.3	10.9	10.6	11.4	7.8	26.0	9.9	13.2	17.8
Henry	56.1	103.9	43.4	^	12.5	12.8	^	9.4	20.4	11.4	11.1	^
Lake	99.6	108.2	47.9	^	^	^	^	^	^	^	^	0.0
Obion	51.7	97.2	47.7	12.5	19.0	11.2	^	7.7	15.7	^	9.4	^
Weakley	69.0	122.2	44.6	^	^	^	9.4	11.2	19.8	11.2	10.9	^

Continued on next page

Appendix V Continued

Legend for Ranking

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Region	Lung and Bronchus	Breast	Colon and Rectum	Melanoma of the Skin	Non Hodgkin Lymphoma	Kidney and Renal Pelvis	Leukemia	Pancreas	Corpus and Uterus NOS	Thyroid	Ovary	Cervix Uteri
South Central Region	65.2	113.7	42.1	13.7	16.1	11.5	7.9	10.4	19.4	20.5	11.6	10.9
Bedford	59.8	119.1	35.4	12.3	11.1	^	^	12.8	16.5	17.6	20.3	11.8
Coffee	73.7	87.5	43.3	12.8	21.3	12.3	9.4	11.3	28.3	15.9	11.8	12.5
Giles	59.1	111.4	47.7	11.7	21.4	14.7	^	^	15.3	22.6	^	^
Hickman	62.5	136.0	51.2	^	15.0	^	^	17.7	16.3	^	15.6	^
Lawrence	58.8	105.2	38.2	18.4	14.3	15.0	8.0	^	22.8	25.8	10.4	12.2
Lewis	52.3	117.6	44.3	^	^	^	^	^	^	^	^	^
Lincoln	58.1	106.3	48.0	12.1	13.3	10.6	^	^	13.4	17.6	12.8	^
Marshall	73.9	130.6	51.2	18.5	17.3	^	^	^	21.6	30.5	^	^
Maury	69.1	123.7	35.6	10.2	14.7	11.3	7.7	11.7	20.3	22.5	8.7	9.8
Moore	^	75.5	^	^	^	0.0	^	^	^	^	^	0.0
Perry	96.4	121.4	51.0	^	^	^	^	^	^	^	^	^
Wayne	77.9	120.0	42.2	^	^	^	^	^	^	^	^	^
Southeast Region	57.3	119.5	39.3	22.2	16.0	10.9	8.4	8.6	20.7	15.8	11.7	9.2
Bledsoe	55.8	98.4	35.5	^	^	^	^	^	^	^	^	^
Bradley	47.6	114.7	33.4	15.7	17.3	9.5	6.6	7.6	23.5	14.7	16.7	9.3
Franklin	66.6	110.8	48.9	18.0	13.0	13.3	^	6.5	15.0	19.1	9.9	9.2
Grundy	68.5	116.6	53.6	31.0	23.2	^	^	^	^	^	0.0	^
Hamilton	55.8	120.1	38.5	25.2	16.0	11.6	9.4	8.4	21.0	15.8	9.9	8.3
McMinn	47.1	107.9	29.9	17.0	9.8	8.5	9.9	10.6	22.9	12.9	14.9	9.9
Marion	73.0	129.5	47.9	16.8	14.9	14.8	^	^	19.3	17.6	^	^
Meigs	62.9	125.6	40.8	^	^	^	^	^	30.7	^	^	^
Polk	69.2	102.8	42.8	27.0	25.7	^	^	^	^	^	23.8	^
Rhea	82.8	181.3	58.3	27.6	21.0	^	^	9.7	19.6	23.7	19.9	16.8
Sequatchie	46.8	86.4	33.6	^	^	^	^	^	24.5	^	^	^

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Appendix V Continued

Legend for Ranking

1	2	3	4	5
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Region	Lung and Bronchus	Breast	Colon and Rectum	Melanoma of the Skin	Non Hodgkin Lymphoma	Kidney and Renal Pelvis	Leukemia	Pancreas	Corpus and Uterus NOS	Thyroid	Ovary	Cervix Uteri
Southwest Region	54.3	122.5	46.9	10.2	14.3	13.6	8.5	10.0	20.3	11.1	11.7	9.9
Chester	50.6	137.7	35.3	^	^	^	^	^	^	^	^	^
Decatur	68.0	100.0	42.5	^	25.6	^	^	^	^	^	23.4	^
Fayette	58.7	138.7	50.9	14.0	12.5	10.9	9.6	8.3	27.4	11.8	9.4	11.9
Hardeman	57.5	113.3	36.9	^	23.5	18.2	14.3	^	21.0	20.4	^	^
Hardin	67.4	121.6	34.0	11.5	17.2	^	^	^	20.1	19.6	^	^
Haywood	44.5	98.0	47.5	^	^	^	^	^	29.5	^	^	^
Henderson	51.1	122.0	59.9	^	15.0	^	^	^	17.9	^	^	^
Lauderdale	73.3	96.8	47.7	^	17.9	^	^	^	21.5	^	^	^
McNairy	43.7	132.7	46.9	12.5	19.3	^	^	^	38.6	^	14.3	^
Madison	50.7	109.3	41.6	7.6	14.7	14.2	10.1	8.1	20.0	7.1	12.7	10.1
Shelby	53.5	125.6	47.5	10.1	13.3	14.1	8.2	11.1	19.7	11.4	11.4	9.7
Tipton	68.5	112.3	57.1	11.1	19.2	18.3	^	11.2	17.2	10.5	15.3	11.6
Upper-Cumberland Region	64.0	119.6	44.3	17.6	15.6	11.8	10.0	8.9	20.1	14.1	10.6	11.3
Cannon	52.3	64.5	57.2	^	^	^	^	^	^	^	^	^
Clay	63.7	124.8	^	^	^	^	0.0	^	^	^	^	^
Cumberland	60.5	127.0	41.1	24.6	17.8	10.1	7.0	8.7	25.9	13.5	9.2	8.4
DeKalb	58.8	120.6	45.6	^	^	^	^	^	^	^	^	^
Fentress	74.4	107.8	41.7	^	^	^	^	^	23.4	^	^	^
Jackson	78.5	113.2	23.1	^	24.9	^	^	^	^	^	^	^
Macon	80.3	174.9	50.1	^	18.7	^	16.5	^	16.1	^	^	^
Overton	62.7	101.7	52.6	^	^	13.9	^	^	18.5	14.1	15.5	^
Pickett	107.3	54.5	^	^	0.0	^	^	^	^	^	^	^
Putnam	54.2	124.1	43.9	20.8	19.3	13.2	12.3	8.9	19.2	12.7	10.3	11.7
Smith	90.3	114.6	48.7	^	18.7	^	^	^	^	^	^	^
Van Buren	^	172.7	^	^	^	0.0	^	^	^	^	0.0	0.0
Warren	59.9	117.0	50.6	14.8	13.0	12.0	14.5	10.0	23.3	18.1	14.4	^
White	68.0	107.8	47.6	16.6	^	^	^	^	24.8	15.3	12.4	^

*Rankings were based on counts. Rates were adjusted to the 2000 U.S. standard population and reported as rate per 100,000

^Cell suppressed due to fewer than 10 cases

APPENDIX VI. AGE-ADJUSTED RATE FOR TOP FIVE LEADING CAUSES OF CANCER INCIDENCE BY RESIDENT COUNTY, MALES, TENNESSEE, 2005-2009

Legend for Ranking

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Region	Lung and Bronchus	Prostate	Colon and Rectum	Melanoma of the Skin	Urinary Bladder	Non Hodgkin Lymphoma	Kidney and Renal Pelvis	Oral Cavity and Pharynx
Tennessee	106.3	146.0	56.2	26.4	35.0	23.0	21.9	17.8
East Region	114.2	151.4	53.7	33.7	37.2	24.2	22.4	17.6
Anderson	112.8	167.4	64.9	24.2	45.8	26.5	25.5	19.6
Blount	108.5	145.2	52.0	33.4	39.4	28.0	23.9	14.2
Campbell	159.2	147.5	60.7	28.6	35.6	20.7	19.9	17.7
Claiborne	159.8	133.2	54.8	31.3	31.2	23.7	22.1	15.7
Cocke	106.4	138.9	47.6	28.8	36.8	22.8	25.5	20.5
Grainger	117.5	136.2	55.5	44.6	45.3	28.7	26.6	18.7
Hamblen	117.3	131.4	49.9	44.2	43.1	23.0	16.0	21.0
Jefferson	107.8	128.6	46.8	37.0	32.8	21.8	22.7	18.0
Knox	107.4	162.8	49.9	36.2	34.2	24.1	23.3	18.0
Loudon	91.6	172.2	41.4	37.8	34.3	22.7	17.0	14.5
Monroe	131.8	137.3	56.1	24.2	28.4	20.5	24.4	16.8
Morgan	155.0	136.9	74.0	22.5	45.4	^	^	30.1
Roane	111.3	152.7	53.9	30.6	35.6	24.1	25.1	14.3
Scott	143.6	120.5	100.9	30.0	24.1	^	^	19.8
Sevier	100.4	146.1	54.8	34.0	45.5	25.0	18.9	17.8
Union	139.4	155.0	63.6	23.9	39.6	40.1	20.4	^
Mid-Cumberland Region	99.5	145.5	53.4	24.3	32.4	22.4	21.9	18.1
Cheatham	117.2	139.5	60.8	19.9	47.6	29.0	29.3	26.4
Davidson	99.2	152.4	51.1	23.4	30.9	22.6	20.6	18.8
Dickson	119.6	119.5	75.2	23.8	37.0	20.4	29.6	22.8
Houston	119.0	139.2	96.3	^	^	^	^	^
Humphreys	120.6	99.3	54.9	^	39.3	27.8	22.0	30.8
Montgomery	110.9	130.7	56.2	15.3	30.1	20.8	17.6	14.5
Robertson	111.2	139.2	55.0	35.6	32.1	28.0	24.7	20.0
Rutherford	90.0	150.7	43.2	20.2	29.5	19.5	20.5	13.2
Stewart	134.6	148.0	93.1	^	42.3	25.6	26.4	^
Sumner	101.5	152.8	58.2	28.7	33.4	25.2	26.1	21.2
Trousdale	102.5	189.1	62.9	^	^	^	^	^
Williamson	74.4	149.7	43.0	33.9	37.4	20.3	23.6	17.1
Wilson	103.5	121.6	64.5	25.9	26.7	20.6	18.7	16.9

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Appendix VI Continued

Legend for Ranking

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Region	Lung and Bronchus	Prostate	Colon and Rectum	Melanoma of the Skin	Urinary Bladder	Non Hodgkin Lymphoma	Kidney and Renal Pelvis	Oral Cavity and Pharynx
Northeast Region	106.9	112.2	48.6	31.9	31.6	25.9	19.5	16.3
Carter	98.8	81.8	41.9	24.3	26.4	19.9	19.0	11.6
Greene	120.9	106.2	54.0	28.1	31.9	27.6	21.4	27.3
Hancock	72.4	154.4	^	^	^	^	^	^
Hawkins	121.6	131.3	55.4	34.8	34.7	27.1	17.9	13.4
Johnson	83.7	67.5	48.5	21.7	39.6	^	25.9	^
Sullivan	108.6	126.1	48.0	40.5	33.6	27.4	18.1	16.7
Unicoi	111.8	82.8	47.8	27.1	30.1	36.2	^	^
Washington	98.7	113.8	47.2	28.3	28.9	26.1	22.9	14.0
Northwest Region	129.9	127.2	65.1	17.2	35.4	22.0	25.8	18.3
Benton	128.0	140.4	66.1	22.6	50.0	29.0	22.8	21.6
Carroll	132.6	116.7	62.3	25.1	41.3	17.2	38.2	22.6
Crockett	107.6	88.3	43.0	^	37.7	^	^	^
Dyer	130.1	82.7	59.8	14.0	38.4	13.8	28.7	27.8
Gibson	141.8	132.0	70.3	10.7	21.3	22.2	20.7	14.6
Henry	137.5	170.6	55.5	19.8	32.2	27.2	25.0	11.0
Lake	133.3	101.1	^	^	^	^	^	^
Obion	131.2	124.9	87.8	18.5	50.1	25.2	21.1	19.2
Weakley	111.6	143.7	65.7	13.6	25.6	29.6	27.6	12.3
South Central Region	109.7	129.8	59.9	23.5	36.2	23.4	22.7	18.7
Bedford	88.8	117.4	57.5	37.6	46.7	27.3	20.5	15.4
Coffee	102.9	165.9	58.1	21.4	44.4	23.4	22.7	17.8
Giles	115.9	103.6	67.2	21.2	34.0	22.6	22.4	25.4
Hickman	145.6	115.9	42.2	17.4	36.4	24.4	32.0	^
Lawrence	110.4	113.0	52.3	17.4	35.3	27.5	21.4	17.7
Lewis	132.3	148.5	45.4	^	^	^	^	^
Lincoln	102.7	106.7	91.9	24.2	22.9	25.2	19.0	13.5
Marshall	111.3	127.6	64.6	28.4	42.5	20.1	24.8	28.4
Maury	106.2	139.0	55.5	24.3	35.0	22.3	25.2	18.5
Moore	75.3	156.6	^	^	^	^	^	^
Perry	112.7	171.6	59.1	^	^	^	^	^
Wayne	130.7	110.8	68.9	20.0	34.9	^	24.4	17.8

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Appendix VI Continued

Legend for Ranking

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Region	Lung and Bronchus	Prostate	Colon and Rectum	Melanoma of the Skin	Urinary Bladder	Non Hodgkin Lymphoma	Kidney and Renal Pelvis	Oral Cavity and Pharynx
Southeast Region	103.5	147.4	54.7	30.5	37.3	24.5	20.0	18.5
Bledsoe	119.9	160.2	36.5	26.6	^	^	^	^
Bradley	88.8	112.0	59.5	23.7	35.0	24.9	16.5	18.9
Franklin	96.1	153.8	68.1	19.3	53.6	24.1	19.8	20.4
Grundy	133.7	118.7	64.3	31.1	26.1	^	^	^
Hamilton	96.0	169.4	50.2	35.8	37.3	24.5	18.9	17.0
McMinn	109.5	119.0	64.7	27.1	32.2	23.4	30.8	16.9
Marion	130.9	148.4	60.4	25.4	34.4	20.7	21.7	29.5
Meigs	117.9	133.2	47.3	^	49.4	^	31.0	^
Polk	136.5	91.7	61.6	^	44.3	31.7	^	^
Rhea	145.2	130.2	55.7	31.8	31.6	34.0	23.9	31.1
Sequatchie	96.9	94.1	42.0	46.0	32.6	^	^	^
Southwest Region	94.9	168.0	63.8	18.4	33.8	19.3	23.5	16.7
Chester	88.9	84.3	61.7	^	^	31.3	36.3	^
Decatur	123.7	89.0	64.2	^	32.7	^	^	^
Fayette	87.2	182.1	65.9	25.2	36.6	25.2	23.2	16.6
Hardeman	115.5	149.3	60.9	^	34.0	25.0	34.6	16.2
Hardin	138.5	91.0	60.6	14.1	39.5	26.7	18.4	16.4
Haywood	110.6	175.0	73.4	^	31.3	^	31.9	19.2
Henderson	126.5	123.9	70.2	22.8	42.3	20.3	26.1	23.3
Lauderdale	115.8	146.8	62.7	^	28.4	22.4	16.0	^
McNairy	108.3	103.7	68.0	16.1	34.7	22.0	22.8	15.5
Madison	101.4	142.6	71.6	15.5	38.7	22.8	23.5	14.8
Shelby	86.0	184.0	62.2	19.1	33.0	17.2	23.4	16.0
Tipton	123.2	173.7	65.7	19.1	38.4	25.6	22.3	27.0
Upper-Cumberland Region	121.5	139.5	57.9	25.7	38.8	24.5	19.9	18.2
Cannon	82.0	110.3	52.1	33.0	54.3	41.8	^	^
Clay	91.3	112.7	76.3	^	44.9	^	^	^
Cumberland	100.3	172.5	50.4	34.8	48.8	32.4	21.7	23.4
DeKalb	128.8	111.1	60.1	^	38.9	21.7	^	^
Fentress	156.0	153.3	83.6	25.9	54.2	^	^	22.0
Jackson	173.8	137.1	71.6	^	^	^	^	^
Macon	165.1	129.1	67.4	^	35.1	30.5	21.1	23.5
Overton	145.2	122.5	61.6	27.2	36.7	^	^	21.1
Pickett	152.2	98.5	^	^	^	^	^	^
Putnam	117.3	133.3	53.3	19.4	31.7	21.8	22.8	17.3
Smith	121.2	102.2	61.2	32.2	33.4	24.3	^	^
Van Buren	122.3	120.3	^	^	^	^	^	^
Warren	119.2	122.4	54.0	27.2	33.5	28.7	18.7	16.5
White	122.2	160.3	64.7	25.2	31.8	18.3	28.0	^

*Rankings were based on counts. Rates were adjusted to the 2000 U.S. standard population and reported as rate per 100,000

^Cell suppressed due to fewer than 10 cases

APPENDIX VII. AGE-ADJUSTED RATE FOR TOP FIVE LEADING CAUSES OF CANCER MORTALITY BY RESIDENT COUNTY, FEMALES, TENNESSEE, 2005-2009

Legend for Ranking



Region	Lung and Bronchus	Colon and Rectum	Breast	Pancreas	Leukemia	Non Hodgkin Lymphoma	Brain and Other Nervous System	Ovary
Tennessee	47.0	15.1	23.8	9.3	5.3	5.4	4.1	8.0
East Region	51.0	13.8	20.9	8.3	5.6	6.0	4.2	8.2
Anderson	60.5	18.0	18.8	10.1	4.9	5.7	5.0	9.7
Blount	38.9	12.6	19.1	6.1	2.9	6.5	4.4	7.0
Campbell	68.4	20.2	24.6	10.2	9.8	^	^	^
Claiborne	55.8	15.2	24.5	^	^	^	^	^
Cocke	56.8	13.9	20.9	9.0	^	^	^	7.9
Grainger	48.4	17.5	36.5	^	^	^	^	^
Hamblen	54.9	16.6	21.0	12.4	^	4.5	^	11.2
Jefferson	43.8	8.9	15.3	6.9	^	8.1	^	14.8
Knox	47.9	11.9	19.9	8.6	5.6	6.3	3.0	8.0
Loudon	44.5	15.0	20.3	6.9	^	8.2	6.2	8.7
Monroe	51.0	15.9	19.9	7.4	8.9	^	^	^
Morgan	63.0	^	36.5	^	^	^	0.0	^
Roane	54.1	18.3	21.5	9.8	7.3	^	^	9.4
Scott	83.3	^	28.6	^	^	^	^	^
Sevier	51.2	11.5	21.8	6.4	6.7	5.5	6.0	4.2
Union	56.4	^	18.7	^	^	^	^	^
Mid-Cumberland Region	46.5	14.6	22.6	9.5	5.1	5.2	4.3	7.3
Cheatham	46.0	10.6	26.3	13.7	^	^	^	^
Davidson	47.6	14.2	24.1	10.1	5.2	4.2	3.7	8.4
Dickson	56.8	15.9	17.2	12.4	^	^	^	^
Houston	41.2	^	34.4	^	^	^	^	^
Humphreys	50.0	^	^	^	^	^	^	^
Montgomery	47.4	19.8	20.0	7.8	5.2	5.9	2.9	6.8
Robertson	55.9	17.1	21.6	7.4	6.7	6.8	6.2	7.6
Rutherford	47.8	13.6	22.1	7.0	3.1	4.7	4.7	5.9
Stewart	59.9	^	^	^	^	^	^	^
Sumner	44.2	13.2	22.2	12.7	5.5	10.1	4.6	6.9
Trousdale	69.6	^	^	^	^	0.0	0.0	^
Williamson	31.5	12.8	19.4	8.6	6.2	4.9	5.0	7.9
Wilson	45.7	17.6	28.3	7.3	4.9	5.2	4.4	6.8

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Appendix VII Continued

Legend for Ranking

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Region	Lung and Bronchus	Colon and Rectum	Breast	Pancreas	Leukemia	Non Hodgkin Lymphoma	Brain and Other Nervous System	Ovary
Northeast Region	49.2	13.9	23.1	10.3	5.2	5.7	5.0	8.8
Carter	57.1	15.5	20.2	8.6	6.8	5.5	^	10.2
Greene	65.1	12.1	23.3	13.7	9.1	6.3	8.0	8.1
Hancock	53.4	^	^	0.0	^	^	^	^
Hawkins	52.3	16.5	29.8	12.0	7.2	7.2	^	6.2
Johnson	55.1	^	22.3	^	^	^	^	^
Sullivan	48.5	12.0	22.8	12.0	2.7	5.0	4.7	9.6
Unicoi	47.4	18.9	22.9	^	^	^	^	^
Washington	34.2	14.2	21.6	6.9	4.6	5.9	3.7	7.5
Northwest Region	52.2	17.4	25.0	9.7	6.0	4.3	3.7	7.8
Benton	49.5	^	24.4	^	^	^	^	16.5
Carroll	57.6	16.9	23.9	8.6	^	^	^	^
Crockett	36.1	21.9	31.7	^	^	^	^	^
Dyer	42.9	14.2	15.8	9.5	^	^	^	9.5
Gibson	46.6	22.0	32.0	10.1	5.9	^	^	7.1
Henry	51.7	19.7	23.2	9.3	^	^	^	7.9
Lake	82.7	^	^	^	^	0.0	^	^
Obion	55.5	14.6	24.2	10.0	9.6	^	^	^
Weakley	65.4	19.1	23.4	8.6	^	^	^	^
South Central Region	50.2	14.8	23.9	9.4	4.8	5.6	4.4	8.6
Bedford	50.5	10.6	23.9	10.4	^	^	^	10.9
Coffee	54.6	16.3	28.1	11.9	7.9	7.5	^	12.1
Giles	50.3	15.4	19.7	9.0	^	^	^	^
Hickman	41.9	17.6	23.5	15.1	^	^	^	^
Lawrence	42.7	13.1	22.1	^	6.3	6.8	^	10.1
Lewis	56.5	^	^	^	^	^	^	^
Lincoln	42.0	19.3	21.8	^	^	^	^	^
Marshall	55.4	13.1	30.2	11.5	^	^	^	^
Maury	55.6	14.6	24.2	9.3	^	^	^	8.1
Moore	^	^	^	^	^	^	^	^
Perry	76.4	^	^	^	^	^	0.0	^
Wayne	41.4	^	30.1	^	^	^	^	^

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Appendix VII Continued

Legend for Ranking

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Region	Lung and Bronchus	Colon and Rectum	Breast	Pancreas	Leukemia	Non Hodgkin Lymphoma	Brain and Other Nervous System	Ovary
Southeast Region	41.5	13.4	22.7	8.7	4.1	5.6	3.3	7.3
Bledsoe	51.2	^	^	^	^	^	0.0	0.0
Bradley	34.7	13.7	28.8	8.2	4.4	5.5	4.7	6.6
Franklin	49.5	19.0	26.2	7.5	^	^	^	^
Grundy	35.2	^	35.6	^	^	^	^	^
Hamilton	40.4	12.1	21.7	8.4	4.0	6.1	2.8	7.4
McMinn	40.2	13.5	18.0	9.5	^	^	^	10.1
Marion	57.9	20.3	28.3	^	^	^	^	^
Meigs	48.3	^	^	^	^	^	^	^
Polk	44.1	^	^	^	^	^	^	^
Rhea	43.4	14.7	20.0	9.8	^	^	^	9.8
Sequatchie	36.9	^	^	^	0.0	^	0.0	^
Southwest Region	43.4	18.3	29.4	10.4	5.9	5.0	3.7	8.4
Chester	40.8	^	24.8	^	^	^	^	^
Decatur	53.1	^	25.7	^	^	^	0.0	^
Fayette	47.3	12.9	27.2	11.9	^	^	^	^
Hardeman	27.6	22.9	23.6	^	^	^	^	^
Hardin	61.1	10.2	20.8	^	^	^	^	12.3
Haywood	31.4	20.3	34.0	^	^	^	^	^
Henderson	44.3	14.6	30.0	^	^	^	^	^
Lauderdale	51.4	21.4	28.3	^	^	^	^	^
McNairy	41.1	21.1	31.1	10.5	^	10.7	^	^
Madison	35.4	14.2	22.6	10.8	7.4	3.5	^	6.2
Shelby	43.7	19.3	31.0	10.9	6.1	4.7	3.7	9.1
Tipton	53.0	20.9	27.7	11.7	^	9.6	6.7	10.5
Upper-Cumberland Region	48.4	14.8	21.5	8.1	6.6	6.2	5.2	8.3
Cannon	43.4	^	^	^	^	^	0.0	^
Clay	53.4	^	^	^	^	^	0.0	^
Cumberland	37.8	10.8	17.0	8.1	4.0	5.9	5.3	4.9
DeKalb	60.2	^	31.2	^	^	^	^	^
Fentress	65.4	20.0	19.1	^	^	^	^	^
Jackson	63.1	^	25.5	^	^	^	0.0	^
Macon	52.7	24.7	22.7	^	^	^	^	^
Overton	51.5	19.8	21.3	^	^	^	^	12.9
Pickett	55.7	^	^	^	0.0	0.0	0.0	^
Putnam	46.5	12.3	25.5	6.4	6.1	^	7.0	9.9
Smith	71.1	23.5	29.1	^	^	^	^	^
Van Buren	^	^	^	^	0.0	^	0.0	^
Warren	44.1	11.5	20.0	8.4	11.3	7.8	8.5	11.2
White	51.9	13.8	16.3	^	^	^	^	14.7

*Rankings were based on counts. Rates were adjusted to the 2000 U.S. standard population and reported as rate per 100,000

^Cell suppressed due to fewer than 10 cases

APPENDIX VIII. AGE-ADJUSTED RATE FOR TOP FIVE LEADING CAUSES OF CANCER MORTALITY BY RESIDENT COUNTY, MALES, TENNESSEE, 2005-2009

Legend for Ranking



Region	Lung and Bronchus	Colon and Rectum	Pancreas	Prostate	Leukemia	Non Hodgkin Lymphoma	Liver and Intrahepatic Bile Duct	Brain and Other Nervous System	Kidney and Renal Pelvis	Esophagus	Urinary Bladder	Myeloma	Stomach
Tennessee	91.2	22.2	12.9	25.2	10.4	9.2	8.0	6.0	6.4	7.4	7.6	5.2	5.0
East Region	92.1	20.6	12.9	21.7	10.6	9.0	7.3	6.3	7.0	6.9	6.9	4.7	4.4
Anderson	92.6	24.6	11.5	24.4	9.7	9.6	8.4	6.7	7.6	7.9	10.9	6.5	^
Blount	84.2	21.7	11.4	23.5	11.1	8.3	7.7	5.7	5.7	4.5	8.3	5.2	5.2
Campbell	140.6	22.3	^	24.9	13.8	^	^	^	^	^	^	10.7	^
Claiborne	154.9	26.3	^	28.9	^	^	^	^	^	^	^	^	^
Cocke	100.3	19.8	11.6	22.3	13.4	^	10.7	^	^	^	^	^	^
Grainger	121.1	28.5	^	37.0	19.7	^	^	^	^	^	^	^	^
Hamblen	110.2	26.0	14.1	19.9	15.1	6.7	^	8.7	10.1	6.1	^	^	^
Jefferson	97.3	19.5	18.0	20.0	8.5	13.1	9.8	8.8	^	^	^	^	^
Knox	78.6	18.5	11.9	19.6	9.4	10.3	6.9	5.7	8.5	7.5	6.3	3.7	4.1
Loudon	70.7	16.8	14.9	19.8	13.4	9.1	6.7	11.2	^	6.4	^	6.8	^
Monroe	103.7	13.9	19.4	16.8	12.0	13.3	^	8.3	^	^	^	^	^
Morgan	114.9	35.1	^	27.2	^	^	^	^	^	^	0.0	^	^
Roane	104.5	19.4	12.5	22.8	8.3	7.2	6.1	^	^	5.8	10.5	^	^
Scott	131.9	25.1	^	^	^	0.0	^	^	^	^	^	^	^
Sevier	71.9	17.1	15.8	21.4	9.2	7.6	9.1	^	6.4	7.1	7.1	^	5.1
Union	99.5	29.0	^	^	^	^	^	^	^	^	^	^	^

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Appendix VIII Continued

Legend for Ranking

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Region	Lung and Bronchus	Colon and Rectum	Pancreas	Prostate	Leukemia	Non Hodgkin Lymphoma	Liver and Intrahepatic Bile Duct	Brain and Other Nervous System	Kidney and Renal Pelvis	Esophagus	Urinary Bladder	Myeloma	Stomach
Mid-Cumberland Region	85.8	20.6	12.1	24.3	10.3	9.0	8.6	6.2	5.5	7.7	8.5	5.0	3.9
Cheatham	103.6	23.8	^	^	^	^	^	^	^	11.8	^	^	^
Davidson	85.3	21.5	13.2	26.7	9.9	8.6	10.8	5.3	4.9	7.2	8.7	5.7	4.3
Dickson	92.9	21.2	24.4	32.8	10.5	^	^	^	^	9.9	10.7	^	0.0
Houston	118.9	^	^	^	^	^	^	^	^	0.0	^	0.0	^
Humphreys	112.7	22.5	^	^	^	^	^	^	0.0	^	^	0.0	^
Montgomery	103.0	19.1	12.7	26.7	7.7	7.9	10.0	4.6	7.3	8.4	12.3	5.2	^
Robertson	97.1	25.1	9.4	26.3	9.1	11.5	8.5	7.2	^	7.9	15.0	^	^
Rutherford	75.6	19.7	9.9	17.8	9.1	10.7	8.7	5.9	5.0	7.9	6.3	3.5	2.9
Stewart	126.8	^	^	41.6	^	^	^	0.0	^	^	^	0.0	0.0
Sumner	85.3	24.8	10.4	21.4	13.3	10.4	5.3	4.7	7.5	9.2	7.5	5.7	4.6
Trousdale	112.3	^	^	^	0.0	0.0	^	^	^	^	^	0.0	0.0
Williamson	64.0	14.6	11.0	22.5	11.0	6.7	4.4	9.2	4.6	6.3	8.0	6.7	5.3
Wilson	87.1	16.4	11.5	23.0	10.7	11.1	6.9	9.6	6.6	8.7	6.7	^	4.6
Northeast Region	94.7	21.6	12.5	20.7	10.0	10.6	6.9	5.0	6.0	8.1	7.8	5.5	3.7
Carter	95.9	20.6	14.7	24.4	^	12.6	6.3	^	7.2	7.0	10.2	^	^
Greene	114.4	23.5	17.9	27.6	6.6	8.8	6.6	5.8	5.6	7.2	9.5	6.0	^
Hancock	123.6	^	^	^	0.0	^	^	0.0	^	^	^	^	0.0
Hawkins	96.5	16.1	9.1	19.2	11.6	9.2	^	^	6.8	7.8	^	^	^
Johnson	82.1	^	19.5	^	^	^	^	^	^	^	^	^	0.0
Sullivan	90.8	22.5	8.1	17.3	10.4	13.1	7.1	5.0	3.5	8.4	7.5	6.4	3.5
Unicoi	93.5	^	23.1	24.7	^	^	^	^	^	21.4	^	^	^
Washington	88.1	24.9	13.1	21.5	13.6	7.8	9.5	7.5	8.2	7.6	5.6	^	3.3

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Appendix VIII Continued

Legend for Ranking

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Region	Lung and Bronchus	Colon and Rectum	Pancreas	Prostate	Leukemia	Non Hodgkin Lymphoma	Liver and Intrahepatic Bile Duct	Brain and Other Nervous System	Kidney and Renal Pelvis	Esophagus	Urinary Bladder	Myeloma	Stomach
Northwest Region	110.1	27.7	14.3	26.7	8.6	8.9	8.7	6.0	8.3	7.1	6.9	3.8	4.8
Benton	94.6	22.6	23.8	20.6	^	^	21.9	^	^	^	^	^	^
Carroll	130.7	33.4	^	23.2	12.4	^	^	^	^	^	^	^	^
Crockett	75.7	^	^	^	^	^	^	^	^	^	^	^	^
Dyer	112.1	29.0	13.5	22.1	^	^	^	^	^	^	^	^	^
Gibson	124.9	34.5	12.4	28.5	^	10.0	^	7.5	11.0	7.5	^	^	8.3
Henry	99.0	13.6	15.0	30.7	14.6	12.4	10.9	^	^	^	^	^	^
Lake	110.4	^	^	^	0.0	0.0	^	^	^	^	^	0.0	0.0
Obion	107.3	29.3	13.2	29.7	^	^	^	^	^	^	14.5	^	^
Weakley	107.7	24.9	^	33.2	12.2	^	^	^	^	^	^	^	^
South Central Region	98.4	25.6	12.6	25.0	11.3	9.2	5.6	6.1	6.4	9.7	7.9	5.9	4.6
Bedford	87.1	26.7	14.0	25.5	^	11.4	^	^	^	11.0	^	^	^
Coffee	88.9	22.8	14.8	24.6	8.3	11.3	^	9.9	^	13.8	8.3	^	^
Giles	113.0	28.5	^	17.2	13.3	^	^	^	^	^	^	^	^
Hickman	136.0	23.0	^	^	^	^	^	^	^	15.5	^	0.0	^
Lawrence	103.0	25.8	^	29.4	18.5	9.1	^	^	^	^	13.2	^	^
Lewis	103.0	^	^	^	^	^	^	^	^	^	^	^	^
Lincoln	104.7	44.1	17.2	21.5	^	13.0	^	^	^	^	^	^	^
Marshall	98.0	24.9	19.3	21.1	^	^	^	^	^	^	^	^	^
Maury	93.3	17.3	12.7	24.4	13.4	7.3	^	6.9	7.4	8.3	10.1	7.2	^
Moore	^	^	0.0	^	0.0	^	0.0	0.0	^	0.0	0.0	^	^
Perry	89.1	^	^	^	^	^	^	^	^	^	0.0	^	0.0
Wayne	105.2	36.8	^	31.5	^	^	^	^	^	^	^	^	^

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Appendix VIII Continued

Legend for Ranking

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Region	Lung and Bronchus	Colon and Rectum	Pancreas	Prostate	Leukemia	Non Hodgkin Lymphoma	Liver and Intrahepatic Bile Duct	Brain and Other Nervous System	Kidney and Renal Pelvis	Esophagus	Urinary Bladder	Myeloma	Stomach
Southeast Region	87.7	19.5	13.0	25.9	9.0	10.6	8.4	7.3	5.6	7.0	7.7	5.0	4.6
Bledsoe	73.3	^	^	^	^	^	^	0.0	^	^	^	^	^
Bradley	87.6	19.7	13.6	22.0	11.6	13.6	5.8	9.4	^	7.3	7.1	6.5	5.6
Franklin	85.4	19.8	12.3	21.1	^	^	^	^	^	^	^	^	^
Grundy	94.1	^	^	^	^	^	^	^	^	^	^	0.0	^
Hamilton	76.8	18.3	12.3	30.1	7.5	10.4	10.2	5.5	6.5	6.7	7.7	4.6	4.4
McMinn	102.2	24.3	13.8	22.9	8.6	11.4	^	9.2	7.7	6.8	^	^	^
Marion	110.6	26.4	15.8	33.1	16.4	12.6	^	^	^	^	^	^	^
Meigs	84.2	^	^	^	^	^	^	^	^	^	0.0	^	0.0
Polk	138.6	30.5	^	^	^	^	^	^	^	^	^	^	^
Rhea	111.8	17.1	16.5	19.0	15.5	16.0	^	^	^	^	^	^	^
Sequatchie	121.0	^	^	^	^	0.0	^	^	^	^	^	^	^
Southwest Region	87.6	25.3	14.0	34.0	11.7	7.8	8.7	4.7	6.9	7.0	7.3	6.5	8.5
Chester	72.5	^	^	^	^	^	^	^	^	^	^	0.0	^
Decatur	93.7	^	^	^	^	^	^	^	^	^	^	0.0	^
Fayette	79.1	19.3	17.1	31.9	12.1	^	^	^	^	^	^	^	^
Hardeman	105.4	24.1	^	32.1	^	^	^	0.0	^	^	^	^	15.0
Hardin	110.3	24.4	17.6	15.9	^	^	^	^	^	^	^	^	^
Haywood	131.2	^	^	32.5	0.0	^	0.0	^	^	^	^	^	^
Henderson	123.1	26.8	^	20.8	^	^	^	^	^	^	^	^	^
Lauderdale	111.8	29.6	29.2	47.8	^	^	^	^	^	^	^	^	^
McNairy	86.4	25.0	^	30.9	^	^	^	^	^	^	^	^	^
Madison	82.6	26.6	12.8	24.3	7.7	8.2	8.7	4.9	10.2	^	^	6.6	7.1
Shelby	81.9	25.8	13.6	38.1	12.4	7.4	9.6	4.5	6.4	7.7	7.7	6.7	9.3
Tipton	116.9	24.4	20.0	23.4	11.9	12.0	^	^	9.3	^	^	11.2	9.7

Appendix VIII Continued

Legend for Ranking



Region	Lung and Bronchus	Colon and Rectum	Pancreas	Prostate	Leukemia	Non Hodgkin Lymphoma	Liver and Intrahepatic Bile Duct	Brain and Other Nervous System	Kidney and Renal Pelvis	Esophagus	Urinary Bladder	Myeloma	Stomach
Upper-Cumberland Region	100.7	23.5	13.1	20.7	10.3	10.5	8.1	7.2	6.7	7.4	7.0	4.4	4.2
Cannon	75.3	^	^	^	^	^	^	^	^	^	^	^	^
Clay	77.5	50.7	^	^	^	0.0	^	^	0.0	^	^	0.0	^
Cumberland	77.9	14.0	12.5	15.8	8.0	14.2	5.6	6.5	6.3	6.7	7.9	4.8	^
DeKalb	109.9	23.8	^	^	^	^	^	^	^	^	^	^	^
Fentress	121.1	53.0	25.7	24.5	^	^	^	^	^	^	^	^	^
Jackson	86.9	30.9	^	^	^	^	^	^	0.0	^	^	^	^
Macon	136.7	27.7	22.2	41.2	^	^	^	^	^	^	^	^	^
Overton	118.6	21.4	17.1	27.3	19.9	^	^	^	^	^	^	^	^
Pickett	103.9	^	0.0	^	^	0.0	^	^	^	^	^	^	^
Putnam	114.5	16.4	8.7	21.9	10.8	7.9	7.5	^	7.8	7.0	^	^	^
Smith	115.9	33.3	^	^	^	^	^	^	^	^	^	^	0.0
Van Buren	68.3	^	^	0.0	0.0	^	^	0.0	0.0	^	0.0	^	0.0
Warren	103.6	26.1	15.0	17.9	^	16.0	^	^	^	^	^	^	^
White	101.2	28.4	^	31.2	^	^	^	^	^	13.3	^	^	^

*Rankings were based on counts. Rates were adjusted to the 2000 U.S. standard population and reported as rate per 100,000

^Cell suppressed due to fewer than 10 cases

APPENDIX IX. LUNG AND BRONCHUS CANCER INCIDENCE AND MORTALITY BY RESIDENT COUNTY, TENNESSEE, 2005-2009

	Incidence			Mortality			M:I Ratio [†]
	Count [*]	Rate ^{**}	Confidence Interval	Count [*]	Rate ^{**}	Confidence Interval	
Tennessee	26,912	80.5	79.5 - 81.5	21,693	65.5	64.6 - 66.4	0.81
East Region	6,002	87.6	85.3 - 89.8	4,663	68.5	66.6 - 70.5	0.78
Anderson	453	93.3	84.8 - 102.4	366	74.0	66.5 - 82.1	0.79
Blount	595	81.2	74.7 - 88.1	425	58.1	52.7 - 64.0	0.72
Campbell	319	120.3	107.3 - 134.5	258	98.7	86.9 - 111.8	0.82
Claiborne	213	107.6	93.4 - 123.5	190	96.9	83.4 - 112.1	0.90
Cocke	204	86.7	75.0 - 99.8	174	76.5	65.4 - 89.2	0.88
Grainger	121	85.5	70.7 - 102.7	108	79.3	64.7 - 96.3	0.93
Hamblen	333	89.8	80.3 - 100.1	283	77.2	68.4 - 86.9	0.86
Jefferson	256	81.9	72.0 - 92.9	205	67.5	58.4 - 77.7	0.82
Knox	1,866	82.3	78.6 - 86.1	1,368	60.7	57.5 - 64.0	0.74
Loudon	256	75.5	66.3 - 85.9	181	56.4	48.2 - 65.6	0.75
Monroe	263	94.7	83.4 - 107.2	199	74.1	63.9 - 85.4	0.78
Morgan	126	109.0	90.6 - 130.3	94	83.6	67.3 - 102.7	0.77
Roane	315	85.0	75.7 - 95.1	282	75.5	66.9 - 85.1	0.89
Scott	129	108.9	90.6 - 129.9	123	104.0	86.1 - 124.5	0.96
Sevier	444	83.6	75.9 - 92.0	324	61.2	54.6 - 68.4	0.73
Union	109	100.1	81.9 - 121.3	83	76.3	60.5 - 95.1	0.76
Mid-Cumberland Region	5,699	77.4	75.4 - 79.5	4,538	62.8	60.9 - 64.6	0.81
Cheatham	162	85.6	72.6 - 100.3	130	71.9	59.7 - 85.8	0.84
Davidson	2,204	77.4	74.2 - 80.8	1,769	62.5	59.6 - 65.5	0.81
Dickson	231	91.5	80.0 - 104.3	175	71.9	61.5 - 83.5	0.79
Houston	51	93.0	69.0 - 123.5	41	75.8	54.2 - 104.0	0.82
Humphreys	113	95.0	78.2 - 114.7	92	76.8	61.8 - 94.6	0.81
Montgomery	473	83.4	76.0 - 91.4	391	70.2	63.3 - 77.6	0.84
Robertson	258	82.4	72.5 - 93.2	224	73.0	63.6 - 83.3	0.89
Rutherford	664	74.6	68.9 - 80.6	521	59.4	54.3 - 64.8	0.80
Stewart	68	83.7	64.8 - 106.8	72	89.2	69.6 - 112.9	1.07
Sumner	607	77.1	70.9 - 83.6	470	61.7	56.1 - 67.6	0.80
Trousdale	42	89.2	64.0 - 121.7	41	88.8	63.4 - 121.6	1.00
Williamson	399	59.5	53.6 - 65.8	290	45.4	40.2 - 51.1	0.76
Wilson	427	82.1	74.3 - 90.6	322	63.2	56.3 - 70.8	0.77

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Appendix IX Continued

	Incidence			Mortality			M:I Ratio [†]
	Count [*]	Rate ^{**}	Confidence Interval	Count [*]	Rate ^{**}	Confidence Interval	
Northeast Region	2,673	83.6	80.4 - 86.9	2,177	68.6	65.7 - 71.6	0.82
Carter	313	84.7	75.5 - 94.8	268	74.2	65.5 - 83.8	0.88
Greene	414	97.6	88.3 - 107.6	364	85.6	76.9 - 95.0	0.88
Hancock	26	60.4	39.1 - 90.1	35	81.9	56.8 - 115.3	1.36
Hawkins	322	90.7	80.9 - 101.4	250	71.1	62.4 - 80.7	0.78
Johnson	84	69.1	54.9 - 86.3	79	67.4	53.2 - 84.6	0.98
Sullivan	898	84.9	79.4 - 90.7	699	66.4	61.5 - 71.6	0.78
Unicoi	111	84.9	69.7 - 102.9	86	66.1	52.8 - 82.3	0.78
Washington	505	72.6	66.4 - 79.3	396	57.5	51.9 - 63.5	0.79
Northwest Region	1,446	90.7	86.0 - 95.5	1,233	76.5	72.2 - 80.9	0.84
Benton	123	104.1	86.0 - 125.4	87	69.7	55.6 - 86.8	0.67
Carroll	180	95.0	81.4 - 110.3	170	88.0	75.0 - 102.6	0.93
Crockett	64	73.3	56.4 - 94.0	48	52.3	38.5 - 69.8	0.71
Dyer	187	85.1	73.2 - 98.4	153	71.6	60.6 - 84.1	0.84
Gibson	294	94.2	83.7 - 105.8	249	79.2	69.6 - 89.8	0.84
Henry	209	90.9	78.8 - 104.5	166	70.9	60.4 - 82.9	0.78
Lake	43	112.2	81.1 - 151.7	37	94.3	66.3 - 130.6	0.84
Obion	179	86.6	74.3 - 100.6	161	77.6	65.9 - 90.9	0.90
Weakley	167	86.8	74.0 - 101.2	162	83.7	71.2 - 97.9	0.96
South Central Region	1,820	83.8	80.0 - 87.8	1,511	70.1	66.6 - 73.8	0.84
Bedford	158	71.2	60.4 - 83.4	143	65.9	55.4 - 77.7	0.93
Coffee	270	84.8	75.0 - 95.6	220	69.1	60.2 - 78.9	0.81
Giles	155	84.0	71.1 - 98.7	138	76.1	63.8 - 90.3	0.91
Hickman	133	100.4	83.9 - 119.3	108	82.0	67.1 - 99.2	0.82
Lawrence	202	80.1	69.4 - 92.1	171	67.4	57.7 - 78.5	0.84
Lewis	62	88.4	67.5 - 114.1	52	75.9	56.4 - 100.4	0.86
Lincoln	163	77.4	66.0 - 90.5	143	67.9	57.2 - 80.1	0.88
Marshall	144	89.7	75.5 - 105.8	114	73.3	60.3 - 88.2	0.82
Maury	353	83.1	74.6 - 92.3	293	69.9	62.0 - 78.4	0.84
Moore	20	47.4	28.8 - 75.1	17	44.1	25.6 - 72.2	0.93
Perry	57	103.3	77.7 - 135.5	42	80.9	57.9 - 110.9	0.78
Wayne	103	102.4	83.5 - 124.7	70	70.6	55.0 - 89.7	0.69

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Appendix IX Continued

	Incidence			Mortality			M:I Ratio [†]
	Count*	Rate**	Confidence Interval	Count*	Rate**	Confidence Interval	
Southeast Region	2,972	77.0	74.3 - 79.9	2,334	60.9	58.5 - 63.5	0.79
Bledsoe	62	83.6	63.6 - 108.1	43	59.6	42.7 - 81.3	0.71
Bradley	356	65.7	58.9 - 73.0	304	57.4	51.1 - 64.3	0.87
Franklin	207	79.4	68.8 - 91.2	169	64.5	55.1 - 75.2	0.81
Grundy	87	97.3	77.7 - 120.5	56	61.6	46.3 - 80.6	0.63
Hamilton	1,403	72.3	68.5 - 76.2	1,078	55.3	52.0 - 58.7	0.76
McMinn	244	74.1	65.0 - 84.3	213	65.8	57.2 - 75.4	0.89
Marion	175	98.8	84.4 - 115.0	139	81.1	68.0 - 96.2	0.82
Meigs	67	89.9	69.2 - 115.3	49	66.4	48.8 - 88.8	0.74
Polk	108	99.5	81.4 - 120.9	90	86.8	69.5 - 107.4	0.87
Rhea	206	110.5	95.7 - 127.1	135	73.2	61.2 - 87.0	0.66
Sequatchie	57	68.7	51.8 - 89.6	58	73.3	55.4 - 95.4	1.07
Southwest Region	4,373	71.0	68.8 - 73.1	3,728	61.4	59.4 - 63.4	0.86
Chester	62	67.7	51.8 - 87.0	49	54.3	40.1 - 72.1	0.80
Decatur	77	91.6	72.0 - 115.6	62	71.8	54.8 - 93.1	0.78
Fayette	153	71.6	60.5 - 84.2	125	61.1	50.7 - 73.2	0.85
Hardeman	131	84.4	70.5 - 100.4	98	62.8	50.9 - 76.8	0.74
Hardin	175	98.2	84.0 - 114.3	144	81.4	68.5 - 96.2	0.83
Haywood	77	72.6	57.2 - 91.0	77	71.8	56.6 - 90.0	0.99
Henderson	131	82.4	68.8 - 98.1	122	77.6	64.3 - 92.9	0.94
Lauderdale	124	90.9	75.4 - 108.6	103	74.0	60.2 - 89.9	0.81
McNairy	123	71.4	59.2 - 85.6	106	60.5	49.5 - 73.6	0.85
Madison	351	71.5	64.1 - 79.4	269	54.8	48.4 - 61.9	0.77
Shelby	2,717	66.5	64.0 - 69.1	2,361	58.9	56.5 - 61.3	0.89
Tipton	252	92.2	81.0 - 104.6	212	79.8	69.2 - 91.5	0.87

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Appendix IX Continued

	Incidence			Mortality			M:I Ratio [†]
	Count [*]	Rate ^{**}	Confidence Interval	Count [*]	Rate ^{**}	Confidence Interval	
Upper-Cumberland Region	1,907	89.2	85.2 - 93.4	1,509	71.1	67.5 - 74.8	0.80
Cannon	55	65.2	49.0 - 85.4	47	56.8	41.6 - 76.0	0.87
Clay	42	75.7	54.1 - 104.1	34	63.9	43.9 - 90.8	0.84
Cumberland	368	78.8	70.6 - 87.9	261	56.4	49.5 - 64.2	0.72
DeKalb	98	88.6	71.7 - 108.4	89	80.5	64.5 - 99.5	0.91
Fentress	126	109.0	90.4 - 130.5	102	89.6	72.7 - 109.6	0.82
Jackson	87	117.4	93.7 - 145.9	53	72.2	53.8 - 95.4	0.61
Macon	141	116.8	98.0 - 138.1	103	86.9	70.8 - 105.8	0.74
Overton	140	100.4	84.2 - 119.0	113	82.1	67.5 - 99.2	0.82
Pickett	48	126.4	91.8 - 171.7	29	75.1	49.7 - 111.5	0.59
Putnam	324	81.7	73.0 - 91.3	297	75.5	67.1 - 84.7	0.92
Smith	106	102.1	83.4 - 123.8	89	88.5	70.9 - 109.2	0.87
Van Buren	27	79.1	51.4 - 117.4	15	41.1	22.5 - 70.4	0.52
Warren	201	85.6	74.1 - 98.5	161	69.4	59.1 - 81.2	0.81
White	144	89.6	75.5 - 105.9	116	71.9	59.3 - 86.6	0.80

*Total counts from 2005-2009

**Age-adjusted annual rate per 100,000

†Mortality incidence ratio. See Technical Notes for details

Note that the number of cases by county may not sum up to the state total due to records with missing county information

APPENDIX X. PROSTATE CANCER INCIDENCE AND MORTALITY BY RESIDENT COUNTY, TENNESSEE, 2005-2009

	Incidence			Mortality			M:I Ratio [†]
	Count [*]	Rate ^{**}	Confidence Interval	Count [*]	Rate ^{**}	Confidence Interval	
Tennessee	22,076	146.0	144.0-147.9	2,977	25.2	24.3-26.1	0.17
East Region	4,761	151.4	147.0-155.9	528	21.7	19.8-23.7	0.14
Anderson	357	167.4	150.3-186.0	47	24.4	17.9-32.6	0.15
Blount	485	145.2	132.3-159.1	61	23.5	17.9-30.3	0.16
Campbell	181	147.5	126.3-171.6	22	24.9	15.3-37.9	0.17
Claiborne	122	133.2	109.8-160.5	19	28.9	16.8-45.9	0.22
Cocke	146	138.9	116.3-164.8	19	22.3	12.9-35.7	0.16
Grainger	89	136.2	107.9-169.9	16	37.0	20.3-61.1	0.27
Hamblen	216	131.4	114.0-150.8	25	19.9	12.6-29.5	0.15
Jefferson	193	128.6	110.3-149.1	21	20.0	11.9-31.1	0.16
Knox	1,668	162.8	155.0-171.0	162	19.6	16.7-22.9	0.12
Loudon	290	172.2	152.1-194.5	21	19.8	12.1-30.6	0.11
Monroe	174	137.3	116.8-160.4	16	16.8	9.4-27.5	0.12
Morgan	77	136.9	107.4-172.5	11	27.2	13.1-49.1	0.20
Roane	260	152.7	134.3-173.0	32	22.8	15.5-32.5	0.15
Scott	64	120.5	91.6-155.5	^	^	^ - ^	^
Sevier	362	146.1	131.0-162.5	40	21.4	15.2-29.3	0.15
Union	77	155.0	121.2-195.5	^	^	^ - ^	^
Mid-Cumberland Region	4,912	145.5	141.3-149.7	618	24.3	22.3-26.3	0.17
Cheatham	129	139.5	115.5-166.9	^	^	^ - ^	^
Davidson	1,870	152.4	145.4-159.6	268	26.7	23.6-30.1	0.18
Dickson	134	119.5	99.5-142.4	29	32.8	21.6-47.3	0.27
Houston	35	139.2	96.6-195.6	^	^	^ - ^	^
Humphreys	56	99.3	74.6-130.2	^	^	^ - ^	^
Montgomery	336	130.7	116.6-145.9	52	26.7	19.6-35.3	0.20
Robertson	204	139.2	120.1-160.3	29	26.3	17.3-37.8	0.19
Rutherford	639	150.7	138.7-163.4	57	17.8	13.2-23.2	0.12
Stewart	54	148.0	109.9-195.4	11	41.6	20.2-74.5	0.28
Sumner	554	152.8	139.8-166.8	57	21.4	16.0-27.9	0.14
Trousdale	38	189.1	132.8-261.5	^	^	^ - ^	^
Williamson	556	149.7	136.6-163.6	50	22.5	16.4-29.8	0.15
Wilson	307	121.6	107.6-136.9	38	23.0	16.0-31.8	0.19

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Appendix X Continued

	Incidence			Mortality			M:I Ratio [†]
	Count [*]	Rate ^{**}	Confidence Interval	Count [*]	Rate ^{**}	Confidence Interval	
Northeast Region	1,664	112.2	106.7-117.8	237	20.7	18.1-23.6	0.18
Carter	139	81.8	68.5-97.1	32	24.4	16.6-34.6	0.30
Greene	202	106.2	91.5-122.7	37	27.6	19.2-38.3	0.26
Hancock	31	154.4	103.7-222.8	^	^	^ - ^	^
Hawkins	223	131.3	114.1-150.4	24	19.2	12.1-28.9	0.15
Johnson	41	67.5	48.0-92.9	^	^	^ - ^	^
Sullivan	614	126.1	116.1-136.7	66	17.3	13.3-22.2	0.14
Unicoi	50	82.8	61.2-110.5	12	24.7	12.6-43.9	0.30
Washington	364	113.8	102.2-126.4	54	21.5	16.1-28.2	0.19
Northwest Region	897	127.2	118.9-135.9	163	26.7	22.7-31.2	0.21
Benton	76	140.4	110.1-177.3	11	20.6	10.2-38.5	0.15
Carroll	100	116.7	94.8-142.6	18	23.2	13.7-37.0	0.20
Crockett	34	88.3	60.7-124.4	^	^	^ - ^	^
Dyer	79	82.7	65.0-103.8	17	22.1	12.6-35.5	0.27
Gibson	175	132.0	113.1-153.3	34	28.5	19.7-39.9	0.22
Henry	173	170.6	145.5-199.0	26	30.7	19.8-45.7	0.18
Lake	18	101.1	59.4-160.7	^	^	^ - ^	^
Obion	118	124.9	103.0-150.3	23	29.7	18.7-44.8	0.24
Weakley	124	143.7	119.2-171.9	25	33.2	21.4-49.1	0.23
South Central Region	1,255	129.8	122.5-137.4	193	25.0	21.5-28.9	0.19
Bedford	120	117.4	96.8-141.0	22	25.5	15.8-38.7	0.22
Coffee	234	165.9	145.1-189.0	30	24.6	16.4-35.4	0.15
Giles	83	103.6	81.6-129.7	10	17.2	8.2-31.4	0.17
Hickman	73	115.9	90.4-146.5	^	^	^ - ^	^
Lawrence	126	113.0	93.8-135.1	26	29.4	18.9-43.3	0.26
Lewis	46	148.5	107.2-200.8	^	^	^ - ^	^
Lincoln	100	106.7	86.4-130.6	16	21.5	12.1-35.1	0.20
Marshall	92	127.6	101.9-157.8	11	21.1	10.2-37.7	0.17
Maury	263	139.0	122.2-157.5	36	24.4	16.9-33.9	0.18
Moore	28	156.6	103.4-229.2	^	^	^ - ^	^
Perry	38	171.6	118.8-240.3	^	^	^ - ^	^
Wayne	52	110.8	82.3-146.4	12	31.5	16.1-55.0	0.28

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Appendix X Continued

	Incidence			Mortality			M:I Ratio [†]
	Count [*]	Rate ^{**}	Confidence Interval	Count [*]	Rate ^{**}	Confidence Interval	
Southeast Region	2,580	147.4	141.7-153.4	365	25.9	23.2-28.7	0.18
Bledsoe	59	160.2	119.0-211.2	^	^	^-^	^
Bradley	276	112.0	98.8-126.4	37	22.0	15.3-30.4	0.20
Franklin	186	153.8	132.2-178.2	22	21.1	13.1-32.2	0.14
Grundy	50	118.7	87.6-157.8	^	^	^-^	^
Hamilton	1,476	169.4	160.7-178.4	221	30.1	26.2-34.4	0.18
McMinn	173	119.0	101.5-138.8	27	22.9	14.9-33.5	0.19
Marion	116	148.4	121.3-179.9	19	33.1	19.2-52.5	0.22
Meigs	46	133.2	95.6-181.5	^	^	^-^	^
Polk	49	91.7	66.9-123.6	^	^	^-^	^
Rhea	114	130.2	106.8-157.5	14	19.0	10.1-32.4	0.15
Sequatchie	35	94.1	64.6-132.8	^	^	^-^	^
Southwest Region	4,551	168.0	163.0-173.1	707	34.0	31.5-36.6	0.20
Chester	34	84.3	57.9-118.8	^	^	^-^	^
Decatur	35	89.0	61.7-125.7	^	^	^-^	^
Fayette	177	182.1	155.4-212.2	23	31.9	19.7-48.3	0.18
Hardeman	104	149.3	121.4-181.7	18	32.1	18.9-50.6	0.22
Hardin	77	91.0	71.4-114.8	11	15.9	7.8-29.0	0.17
Haywood	76	175.0	137.3-219.9	12	32.5	16.6-56.4	0.19
Henderson	86	123.9	98.5-153.9	11	20.8	10.3-37.0	0.17
Lauderdale	86	146.8	116.5-182.3	22	47.8	29.8-71.8	0.33
McNairy	84	103.7	82.4-129.3	21	30.9	18.9-47.9	0.30
Madison	319	142.6	127.1-159.5	44	24.3	17.6-32.6	0.17
Shelby	3,253	184.0	177.5-190.7	512	38.1	34.8-41.7	0.21
Tipton	220	173.7	150.4-199.5	21	23.4	13.9-36.2	0.13

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Appendix X Continued

	Incidence			Mortality			M:I Ratio [†]
	Count [*]	Rate ^{**}	Confidence Interval	Count [*]	Rate ^{**}	Confidence Interval	
Upper-Cumberland Region	1,391	139.5	132.1-147.2	166	20.7	17.6-24.1	0.15
Cannon	41	110.3	78.5-151.3	^	^	^-^	^
Clay	31	112.7	75.8-163.6	^	^	^-^	^
Cumberland	403	172.5	155.6-191.1	31	15.8	10.6-23.1	0.09
DeKalb	57	111.1	83.7-144.9	^	^	^-^	^
Fentress	81	153.3	120.3-192.9	10	24.5	11.3-46.1	0.16
Jackson	51	137.1	101.3-183.0	^	^	^-^	^
Macon	67	129.1	99.1-165.2	17	41.2	23.6-65.8	0.32
Overton	80	122.5	96.7-153.6	14	27.3	14.7-46.1	0.22
Pickett	19	98.5	58.6-161.1	^	^	^-^	^
Putnam	242	133.3	116.9-151.4	33	21.9	15.0-30.9	0.16
Smith	48	102.2	74.6-136.7	^	^	^-^	^
Van Buren	23	120.3	74.8-186.5	0	0.0	0.0-29.1	0.00
Warren	128	122.4	101.7-146.1	17	17.9	10.3-28.9	0.15
White	120	160.3	132.3-192.8	17	31.2	17.8-50.4	0.19

*Total counts from 2005-2009

**Age-adjusted annual rate per 100,000

†Mortality incidence ratio. See Technical Notes for details

^Cell suppressed due to fewer than 10 cases

Note that the number of cases by county may not sum up to the state total due to records with missing county information

APPENDIX XI. FEMALE BREAST CANCER INCIDENCE AND MORTALITY BY RESIDENT COUNTY, TENNESSEE, 2005-2009

	Incidence			Mortality			M:I Ratio [†]
	Count *	Rate **	Confidence Interval	Count *	Rate **	Confidence Interval	
Tennessee	21,535	119.8	118.2-121.4	4,411	23.8	23.1-24.5	0.20
East Region	4,338	121.2	117.6-124.9	779	20.9	19.4-22.4	0.17
Anderson	312	124.1	110.4-139.1	52	18.8	13.9-25.1	0.15
Blount	499	128.7	117.5-140.8	76	19.1	15.0-24.1	0.15
Campbell	152	111.6	94.1-131.6	35	24.6	16.9-34.8	0.22
Claiborne	116	116.8	96.1-140.9	26	24.5	15.9-36.5	0.21
Cocke	110	94.9	77.7-115.1	25	20.9	13.4-31.4	0.22
Grainger	79	118.0	92.9-148.0	26	36.5	23.7-54.3	0.31
Hamblen	214	111.3	96.5-127.7	42	21.0	15.1-28.7	0.19
Jefferson	167	107.1	91.1-125.2	24	15.3	9.7-23.2	0.14
Knox	1,598	130.0	123.6-136.6	256	19.9	17.5-22.6	0.15
Loudon	190	111.9	95.8-130.3	31	20.3	13.5-29.6	0.18
Monroe	161	111.4	94.5-130.6	28	19.9	13.1-29.1	0.18
Morgan	69	120.7	93.5-153.8	22	36.5	22.7-56.1	0.30
Roane	251	133.4	117.0-151.6	45	21.5	15.7-29.3	0.16
Scott	70	112.2	87.0-142.6	18	28.6	16.8-45.9	0.25
Sevier	295	110.9	98.4-124.7	62	21.8	16.7-28.2	0.20
Union	55	100.5	75.3-131.6	11	18.7	9.3-34.2	0.19
Mid-Cumberland Region	5,096	120.8	117.4-124.1	953	22.6	21.2-24.1	0.19
Cheatham	113	106.9	87.8-129.1	27	26.3	17.2-38.5	0.25
Davidson	1,988	121.6	116.3-127.1	410	24.1	21.8-26.6	0.20
Dickson	151	114.2	96.6-134.2	22	17.2	10.7-26.2	0.15
Houston	27	108.5	70.2-161.1	10	34.4	16.1-66.7	0.32
Humphreys	79	133.1	104.7-167.4	^	^	^-^	^
Montgomery	381	113.1	102.0-125.1	65	20.0	15.4-25.5	0.18
Robertson	205	121.7	105.5-139.7	36	21.6	15.1-29.9	0.18
Rutherford	584	111.7	102.7-121.3	111	22.1	18.2-26.7	0.20
Stewart	45	110.0	79.6-148.7	^	^	^-^	^
Sumner	538	123.8	113.5-134.9	92	22.2	17.8-27.3	0.18
Trousdale	22	95.4	59.4-146.2	^	^	^-^	^
Williamson	586	133.5	122.6-145.1	79	19.4	15.2-24.4	0.15
Wilson	377	128.4	115.5-142.2	81	28.3	22.3-35.3	0.22

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Appendix XI Continued

	Incidence			Mortality			M:I Ratio [†]
	Count [*]	Rate ^{**}	Confidence Interval	Count [*]	Rate ^{**}	Confidence Interval	
Northeast Region	1,884	115.1	109.8-120.5	399	23.1	20.8-25.5	0.20
Carter	197	104.8	90.3-121.0	39	20.2	14.2-28.0	0.19
Greene	289	129.7	114.8-146.1	54	23.3	17.4-30.7	0.18
Hancock	22	105.3	64.7-163.0	^	^	^-^	^
Hawkins	199	106.8	92.2-123.2	57	29.8	22.5-39.0	0.28
Johnson	51	92.0	67.5-123.3	12	22.3	11.4-40.4	0.24
Sullivan	624	116.8	107.6-126.7	129	22.8	18.9-27.2	0.20
Unicoi	75	117.0	91.1-148.9	18	22.9	13.5-38.1	0.20
Washington	427	117.6	106.5-129.5	83	21.6	17.1-26.9	0.18
Northwest Region	900	110.0	102.7-117.7	224	25.0	21.7-28.7	0.23
Benton	66	113.7	86.9-146.9	17	24.4	14.1-41.1	0.21
Carroll	106	110.7	89.9-135.2	25	23.9	15.0-36.4	0.22
Crockett	65	147.9	113.5-189.7	14	31.7	16.9-54.5	0.21
Dyer	112	96.8	79.4-117.0	19	15.8	9.4-25.1	0.16
Gibson	185	113.0	96.8-131.2	60	32.0	24.1-42.0	0.28
Henry	122	103.9	85.7-125.1	30	23.2	15.4-34.2	0.22
Lake	20	108.2	63.7-173.8	^	^	^-^	^
Obion	100	97.2	78.6-119.2	26	24.2	15.6-36.2	0.25
Weakley	124	122.2	101.1-146.5	27	23.4	15.1-35.0	0.19
South Central Region	1,286	113.7	107.4-120.2	284	23.9	21.2-27.0	0.21
Bedford	141	119.1	100.0-140.8	29	23.9	15.9-34.5	0.20
Coffee	142	87.5	73.3-103.6	49	28.1	20.7-37.5	0.32
Giles	108	111.4	90.9-135.4	20	19.7	11.8-31.2	0.18
Hickman	90	136.0	108.9-168.0	17	23.5	13.6-38.4	0.17
Lawrence	138	105.2	87.9-125.1	32	22.1	14.9-31.8	0.21
Lewis	43	117.6	84.6-159.9	^	^	^-^	^
Lincoln	119	106.3	87.7-128.0	26	21.8	14.1-32.7	0.21
Marshall	109	130.6	106.9-158.0	26	30.2	19.6-44.7	0.23
Maury	290	123.7	109.7-138.9	58	24.2	18.3-31.4	0.20
Moore	16	75.5	42.1-127.6	^	^	^-^	^
Perry	31	121.4	80.8-176.6	^	^	^-^	^
Wayne	59	120.0	90.9-156.3	14	30.1	16.2-52.0	0.25

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Appendix XI Continued

	Incidence			Mortality			M:I Ratio [†]
	Count [*]	Rate ^{**}	Confidence Interval	Count [*]	Rate ^{**}	Confidence Interval	
Southeast Region	2,420	119.5	114.8-124.5	482	22.7	20.7-24.9	0.19
Bledsoe	39	98.4	69.4-136.5	^	^	^-^	^
Bradley	322	114.7	102.4-128.1	83	28.8	22.9-35.9	0.25
Franklin	141	110.8	92.8-131.4	35	26.2	18.0-37.0	0.24
Grundy	53	116.6	86.5-154.3	17	35.6	20.4-58.5	0.31
Hamilton	1,258	120.1	113.5-127.1	243	21.7	19.0-24.7	0.18
McMinn	184	107.9	92.6-125.1	33	18.0	12.3-25.7	0.17
Marion	115	129.5	106.5-156.3	25	28.3	18.2-42.4	0.22
Meigs	44	125.6	90.3-170.7	^	^	^-^	^
Polk	57	102.8	77.3-134.9	^	^	^-^	^
Rhea	171	181.3	154.4-211.7	20	20.0	12.0-31.6	0.11
Sequatchie	36	86.4	60.1-120.8	^	^	^-^	^
Southwest Region	4,308	122.5	118.9-126.3	1,049	29.4	27.6-31.2	0.24
Chester	65	137.7	105.8-176.5	14	24.8	13.5-42.7	0.18
Decatur	40	100.0	69.6-140.2	10	25.7	11.8-50.0	0.26
Fayette	154	138.7	117.4-163.1	32	27.2	18.5-38.9	0.20
Hardeman	86	113.3	90.1-140.9	18	23.6	13.7-38.1	0.21
Hardin	107	121.6	99.0-148.3	20	20.8	12.7-33.0	0.17
Haywood	59	98.0	74.2-127.3	21	34.0	20.8-52.8	0.35
Henderson	102	122.0	99.1-148.8	27	30.0	19.7-44.2	0.25
Lauderdale	71	96.8	75.3-122.7	22	28.3	17.5-43.6	0.29
McNairy	112	132.7	108.4-161.1	27	31.1	20.1-46.4	0.23
Madison	303	109.3	97.2-122.5	66	22.6	17.4-28.9	0.21
Shelby	3,036	125.6	121.1-130.2	751	31.0	28.8-33.4	0.25
Tipton	173	112.3	96.1-130.5	41	27.7	19.9-37.7	0.25

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Appendix XI Continued

	Incidence			Mortality			M:I Ratio [†]
	Count [*]	Rate ^{**}	Confidence Interval	Count [*]	Rate ^{**}	Confidence Interval	
Upper-Cumberland Region	1,263	119.6	112.9-126.6	241	21.5	18.9-24.5	0.18
Cannon	28	64.5	42.7-94.4	^	^	^-^	^
Clay	33	124.8	84.1-179.5	^	^	^-^	^
Cumberland	269	127.0	110.9-145.1	39	17.0	11.8-24.1	0.13
DeKalb	71	120.6	93.7-153.2	18	31.2	18.4-50.0	0.26
Fentress	61	107.8	81.8-139.9	11	19.1	9.3-35.6	0.18
Jackson	42	113.2	80.2-156.2	10	25.5	11.8-49.9	0.23
Macon	104	174.9	142.5-212.7	14	22.7	12.3-38.6	0.13
Overton	73	101.7	79.3-129.0	16	21.3	11.9-35.9	0.21
Pickett	11	54.5	25.7-107.1	^	^	^-^	^
Putnam	247	124.1	108.8-141.1	55	25.5	19.1-33.5	0.21
Smith	62	114.6	87.5-147.7	17	29.1	16.8-47.4	0.25
Van Buren	30	172.7	114.5-252.0	^	^	^-^	^
Warren	143	117.0	98.3-138.3	26	20.0	13.0-29.7	0.17
White	89	107.8	86.1-133.6	14	16.3	8.8-28.1	0.15

*Total counts from 2005-2009

**Age-adjusted annual rate per 100,000

†Mortality incidence ratio. See Technical Notes for details

^Cell suppressed due to fewer than 10 cases

Note that the number of cases by county may not sum up to the state total due to records with missing county information

APPENDIX XII. COLORECTAL CANCER INCIDENCE AND MORTALITY BY RESIDENT COUNTY, TENNESSEE, 2005-2009

	Incidence			Mortality			M:I Ratio [†]
	Count *	Rate **	Confidence Interval	Count *	Rate **	Confidence Interval	
Tennessee	15,822	47.8	47.1-48.6	5,917	18.1	17.7-18.6	0.38
East Region	3,030	45.5	43.8-47.1	1,095	16.7	15.7-17.7	0.37
Anderson	268	56.6	50.0-64.0	100	20.0	16.2-24.5	0.35
Blount	309	43.0	38.3-48.2	119	16.5	13.7-19.8	0.38
Campbell	123	47.7	39.5-57.2	53	21.0	15.7-27.6	0.44
Claiborne	95	50.4	40.6-62.0	35	19.1	13.3-26.8	0.38
Cocke	98	44.6	36.0-54.7	35	16.5	11.4-23.2	0.37
Grainger	63	46.9	35.8-60.5	26	21.4	13.9-31.7	0.46
Hamblen	164	46.5	39.6-54.3	73	20.6	16.1-26.1	0.44
Jefferson	120	41.9	34.6-50.3	41	13.6	9.7-18.7	0.32
Knox	963	42.8	40.1-45.6	329	14.7	13.1-16.4	0.34
Loudon	118	35.5	29.3-42.9	48	16.0	11.7-21.5	0.45
Monroe	124	47.6	39.4-57.1	38	15.6	11.0-21.5	0.33
Morgan	62	55.4	42.2-71.4	25	22.5	14.4-33.7	0.41
Roane	167	46.2	39.3-53.9	64	18.4	14.1-23.8	0.40
Scott	76	65.3	51.2-82.1	22	19.2	12.0-29.3	0.29
Sevier	230	45.5	39.7-51.9	68	13.9	10.7-17.7	0.31
Union	50	47.6	35.1-63.2	19	19.0	11.3-29.9	0.40
Mid-Cumberland Region	3,465	46.5	44.9-48.1	1,245	17.2	16.2-18.2	0.37
Cheatham	101	56.0	45.4-68.4	29	16.5	10.9-23.9	0.29
Davidson	1,311	45.3	42.8-47.8	499	17.2	15.7-18.8	0.38
Dickson	154	63.2	53.5-74.2	44	18.4	13.3-24.8	0.29
Houston	38	72.3	50.8-100.6	^	^	^ - ^	^
Humphreys	60	50.5	38.3-65.5	20	18.0	10.9-28.3	0.36
Montgomery	275	46.8	41.3-52.7	109	19.5	15.9-23.5	0.42
Robertson	157	51.2	43.4-60.0	60	21.0	16.0-27.1	0.41
Rutherford	387	42.4	38.2-46.9	139	16.3	13.6-19.3	0.38
Stewart	52	65.2	48.5-86.2	14	19.1	10.4-32.5	0.29
Sumner	349	45.5	40.8-50.6	136	18.4	15.4-21.8	0.40
Trousdale	21	48.4	29.7-74.8	10	23.4	11.0-43.8	0.48
Williamson	291	39.7	35.1-44.8	90	13.4	10.7-16.6	0.34
Wilson	269	51.5	45.4-58.3	88	17.8	14.2-22.1	0.35

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Appendix XII Continued

	Incidence			Mortality			M:I Ratio [†]
	Count [*]	Rate ^{**}	Confidence Interval	Count [*]	Rate ^{**}	Confidence Interval	
Northeast Region	1,292	41.5	39.2-43.8	540	17.2	15.8-18.8	0.41
Carter	140	38.6	32.4-45.8	65	17.9	13.8-23.0	0.46
Greene	187	45.4	39.1-52.6	68	16.8	13.0-21.5	0.37
Hancock	^	^	^-^	^	^	^-^	^
Hawkins	156	45.9	38.9-53.8	56	16.3	12.3-21.4	0.36
Johnson	47	39.4	28.8-53.1	16	13.0	7.4-21.9	0.33
Sullivan	420	41.1	37.2-45.3	174	16.6	14.2-19.3	0.40
Unicoi	48	38.1	27.9-51.2	24	17.9	11.5-27.3	0.47
Washington	285	41.1	36.4-46.2	129	18.7	15.6-22.3	0.45
Northwest Region	837	52.9	49.3-56.7	359	21.9	19.7-24.4	0.41
Benton	58	48.9	36.8-64.2	18	14.1	8.4-23.2	0.29
Carroll	97	50.8	41.0-62.3	48	24.0	17.6-32.1	0.47
Crockett	44	51.0	36.8-69.0	21	22.7	14.0-35.3	0.45
Dyer	115	52.8	43.5-63.5	45	20.6	14.9-27.7	0.39
Gibson	165	53.0	45.2-62.0	89	27.0	21.7-33.5	0.51
Henry	105	47.8	38.9-58.3	39	17.6	12.4-24.4	0.37
Lake	20	50.4	30.7-78.6	^	^	^-^	^
Obion	127	64.6	53.7-77.2	46	21.8	15.9-29.3	0.34
Weakley	106	53.7	43.8-65.1	45	21.9	15.9-29.5	0.41
South Central Region	1,066	49.7	46.8-52.8	412	19.4	17.5-21.4	0.39
Bedford	100	44.9	36.4-54.7	40	18.2	12.9-24.8	0.41
Coffee	154	49.6	42.0-58.3	56	18.3	13.8-23.8	0.37
Giles	100	55.4	44.9-67.8	38	20.5	14.4-28.4	0.37
Hickman	62	48.0	36.7-61.7	25	19.3	12.4-28.6	0.40
Lawrence	108	43.5	35.6-52.7	46	19.2	14.0-25.8	0.44
Lewis	30	45.7	30.6-65.9	16	24.9	14.2-40.9	0.54
Lincoln	139	67.1	56.3-79.4	62	29.5	22.6-38.0	0.44
Marshall	86	55.6	44.4-68.8	26	16.9	11.0-24.9	0.30
Maury	187	43.8	37.7-50.6	68	15.9	12.4-20.3	0.36
Moore	17	41.7	24.2-68.6	^	^	^-^	^
Perry	30	57.3	38.4-83.3	10	18.6	8.8-35.8	0.32
Wayne	53	54.4	40.7-71.6	19	20.3	12.2-31.9	0.37

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Appendix XII Continued

	Incidence			Mortality			M:I Ratio [†]
	Count [*]	Rate ^{**}	Confidence Interval	Count [*]	Rate ^{**}	Confidence Interval	
Southeast Region	1,735	46.0	43.8-48.2	600	15.9	14.7-17.3	0.35
Bledsoe	28	36.4	23.8-53.6	10	14.6	6.8-27.6	0.40
Bradley	237	44.8	39.2-51.0	82	16.3	12.9-20.2	0.36
Franklin	150	58.6	49.5-68.9	50	19.4	14.4-25.7	0.33
Grundy	49	59.1	43.5-78.6	12	14.0	7.1-25.0	0.24
Hamilton	841	43.3	40.4-46.4	284	14.6	13.0-16.4	0.34
McMinn	142	44.8	37.6-53.0	57	18.3	13.9-23.9	0.41
Marion	79	51.8	40.8-65.1	34	21.3	14.6-30.2	0.41
Meigs	30	43.2	28.7-62.7	^	^	^-^	^
Polk	51	51.2	37.9-67.9	22	22.8	14.2-35.0	0.45
Rhea	102	57.6	46.7-70.2	30	16.1	10.8-23.3	0.28
Sequatchie	26	37.1	24.2-54.7	12	17.1	8.8-30.0	0.46
Southwest Region	3,349	53.9	52.1-55.8	1,288	21.1	20.0-22.3	0.39
Chester	42	46.0	33.1-62.5	16	17.7	10.1-29.0	0.38
Decatur	43	50.4	36.2-69.1	13	16.8	8.8-29.7	0.33
Fayette	119	58.0	47.9-69.7	32	15.9	10.8-22.6	0.27
Hardeman	75	49.3	38.7-62.0	36	23.7	16.6-33.0	0.48
Hardin	79	45.6	35.9-57.3	28	15.5	10.3-22.9	0.34
Haywood	63	58.4	44.8-75.1	23	21.6	13.6-32.6	0.37
Henderson	96	61.9	50.0-75.9	32	19.7	13.4-28.0	0.32
Lauderdale	77	56.0	44.0-70.1	35	25.9	18.0-36.1	0.46
McNairy	90	55.9	44.7-69.1	37	22.6	15.8-31.5	0.40
Madison	268	54.1	47.8-61.1	100	19.7	16.0-24.0	0.36
Shelby	2,229	53.5	51.3-55.8	880	21.8	20.4-23.4	0.41
Tipton	168	61.2	52.1-71.3	56	22.0	16.5-28.7	0.36

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Appendix XII Continued

	Incidence			Mortality			M:I Ratio [†]
	Count [*]	Rate ^{**}	Confidence Interval	Count [*]	Rate ^{**}	Confidence Interval	
Upper-Cumberland Region	1,036	50.4	47.3-53.6	378	18.7	16.8-20.7	0.37
Cannon	45	54.9	39.9-73.9	15	18.2	10.1-30.6	0.33
Clay	26	48.7	31.5-72.8	14	27.7	15.0-47.7	0.57
Cumberland	200	45.8	39.3-53.2	57	12.5	9.4-16.6	0.27
DeKalb	57	52.0	39.3-67.7	20	17.9	10.9-28.0	0.34
Fentress	60	58.8	44.7-76.3	35	33.8	23.4-47.6	0.57
Jackson	32	44.3	30.1-63.6	17	24.0	13.9-39.3	0.54
Macon	64	57.4	44.1-73.5	28	25.5	16.9-37.0	0.44
Overton	76	57.1	44.7-72.1	26	20.5	13.3-30.4	0.36
Pickett	16	43.5	24.7-73.8	^	^	^-^	^
Putnam	189	48.1	41.4-55.6	54	14.1	10.6-18.5	0.29
Smith	52	52.1	38.7-68.6	27	27.1	17.8-39.5	0.52
Van Buren	14	40.3	21.4-70.3	^	^	^-^	^
Warren	120	51.8	42.9-62.1	42	18.0	12.9-24.4	0.35
White	85	55.3	44.0-68.8	29	19.4	13.0-28.2	0.35

*Total counts from 2005-2009

**Age-adjusted annual rate per 100,000

†Mortality incidence ratio. See Technical Notes for details

^Cell suppressed due to fewer than 10 cases

Note that the number of cases by county may not sum up to the state total due to records with missing county information

APPENDIX XIII. MELANOMA OF THE SKIN INCIDENCE AND MORTALITY BY RESIDENT COUNTY, TENNESSEE, 2005-2009

	Incidence			Mortality			M:I Ratio [†]
	Count [*]	Rate ^{**}	Confidence Interval	Count [*]	Rate ^{**}	Confidence Interval	
Tennessee	6,725	20.6	20.1-21.1	964	3.0	2.8-3.1	0.15
East Region	1,754	27.1	25.9-28.5	218	3.3	2.9-3.8	0.12
Anderson	96	21.1	17.0-25.9	14	3.1	1.7-5.3	0.15
Blount	200	28.4	24.5-32.7	27	3.8	2.5-5.6	0.13
Campbell	50	20.0	14.7-26.6	^	^	^ - ^	^
Claiborne	43	24.8	17.8-33.7	^	^	^ - ^	^
Cocke	49	23.3	17.1-31.0	^	^	^ - ^	^
Grainger	44	34.9	25.2-47.2	^	^	^ - ^	^
Hamblen	129	37.1	30.9-44.2	12	3.3	1.7-5.8	0.09
Jefferson	88	31.1	24.8-38.5	17	6.5	3.7-10.5	0.21
Knox	631	28.4	26.3-30.8	63	2.8	2.1-3.6	0.10
Loudon	84	25.3	20.0-31.8	^	^	^ - ^	^
Monroe	58	21.8	16.5-28.4	16	6.4	3.6-10.5	0.29
Morgan	21	19.0	11.7-29.4	^	^	^ - ^	^
Roane	81	24.8	19.6-31.2	12	3.4	1.7-6.1	0.14
Scott	26	22.6	14.7-33.4	^	^	^ - ^	^
Sevier	136	28.3	23.6-33.6	17	3.5	2.0-5.8	0.12
Union	18	17.7	10.4-28.3	^	^	^ - ^	^
Mid-Cumberland Region	1,438	18.4	17.5-19.4	212	2.9	2.5-3.3	0.16
Cheatham	32	16.0	10.8-22.7	^	^	^ - ^	^
Davidson	463	15.4	14.0-16.9	75	2.6	2.1-3.3	0.17
Dickson	47	18.7	13.7-25.0	^	^	^ - ^	^
Houston	^	^	^ - ^	^	^	^ - ^	^
Humphreys	18	17.1	10.0-27.6	^	^	^ - ^	^
Montgomery	108	16.6	13.6-20.2	24	4.0	2.6-6.0	0.24
Robertson	86	27.7	22.1-34.3	10	3.4	1.6-6.3	0.12
Rutherford	173	17.3	14.8-20.2	24	2.7	1.7-4.0	0.16
Stewart	15	19.7	10.8-33.1	^	^	^ - ^	^
Sumner	178	23.1	19.8-26.9	27	3.6	2.3-5.2	0.16
Trousdale	^	^	^ - ^	^	^	^ - ^	^
Williamson	206	27.0	23.3-31.1	20	2.9	1.7-4.5	0.11
Wilson	100	18.4	14.9-22.5	12	2.1	1.1-3.8	0.11

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Appendix XIII Continued

	Incidence			Mortality			M:I Ratio [†]
	Count [*]	Rate ^{**}	Confidence Interval	Count [*]	Rate ^{**}	Confidence Interval	
Northeast Region	736	25.1	23.3-27.0	97	3.2	2.6-3.9	0.13
Carter	64	18.2	13.9-23.3	^	^	^ - ^	^
Greene	77	20.0	15.7-25.2	15	3.8	2.1-6.5	0.19
Hancock	^	^	^ - ^	^	^	^ - ^	^
Hawkins	100	30.9	25.0-37.8	^	^	^ - ^	^
Johnson	19	16.6	9.9-26.6	^	^	^ - ^	^
Sullivan	290	30.4	26.9-34.2	33	3.4	2.4-4.9	0.11
Unicoi	31	27.7	18.6-40.1	^	^	^ - ^	^
Washington	151	23.0	19.5-27.1	21	3.0	1.9-4.7	0.13
Northwest Region	186	12.8	11.0-14.8	66	4.4	3.4-5.7	0.34
Benton	17	18.5	10.3-30.5	^	^	^ - ^	^
Carroll	29	17.4	11.5-25.4	^	^	^ - ^	^
Crockett	12	14.6	7.5-25.9	^	^	^ - ^	^
Dyer	24	11.0	7.0-16.6	10	4.7	2.2-8.7	0.43
Gibson	25	8.5	5.4-12.7	11	3.6	1.8-6.7	0.42
Henry	27	13.7	8.9-20.3	13	6.6	3.4-11.7	0.48
Lake	^	^	^ - ^	^	^	^ - ^	^
Obion	28	14.8	9.7-21.6	^	^	^ - ^	^
Weakley	20	11.7	7.1-18.3	^	^	^ - ^	^
South Central Region	376	17.9	16.1-19.8	65	3.1	2.4-4.0	0.17
Bedford	49	22.6	16.7-30.0	^	^	^ - ^	^
Coffee	48	16.7	12.3-22.3	10	3.6	1.7-6.6	0.22
Giles	30	16.7	11.1-24.1	^	^	^ - ^	^
Hickman	18	13.4	7.9-21.4	^	^	^ - ^	^
Lawrence	41	17.6	12.6-24.0	10	4.0	1.9-7.6	0.23
Lewis	^	^	^ - ^	^	^	^ - ^	^
Lincoln	36	17.3	12.1-24.2	^	^	^ - ^	^
Marshall	37	22.2	15.6-30.9	^	^	^ - ^	^
Maury	70	16.5	12.8-20.9	12	2.8	1.4-5.0	0.17
Moore	11	26.1	12.7-48.9	^	^	^ - ^	^
Perry	11	22.9	11.1-42.5	^	^	^ - ^	^
Wayne	18	18.4	10.9-29.5	^	^	^ - ^	^

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Appendix XIII Continued

	Incidence			Mortality			M:I Ratio [†]
	Count [*]	Rate ^{**}	Confidence Interval	Count [*]	Rate ^{**}	Confidence Interval	
Southeast Region	917	25.5	23.8-27.2	105	2.7	2.2-3.3	0.11
Bledsoe	17	21.9	12.5-36.1	^	^	^--^	^
Bradley	97	18.9	15.3-23.1	13	2.5	1.3-4.3	0.13
Franklin	46	18.6	13.6-25.1	^	^	^--^	^
Grundy	25	31.7	20.3-47.3	^	^	^--^	^
Hamilton	534	29.1	26.7-31.8	40	2.0	1.4-2.7	0.07
McMinn	65	21.1	16.2-27.1	14	4.3	2.3-7.3	0.20
Marion	32	20.3	13.8-29.0	^	^	^--^	^
Meigs	13	18.8	9.8-33.1	^	^	^--^	^
Polk	19	21.3	12.5-34.1	^	^	^--^	^
Rhea	50	29.8	21.9-39.5	^	^	^--^	^
Sequatchie	19	27.6	16.5-43.4	^	^	^--^	^
Southwest Region	845	13.4	12.5-14.4	127	2.1	1.7-2.5	0.16
Chester	^	^	^--^	^	^	^--^	^
Decatur	11	14.6	7.1-27.1	^	^	^--^	^
Fayette	39	19.2	13.6-26.5	^	^	^--^	^
Hardeman	12	8.3	4.3-14.7	^	^	^--^	^
Hardin	23	12.6	7.9-19.5	^	^	^--^	^
Haywood	13	12.5	6.6-21.5	^	^	^--^	^
Henderson	22	14.6	9.1-22.3	^	^	^--^	^
Lauderdale	16	12.2	7.0-19.9	^	^	^--^	^
McNairy	22	13.7	8.4-21.1	^	^	^--^	^
Madison	55	11.0	8.3-14.4	12	2.5	1.3-4.3	0.23
Shelby	582	13.5	12.4-14.7	70	1.7	1.3-2.2	0.13
Tipton	41	14.3	10.2-19.5	^	^	^--^	^

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Appendix XIII Continued

	Incidence			Mortality			M:I Ratio [†]
	Count [*]	Rate ^{**}	Confidence Interval	Count [*]	Rate ^{**}	Confidence Interval	
Upper-Cumberland Region	406	21.0	19.0-23.2	74	3.8	3.0-4.8	0.18
Cannon	19	22.2	13.3-35.3	^	^	^-^	^
Clay	^	^	^-^	^	^	^-^	^
Cumberland	110	29.4	23.7-36.2	^	^	^-^	^
DeKalb	16	14.8	8.4-24.4	^	^	^-^	^
Fentress	18	16.7	9.8-27.0	^	^	^-^	^
Jackson	15	23.3	12.8-39.2	^	^	^-^	^
Macon	17	14.3	8.3-23.1	^	^	^-^	^
Overton	27	21.2	13.8-31.3	^	^	^-^	^
Pickett	^	^	^-^	0	0.0	0.0-16.5	^
Putnam	69	19.4	15.1-24.7	13	3.5	1.8-6.0	0.18
Smith	21	21.3	13.1-32.8	^	^	^-^	^
Van Buren	^	^	^-^	^	^	^-^	^
Warren	44	20.1	14.6-27.1	10	4.8	2.3-8.9	0.24
White	31	20.6	13.8-29.5	^	^	^-^	^

*Total counts from 2005-2009

**Age-adjusted annual rate per 100,000

†Mortality incidence ratio. See Technical Notes for details

^Cell suppressed due to fewer than 10 cases

Note that the number of cases by county may not sum up to the state total due to records with missing county information

APPENDIX XIV. PANCREATIC CANCER INCIDENCE AND MORTALITY BY RESIDENT COUNTY, TENNESSEE, 2005-2009

	Incidence			Mortality			M:I Ratio [†]
	Count [*]	Rate ^{**}	Confidence Interval	Count [*]	Rate ^{**}	Confidence Interval	
Tennessee	3,686	11.2	10.8-11.6	3,563	10.9	10.5-11.2	0.97
East Region	731	10.8	10.0-11.6	696	10.4	9.6-11.2	0.96
Anderson	50	10.2	7.5-13.6	53	10.8	8.1-14.2	1.06
Blount	70	9.6	7.5-12.3	60	8.5	6.4-10.9	0.89
Campbell	26	10.2	6.6-15.2	24	9.2	5.9-13.9	0.90
Claiborne	15	7.6	4.2-12.8	15	7.6	4.2-12.9	1.00
Cocke	23	10.5	6.6-16.0	23	10.2	6.4-15.6	0.97
Grainger	14	9.0	4.8-15.6	10	7.0	3.3-13.4	0.78
Hamblen	46	13.0	9.5-17.4	46	13.0	9.5-17.5	1.00
Jefferson	33	11.2	7.6-15.9	35	12.4	8.6-17.4	1.11
Knox	248	10.8	9.5-12.3	231	10.1	8.8-11.5	0.94
Loudon	37	10.7	7.4-15.1	36	10.5	7.3-14.9	0.98
Monroe	36	13.3	9.3-18.7	35	13.2	9.1-18.5	0.99
Morgan	15	14.3	7.9-23.8	13	12.5	6.6-21.7	0.87
Roane	37	9.8	6.8-13.7	40	10.6	7.6-14.6	1.08
Scott	17	15.2	8.8-24.6	13	11.5	6.1-19.9	0.76
Sevier	51	9.8	7.3-13.1	56	10.7	8.0-14.0	1.09
Union	13	12.0	6.3-20.9	^	^	^-^	^
Mid-Cumberland Region	855	11.7	10.9-12.5	768	10.6	9.9-11.4	0.91
Cheatham	21	11.1	6.8-17.2	19	10.8	6.4-17.0	0.97
Davidson	347	12.3	11.0-13.7	318	11.4	10.1-12.7	0.93
Dickson	33	14.0	9.6-19.7	41	17.2	12.3-23.4	1.23
Houston	^	^	^-^	^	^	^-^	^
Humphreys	12	9.5	4.9-17.2	15	11.9	6.6-20.2	1.25
Montgomery	67	12.0	9.2-15.2	54	9.6	7.2-12.6	0.80
Robertson	35	11.2	7.7-15.6	25	8.3	5.3-12.3	0.74
Rutherford	103	11.4	9.2-13.8	76	8.3	6.5-10.4	0.73
Stewart	10	12.9	6.1-24.3	^	^	^-^	^
Sumner	89	11.7	9.4-14.5	88	11.7	9.3-14.5	1.00
Trousdale	^	^	^-^	^	^	^-^	^
Williamson	68	9.6	7.4-12.3	68	9.8	7.5-12.5	1.02
Wilson	65	11.8	9.0-15.1	50	9.3	6.9-12.4	0.79

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Appendix XIV Continued

	Incidence			Mortality			M:I Ratio [†]
	Count*	Rate**	Confidence Interval	Count*	Rate**	Confidence Interval	
Northeast Region	392	12.4	11.2-13.7	359	11.3	10.2-12.6	0.91
Carter	42	11.2	8.1-15.3	43	11.5	8.3-15.6	1.03
Greene	64	15.5	11.9-19.9	65	15.7	12.0-20.1	1.01
Hancock	^	^	^_^	^	^	^_^	^
Hawkins	44	11.7	8.5-15.9	41	11.3	8.0-15.4	0.97
Johnson	11	10.1	5.0-18.5	14	12.7	6.9-21.7	1.26
Sullivan	128	12.7	10.5-15.1	109	10.5	8.6-12.7	0.83
Unicoi	17	13.4	7.8-22.1	19	15.5	9.2-24.8	1.16
Washington	84	12.0	9.5-14.9	67	9.5	7.3-12.1	0.79
Northwest Region	178	11.0	9.4-12.8	190	11.7	10.1-13.5	1.06
Benton	15	13.4	7.3-23.0	20	16.5	10.0-26.3	1.23
Carroll	18	9.3	5.5-15.0	17	8.5	5.0-14.0	0.91
Crockett	10	10.7	5.1-20.3	12	13.4	6.9-23.9	1.25
Dyer	28	12.4	8.2-18.1	26	11.9	7.7-17.6	0.96
Gibson	32	9.7	6.6-13.8	36	10.9	7.6-15.3	1.12
Henry	29	13.0	8.6-19.0	26	11.2	7.3-16.8	0.86
Lake	^	^	^_^	10	25.4	12.1-47.5	^
Obion	19	8.9	5.3-14.1	24	11.4	7.3-17.3	1.28
Weakley	21	11.0	6.8-17.0	19	10.3	6.2-16.3	0.94
South Central Region	234	11.0	9.7-12.6	231	10.8	9.5-12.3	0.98
Bedford	31	13.7	9.2-19.5	27	12.3	8.1-18.0	0.90
Coffee	35	11.0	7.7-15.4	43	13.2	9.6-17.9	1.20
Giles	19	10.7	6.3-17.1	18	10.2	6.0-16.4	0.95
Hickman	17	13.1	7.6-21.2	14	10.7	5.8-18.2	0.82
Lawrence	16	6.3	3.6-10.3	17	6.8	3.9-11.0	1.08
Lewis	^	^	^_^	^	^	^_^	^
Lincoln	20	9.3	5.7-14.6	20	9.6	5.8-15.0	1.03
Marshall	19	12.7	7.6-20.0	21	14.0	8.6-21.5	1.10
Maury	47	11.3	8.3-15.1	44	10.6	7.7-14.3	0.94
Moore	^	^	^_^	^	^	^_^	^
Perry	^	^	^_^	^	^	^_^	^
Wayne	14	14.5	7.9-24.7	11	10.9	5.4-19.9	0.75

Continued on next page

Appendix XIV Continued

	Incidence			Mortality			M:I Ratio [†]
	Count*	Rate**	Confidence Interval	Count*	Rate**	Confidence Interval	
Southeast Region	392	10.3	9.3-11.4	398	10.6	9.6-11.7	1.03
Bledsoe	^	^	^-^	^	^	^-^	^
Bradley	55	10.5	7.9-13.7	53	10.3	7.7-13.6	0.98
Franklin	28	10.8	7.2-15.8	26	10.1	6.6-15.0	0.94
Grundy	^	^	^-^	10	11.5	5.5-21.7	^
Hamilton	194	10.0	8.6-11.5	191	10.0	8.6-11.5	1.00
McMinn	39	12.4	8.7-17.0	37	11.8	8.3-16.4	0.95
Marion	18	10.9	6.4-17.5	20	11.9	7.2-18.8	1.09
Meigs	^	^	^-^	^	^	^-^	^
Polk	^	^	^-^	10	10.0	4.7-18.9	^
Rhea	19	10.4	6.2-16.4	24	12.8	8.2-19.3	1.23
Sequatchie	^	^	^-^	11	15.8	7.8-28.4	^
Southwest Region	689	11.3	10.5-12.2	710	11.9	11.0-12.8	1.05
Chester	^	^	^-^	^	^	^-^	^
Decatur	^	^	^-^	^	^	^-^	^
Fayette	24	12.0	7.6-18.0	27	13.8	9.0-20.3	1.15
Hardeman	21	13.8	8.5-21.2	17	11.3	6.5-18.2	0.82
Hardin	14	8.1	4.4-13.9	20	11.3	6.9-17.8	1.40
Haywood	^	^	^-^	^	^	^-^	^
Henderson	14	9.0	4.9-15.3	13	8.2	4.4-14.3	0.91
Lauderdale	16	11.4	6.5-18.7	23	17.0	10.7-25.6	1.49
McNairy	12	7.5	3.8-13.4	18	11.2	6.6-18.0	1.49
Madison	54	11.0	8.2-14.4	59	11.9	9.0-15.4	1.08
Shelby	474	11.8	10.7-12.9	471	12.0	10.9-13.1	1.02
Tipton	35	12.9	8.9-18.0	38	14.9	10.4-20.5	1.16

Continued on next page

Appendix XIV Continued

	Incidence			Mortality			M:I Ratio [†]
	Count [*]	Rate ^{**}	Confidence Interval	Count [*]	Rate ^{**}	Confidence Interval	
Upper-Cumberland Region	215	10.4	9.1-12.0	211	10.2	8.9-11.7	0.98
Cannon	^	^	^-^	^	^	^-^	^
Clay	^	^	^-^	10	19.5	9.2-37.3	^
Cumberland	51	10.5	7.8-14.2	49	10.1	7.4-13.7	0.96
DeKalb	13	12.9	6.8-22.3	12	11.8	6.0-20.8	0.91
Fentress	17	16.4	9.4-26.7	16	15.2	8.6-25.2	0.93
Jackson	^	^	^-^	^	^	^-^	^
Macon	10	8.8	4.1-16.3	15	13.6	7.5-22.6	1.55
Overton	14	10.5	5.7-18.1	12	9.3	4.8-16.7	0.89
Pickett	^	^	^-^	^	^	^-^	^
Putnam	29	7.8	5.2-11.3	27	7.2	4.7-10.5	0.92
Smith	11	11.6	5.8-20.8	10	11.0	5.3-20.2	0.95
Van Buren	^	^	^-^	^	^	^-^	^
Warren	25	10.5	6.7-15.6	27	11.4	7.5-16.8	1.09
White	17	11.9	6.9-19.3	14	9.0	4.9-15.5	0.76

^{*}Total counts from 2005-2009

^{**}Age-adjusted annual rate per 100,000

[†]Mortality incidence ratio. See Technical Notes for details

[^]Cell suppressed due to fewer than 10 cases

Note that the number of cases by county may not sum up to the state total due to records with missing county information

APPENDIX XV. CANCER INCIDENCE AND MORTALITY, CHILDREN, 0-19 YEARS, TENNESSEE, 2005-2009

		Incidence			Mortality			M:I Ratio [‡]
		Count ^{**}	Rate ^{***}	Confidence Interval	Count ^{**}	Rate ^{***}	Confidence Interval	
Gender	Race							
Both*	All Races [†]	1,399	169.5	160.7 - 178.6	209	25.5	22.2 - 29.2	0.15
	Black	270	149.9	132.6 - 168.9	45	25.1	18.3 - 33.6	0.17
	White	1,075	171.3	161.2 - 181.8	159	25.5	21.7 - 29.8	0.15
Female	All Races [†]	660	163.6	151.4 - 176.6	104	25.9	21.2 - 31.4	0.16
	Black	135	151.5	127.0 - 179.3	15	16.6	9.3 - 27.4	0.11
	White	496	162.4	148.5 - 177.4	88	29.0	23.3 - 35.8	0.18
Male	All Races [†]	739	175.1	162.7 - 188.2	105	25.1	20.5 - 30.4	0.14
	Black	135	148.4	124.4 - 175.6	30	33.5	22.6 - 47.8	0.23
	White	579	179.6	165.3 - 194.9	71	22.2	17.3 - 28.0	0.12
Age at Diagnosis or Death								
	<01	106	251.9	206.2 - 304.6	^	^	^	^
	01-04	373	226.9	204.5 - 251.1	42	25.5	18.4 - 34.5	0.11
	05-09	231	114.9	100.6 - 130.7	44	21.9	15.9 - 29.4	0.19
	10-14	282	139.0	123.2 - 156.2	54	26.6	20.0 - 34.7	0.19
	15-19	407	195.3	176.8 - 215.3	63	30.2	23.2 - 38.7	0.15
Year of Diagnosis or Death								
	2005	260	161.2	142.2 - 182.0	56	34.9	26.3 - 45.3	0.22
	2006	248	151.9	133.5 - 172.0	37	22.8	16.1 - 31.5	0.15
	2007	262	157.9	139.3 - 178.2	35	21.4	14.9 - 29.8	0.14
	2008	321	192.3	171.8 - 214.6	39	23.6	16.8 - 32.2	0.12
	2009	308	183.4	163.5 - 205.1	42	25.1	18.1 - 33.9	0.14

*Excluded hermaphrodites and transsexuals.

**Total counts from 2005-2009

***Age-adjusted annual rate per 1,000,000

†Includes whites, blacks, other races and those missing race information

‡Mortality incidence ratio. See Technical Notes for details

^Cell suppressed due to fewer than 10 cases

APPENDIX XVI. CHILDHOOD CANCER INCIDENCE AND MORTALITY BY RESIDENT COUNTY, TENNESSEE, 2005-2009

	Incidence			Mortality			M:I Ratio [†]
	Count [*]	Rate ^{**}	Confidence Interval	Count [*]	Rate ^{**}	Confidence Interval	
Tennessee	1,399	169.5	160.7 - 178.6	209	25.5	22.2 - 29.2	0.15
East Region	249	172.3	151.6 - 195.2	33	23.2	16.0 - 32.6	0.13
Anderson	19	206.4	124.2 - 322.4	^	^	^ - ^	^
Blount	28	190.9	126.9 - 276.0	^	^	^ - ^	^
Campbell	^	^	^ - ^	0	0.0	0.0 - 74.5	^
Claiborne	10	256.7	123.0 - 473.7	^	^	^ - ^	^
Cocke	^	^	^ - ^	^	^	^ - ^	^
Grainger	^	^	^ - ^	0	0.0	0.0 - 133.8	^
Hamblen	13	165.0	87.7 - 281.8	^	^	^ - ^	^
Jefferson	12	190.2	98.1 - 332.8	^	^	^ - ^	^
Knox	88	160.7	128.8 - 198.2	14	25.9	14.1 - 43.5	0.16
Loudon	14	269.0	147.1 - 451.1	0	0.0	0.0 - 70.1	0.00
Monroe	^	^	^ - ^	^	^	^ - ^	^
Morgan	^	^	^ - ^	0	0.0	0.0 - 151.9	^
Roane	^	^	^ - ^	0	0.0	0.0 - 61.2	^
Scott	^	^	^ - ^	^	^	^ - ^	^
Sevier	17	162.3	94.5 - 260.1	^	^	^ - ^	^
Union	^	^	^ - ^	0	0.0	0.0 - 147.2	^
Mid-Cumberland Region	388	170.4	153.9 - 188.3	61	27.6	21.1 - 35.4	0.16
Cheatham	^	^	^ - ^	0	0.0	0.0 - 68.5	^
Davidson	127	158.0	131.5 - 188.3	21	28.3	17.5 - 43.2	0.18
Dickson	13	194.5	103.5 - 332.8	^	^	^ - ^	^
Houston	^	^	^ - ^	0	0.0	0.0 - 341.0	^
Humphreys	^	^	^ - ^	^	^	^ - ^	^
Montgomery	28	115.6	76.6 - 167.4	^	^	^ - ^	^
Robertson	^	^	^ - ^	0	0.0	0.0 - 39.5	^
Rutherford	60	170.9	130.3 - 220.0	10	28.9	13.9 - 53.1	0.17
Stewart	^	^	^ - ^	0	0.0	0.0 - 230.6	^
Sumner	45	214.3	156.3 - 286.7	^	^	^ - ^	^
Trousdale	^	^	^ - ^	0	0.0	0.0 - 379.2	^
Williamson	46	183.1	134.0 - 244.4	^	^	^ - ^	^
Wilson	41	276.9	198.7 - 375.7	^	^	^ - ^	^

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Appendix XVI Continued

	Incidence			Mortality			M:I Ratio [†]
	Count*	Rate**	Confidence Interval	Count*	Rate**	Confidence Interval	
Northeast Region	98	169.5	137.6 - 206.6	10	17.3	8.3 - 31.9	0.10
Carter	11	166.5	83.0 - 298.6	^	^	^ - ^	^
Greene	11	137.1	68.4 - 245.9	^	^	^ - ^	^
Hancock	^	^	^ - ^	0	0.0	0.0 - 468.6	^
Hawkins	10	146.3	70.1 - 269.1	0	0.0	0.0 - 54.1	0.00
Johnson	^	^	^ - ^	^	^	^ - ^	^
Sullivan	36	199.7	139.8 - 276.7	^	^	^ - ^	^
Unicoi	^	^	^ - ^	0	0.0	0.0 - 191.1	^
Washington	17	124.2	72.3 - 198.9	^	^	^ - ^	^
Northwest Region	76	238.6	188.0 - 298.7	^	^	^ - ^	^
Benton	^	^	^ - ^	0	0.0	0.0 - 202.6	^
Carroll	13	346.0	184.0 - 593.4	0	0.0	0.0 - 101.2	0.00
Crockett	^	^	^ - ^	^	^	^ - ^	^
Dyer	^	^	^ - ^	^	^	^ - ^	^
Gibson	15	235.0	131.5 - 387.5	0	0.0	0.0 - 57.6	0.00
Henry	^	^	^ - ^	^	^	^ - ^	^
Lake	^	^	^ - ^	0	0.0	0.0 - 522.7	^
Obion	12	303.5	156.8 - 530.1	0	0.0	0.0 - 92.9	0.00
Weakley	^	^	^ - ^	^	^	^ - ^	^
South Central Region	72	144.4	113.0 - 181.8	19	38.3	23.0 - 59.8	0.27
Bedford	11	178.6	88.9 - 318.5	^	^	^ - ^	^
Coffee	^	^	^ - ^	^	^	^ - ^	^
Giles	^	^	^ - ^	^	^	^ - ^	^
Hickman	^	^	^ - ^	^	^	^ - ^	^
Lawrence	^	^	^ - ^	0	0.0	0.0 - 64.2	^
Lewis	^	^	^ - ^	^	^	^ - ^	^
Lincoln	14	338.2	184.9 - 566.8	^	^	^ - ^	^
Marshall	^	^	^ - ^	^	^	^ - ^	^
Maury	^	^	^ - ^	^	^	^ - ^	^
Moore	^	^	^ - ^	0	0.0	0.0 - 539.8	^
Perry	^	^	^ - ^	^	^	^ - ^	^
Wayne	^	^	^ - ^	^	^	^ - ^	^

Continued on next page

Appendix XVI Continued

	Incidence			Mortality			M:I Ratio [†]
	Count*	Rate**	Confidence Interval	Count*	Rate**	Confidence Interval	
Southeast Region	140	169.8	142.8 - 200.3	16	19.4	11.1 - 31.5	0.11
Bledsoe	^	^	^ - ^	0	0.0	0.0 - 248.0	^
Bradley	20	161.0	98.3 - 248.7	^	^	^ - ^	^
Franklin	14	266.2	144.8 - 449.6	^	^	^ - ^	^
Grundy	^	^	^ - ^	0	0.0	0.0 - 197.7	^
Hamilton	80	191.0	151.4 - 237.8	^	^	^ - ^	^
McMinn	^	^	^ - ^	^	^	^ - ^	^
Marion	^	^	^ - ^	^	^	^ - ^	^
Meigs	^	^	^ - ^	0	0.0	0.0 - 253.7	^
Polk	0	0.0	0.0 - 189.2	0	0.0	0.0 - 189.2	~
Rhea	^	^	^ - ^	0	0.0	0.0 - 88.5	^
Sequatchie	^	^	^ - ^	0	0.0	0.0 - 210.3	^
Southwest Region	293	153.7	136.6 - 172.4	56	29.5	22.3 - 38.3	0.19
Chester	^	^	^ - ^	0	0.0	0.0 - 174.2	^
Decatur	0	0.0	0.0 - 280.2	0	0.0	0.0 - 280.2	~
Fayette	^	^	^ - ^	^	^	^ - ^	^
Hardeman	^	^	^ - ^	^	^	^ - ^	^
Hardin	^	^	^ - ^	0	0.0	0.0 - 118.3	^
Haywood	^	^	^ - ^	0	0.0	0.0 - 133.6	^
Henderson	^	^	^ - ^	^	^	^ - ^	^
Lauderdale	12	338.4	174.7 - 590.6	^	^	^ - ^	^
McNairy	^	^	^ - ^	^	^	^ - ^	^
Madison	19	136.4	82.1 - 213.3	^	^	^ - ^	^
Shelby	212	151.3	131.6 - 173.1	50	35.8	26.5 - 47.2	0.24
Tipton	12	141.4	73.0 - 247.1	0	0.0	0.0 - 43.7	0.00

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Appendix XVI Continued

	Incidence			Mortality			M:I Ratio [†]
	Count [*]	Rate ^{**}	Confidence Interval	Count [*]	Rate ^{**}	Confidence Interval	
Upper-Cumberland Region	79	191.0	151.2 - 238.1	^	^	^ - ^	^
Cannon	^	^	^ - ^	0	0.0	0.0 - 216.5	^
Clay	^	^	^ - ^	0	0.0	0.0 - 393.0	^
Cumberland	12	212.7	109.9 - 371.7	^	^	^ - ^	^
DeKalb	^	^	^ - ^	0	0.0	0.0 - 151.7	^
Fentress	^	^	^ - ^	0	0.0	0.0 - 169.9	^
Jackson	^	^	^ - ^	0	0.0	0.0 - 311.0	^
Macon	^	^	^ - ^	0	0.0	0.0 - 124.3	^
Overton	^	^	^ - ^	^	^	^ - ^	^
Pickett	0	0.0	0.0 - 704.2	0	0.0	0.0 - 704.2	~
Putnam	14	135.1	73.6 - 228.9	^	^	^ - ^	^
Smith	^	^	^ - ^	0	0.0	0.0 - 147.4	^
Van Buren	0	0.0	0.0 - 595.8	0	0.0	0.0 - 595.8	~
Warren	12	233.8	120.6 - 407.8	^	^	^ - ^	^
White	10	317.2	152.1 - 583.2	^	^	^ - ^	^

*Total counts from 2005-2009

**Age-adjusted annual rate per 1,000,000

†Mortality incidence ratio. See Technical Notes for details

^Cell suppressed due to fewer than 10 cases

~Values could not be calculated due to a zero incidence rate or other invalid values

Note that the number of cases by county may not sum up to the state total due to records with missing county information

APPENDIX XVII. INCIDENCE AND MORTALITY OF COMMON CANCERS, THREE-YEAR MOVING AVERAGE, TENNESSEE, 2005-2009

	Year	Incidence			Mortality			M:I Ratio [†]
		Count [*]	Rate ^{**}	Confidence Interval	Count [*]	Rate ^{**}	Confidence Interval	
All Sites	2005-07	92,401	474.9	471.8 - 477.9	39,089	203.5	201.4 - 205.5	0.43
	2006-08	95,015	476.2	473.2 - 479.3	39,227	198.7	196.7 - 200.7	0.42
	2007-09	97,769	479.0	476.0 - 482.1	39,627	196.2	194.2 - 198.1	0.41
Lung and Bronchus	2005-07	15,913	81.5	80.2 - 82.8	13,048	67.3	66.2 - 68.5	0.83
	2006-08	16,040	79.9	78.7 - 81.2	12,964	65.2	64.1 - 66.3	0.82
	2007-09	16,260	79.0	77.8 - 80.2	12,970	63.7	62.6 - 64.8	0.81
Female Breast	2005-07	12,575	119.0	116.9 - 121.1	2,682	24.6	23.7 - 25.6	0.21
	2006-08	12,817	118.7	116.6 - 120.7	2,605	23.3	22.4 - 24.2	0.20
	2007-09	13,212	120.0	118.0 - 122.1	2,602	22.8	21.9 - 23.7	0.19
Prostate	2005-07	12,769	146.1	143.5 - 148.7	1,825	26.8	25.6 - 28.1	0.18
	2006-08	13,738	151.6	149.0 - 154.2	1,803	25.4	24.2 - 26.7	0.17
	2007-09	14,037	149.6	147.1 - 152.2	1,783	24.1	22.9 - 25.2	0.16
Colon and Rectum	2005-07	9,613	49.6	48.6 - 50.6	3,503	18.3	17.7 - 19.0	0.37
	2006-08	9,551	48.0	47.0 - 49.0	3,568	18.1	17.6 - 18.8	0.38
	2007-09	9,378	46.2	45.2 - 47.1	3,643	18.1	17.5 - 18.7	0.39
Melanoma of the Skin	2005-07	3,912	20.3	19.7 - 21.0	561	2.9	2.7 - 3.2	0.14
	2006-08	3,910	19.9	19.3 - 20.6	571	2.9	2.7 - 3.2	0.15
	2007-09	4,179	20.9	20.3 - 21.5	575	2.9	2.6 - 3.1	0.14
Pancreas	2005-07	2,101	10.9	10.4 - 11.4	2,054	10.7	10.2 - 11.2	0.98
	2006-08	2,242	11.3	10.8 - 11.8	2,122	10.8	10.3 - 11.2	0.96
	2007-09	2,339	11.6	11.1 - 12.1	2,208	11.0	10.5 - 11.5	0.95

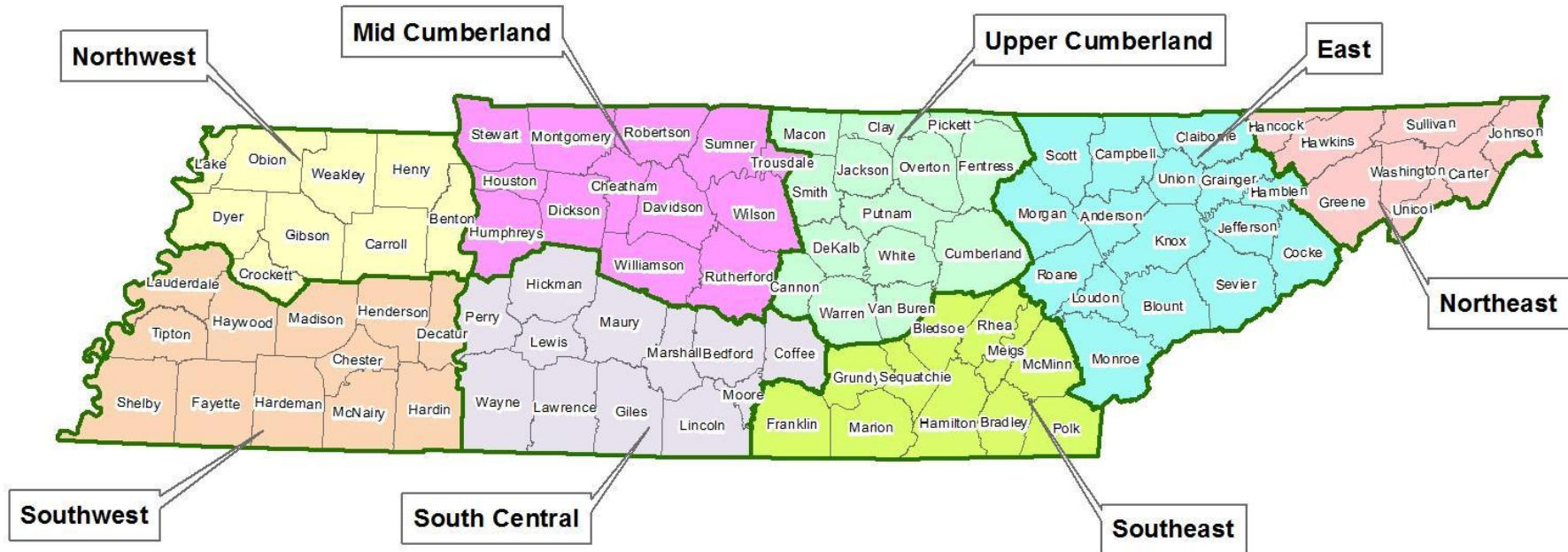
*Total counts from 2005-2009

**Age-adjusted annual rate per 100,000

†Mortality incidence ratio. See Technical Notes for details

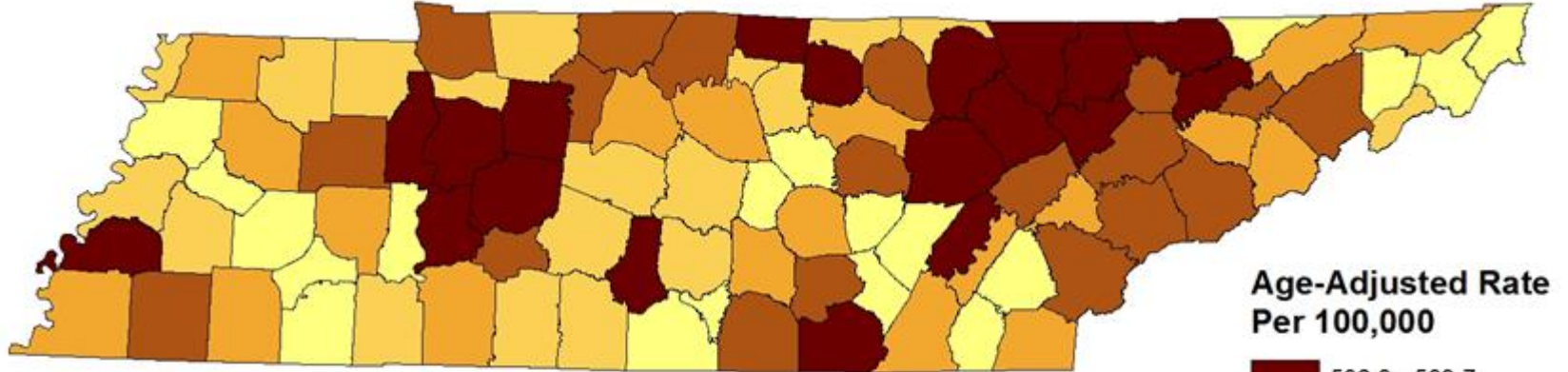
APPENDIX XVIII. COUNTY MAPS OF INCIDENCE AND MORTALITY RATES OF ALL CANCERS AND COMMON CANCERS

1. TENNESSEE COUNTIES AND REGIONAL GROUPINGS



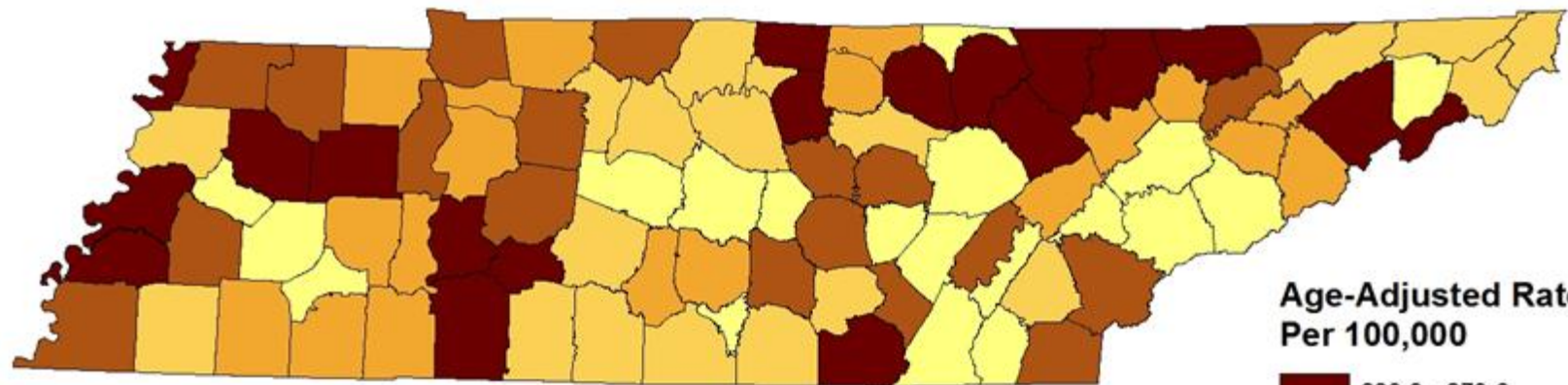
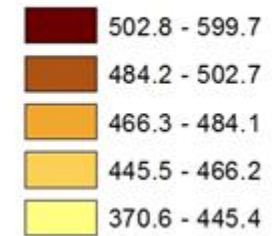
Northwest	Southwest	Mid-Cumberland	South Central	Upper-Cumberland	Southeast	East	Northeast
Benton	Chester	Cheatham	Bedford	Cannon	Bledsoe	Anderson	Carter
Carroll	Decatur	Davidson	Coffee	Clay	Bradley	Blount	Greene
Crockett	Fayette	Dickson	Giles	Cumberland	Franklin	Campbell	Hancock
Dyer	Hardeman	Houston	Hickman	DeKalb	Grundy	Claiborne	Hawkins
Gibson	Hardin	Humphreys	Lawrence	Fentress	Hamilton	Cocke	Johnson
Henry	Haywood	Montgomery	Lewis	Jackson	McMinn	Grainger	Sullivan
Lake	Henderson	Robertson	Lincoln	Macon	Marion	Hamblen	Unicoi
Obion	Lauderdale	Rutherford	Marshall	Overton	Meigs	Jefferson	Washington
Weakley	McNairy	Stewart	Maury	Pickett	Polk	Knox	
	Madison	Sumner	Moore	Putnam	Rhea	Loudon	
	Shelby	Trousdale	Perry	Smith	Sequatchie	Monroe	
	Tipton	Williamson	Wayne	Van Buren		Morgan	
		Wilson		Warren		Roane	
				White		Scott	
						Sevier	
						Union	

2. AGE-ADJUSTED CANCER INCIDENCE AND MORTALITY RATES BY RESIDENT COUNTY, ALL SITES COMBINED, TENNESSEE, 2005-2009



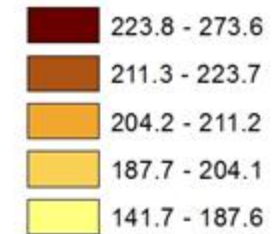
Incidence

Age-Adjusted Rate
Per 100,000

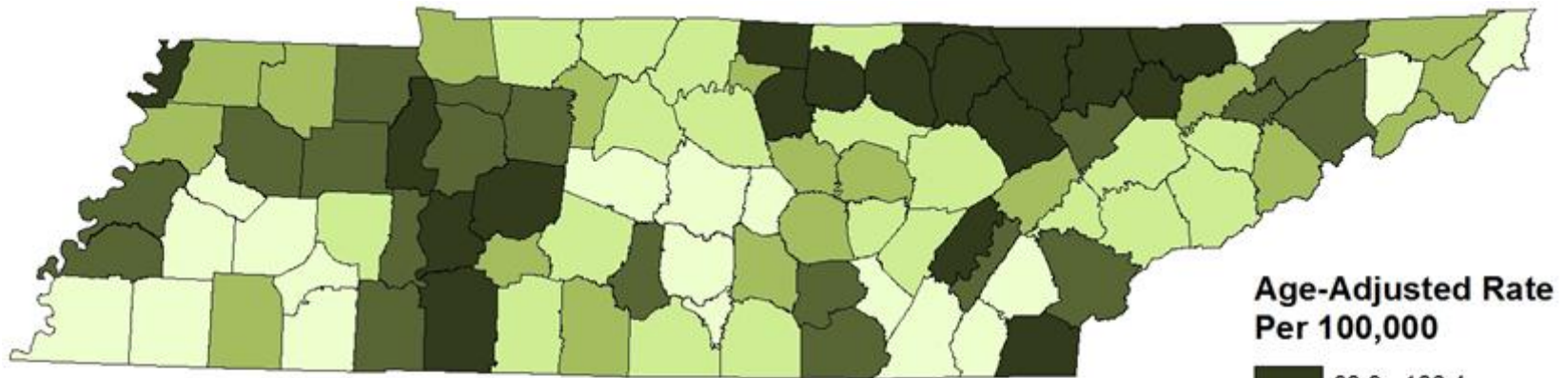


Mortality

Age-Adjusted Rate
Per 100,000

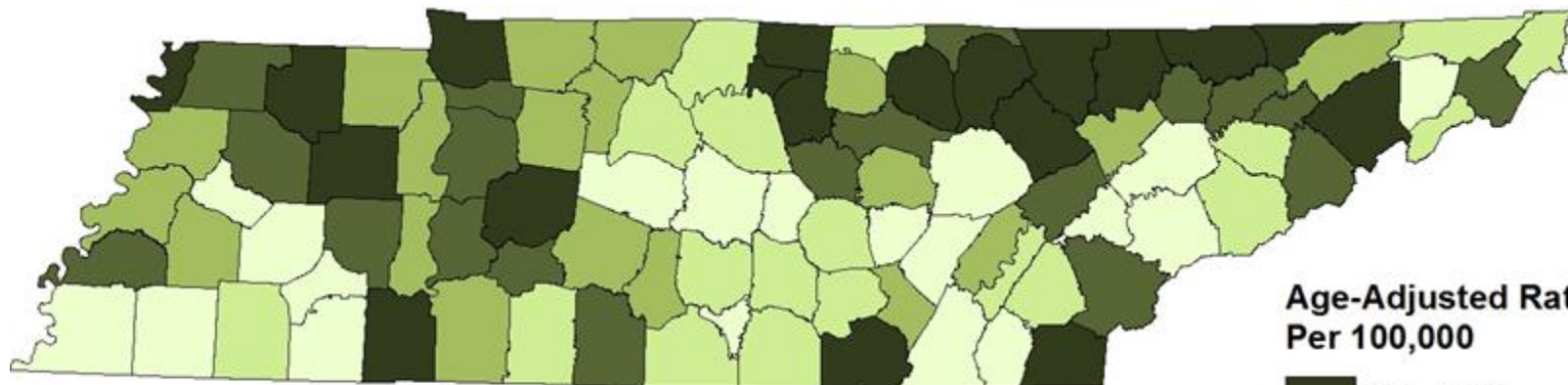
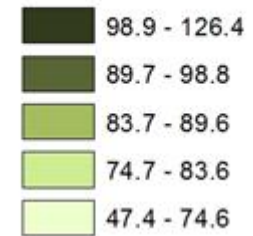


3. AGE-ADJUSTED CANCER INCIDENCE AND MORTALITY RATES BY RESIDENT COUNTY, LUNG AND BRONCHUS, TENNESSEE, 2005-2009



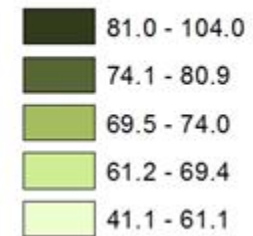
Incidence

**Age-Adjusted Rate
Per 100,000**

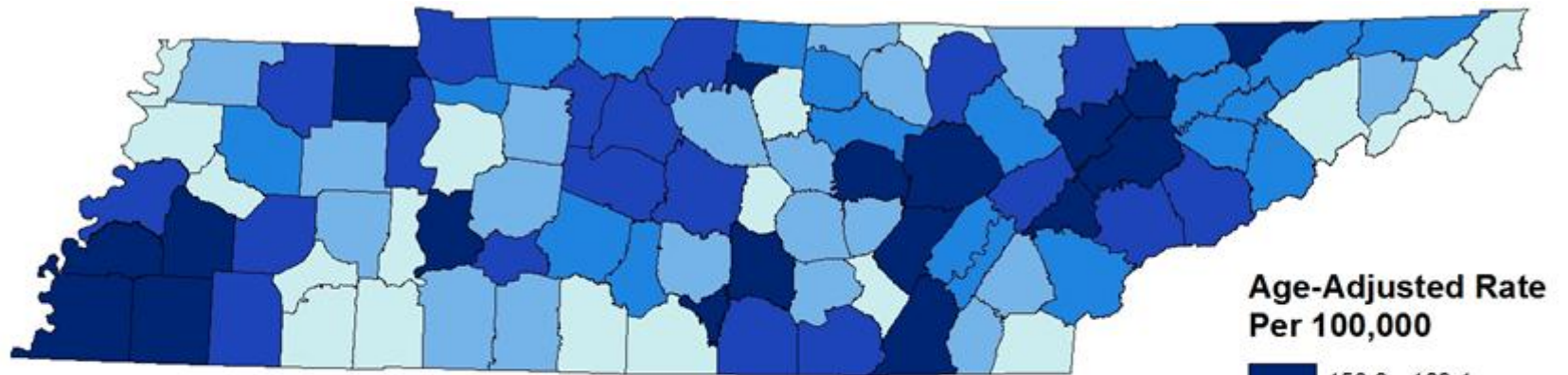


Mortality

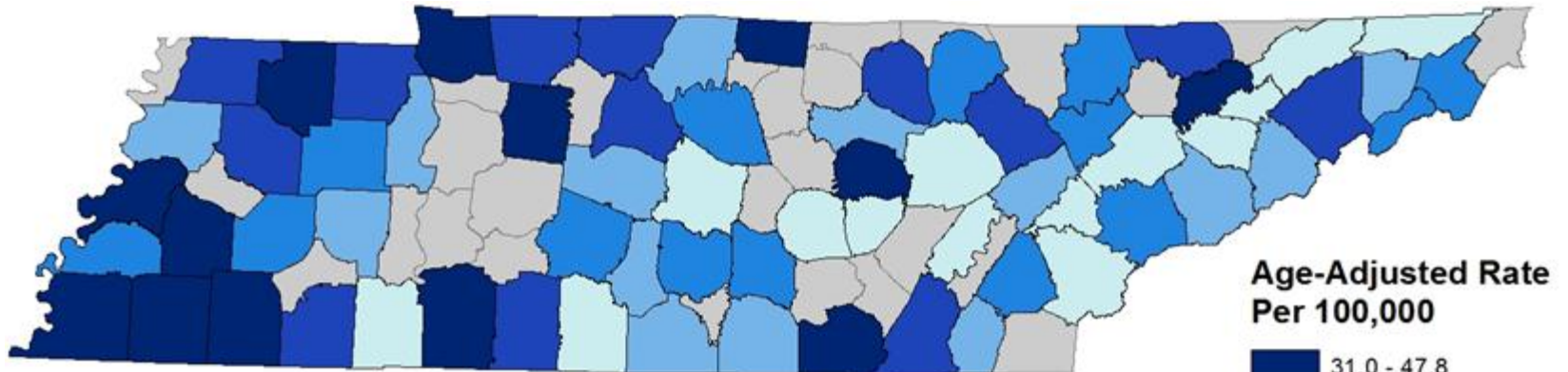
**Age-Adjusted Rate
Per 100,000**



4. AGE-ADJUSTED CANCER INCIDENCE AND MORTALITY RATES BY RESIDENT COUNTY, PROSTATE, TENNESSEE, 2005-2009

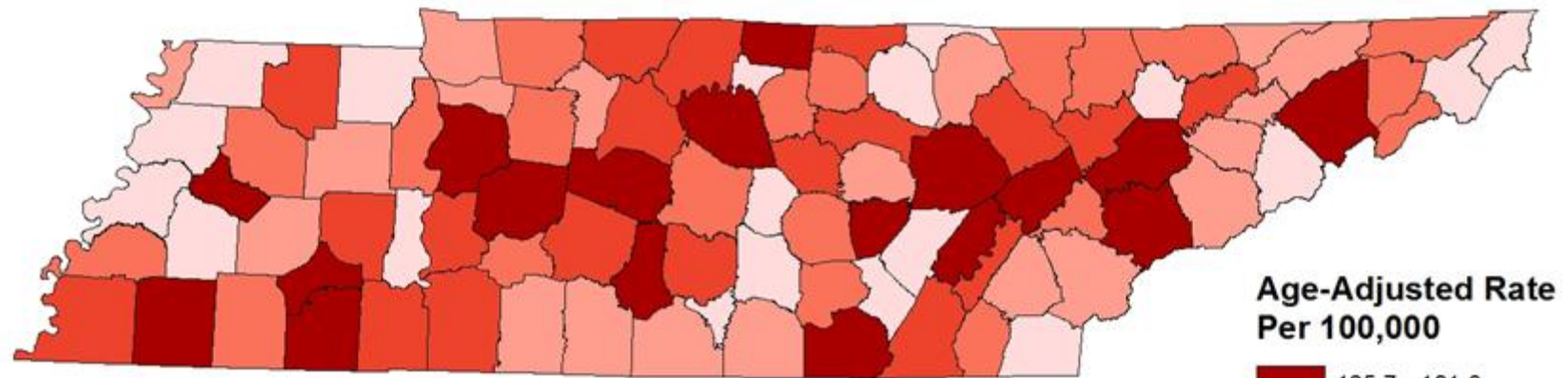


Incidence

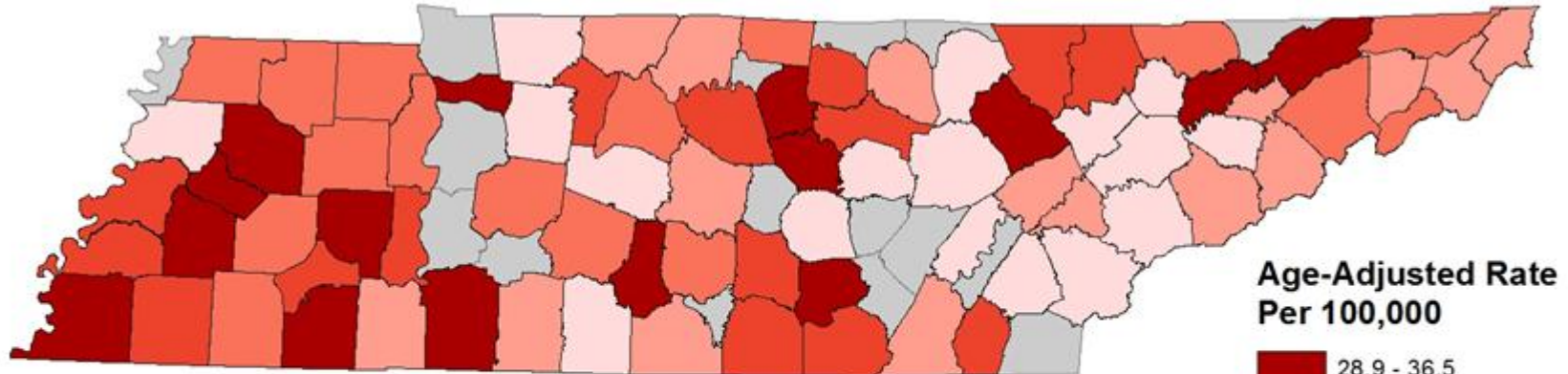


Mortality

5. AGE-ADJUSTED CANCER INCIDENCE AND MORTALITY RATES BY RESIDENT COUNTY, FEMALE BREAST, TENNESSEE, 2005-2009

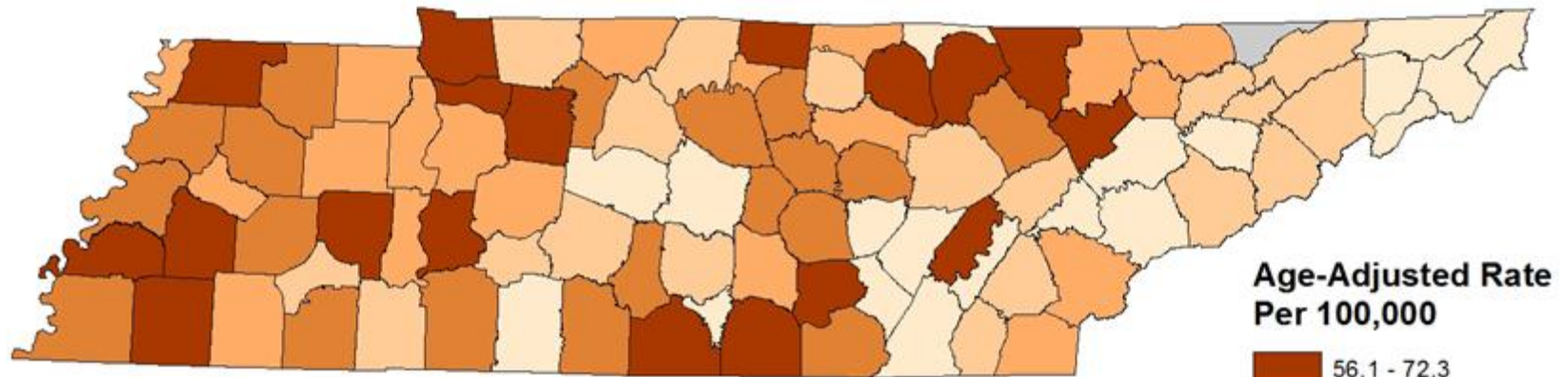


Incidence



Mortality

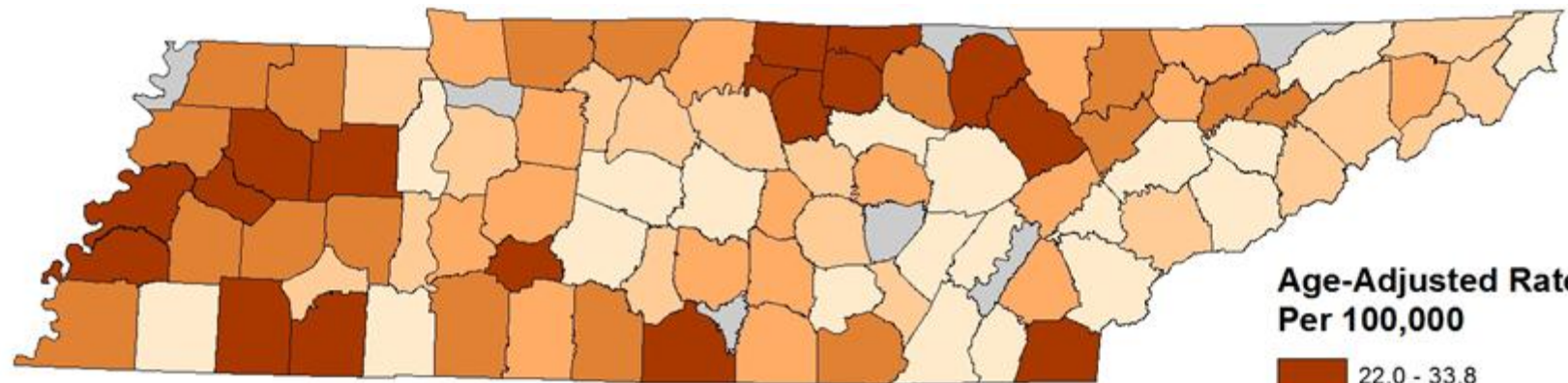
6. AGE-ADJUSTED CANCER INCIDENCE AND MORTALITY RATES BY RESIDENT COUNTY, COLON AND RECTUM, TENNESSEE, 2005-2009



Incidence

**Age-Adjusted Rate
Per 100,000**

- 56.1 - 72.3
- 51.3 - 56.0
- 47.0 - 51.2
- 43.6 - 46.9
- 35.5 - 43.5
- Data Suppressed

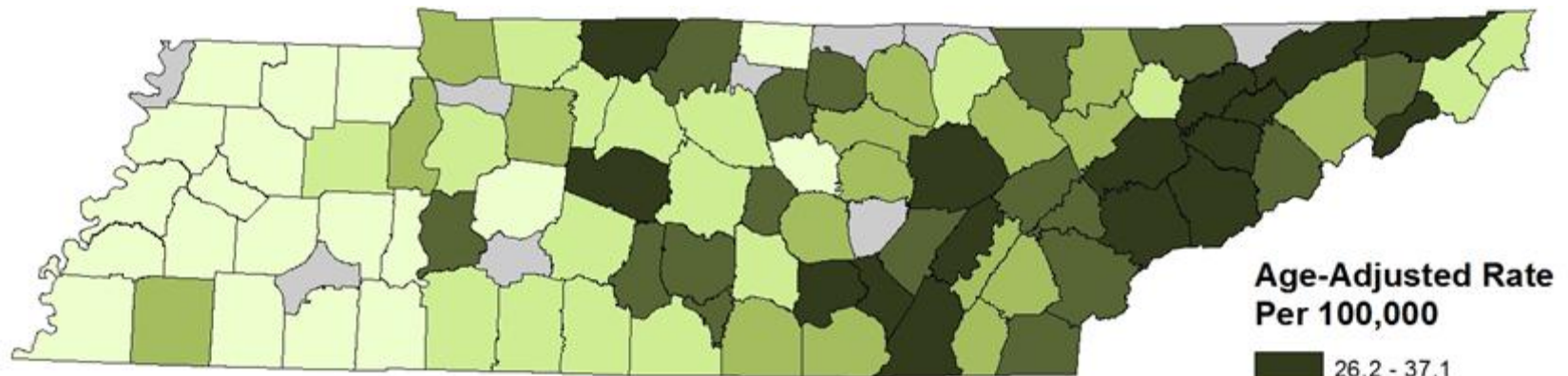


Mortality

**Age-Adjusted Rate
Per 100,000**

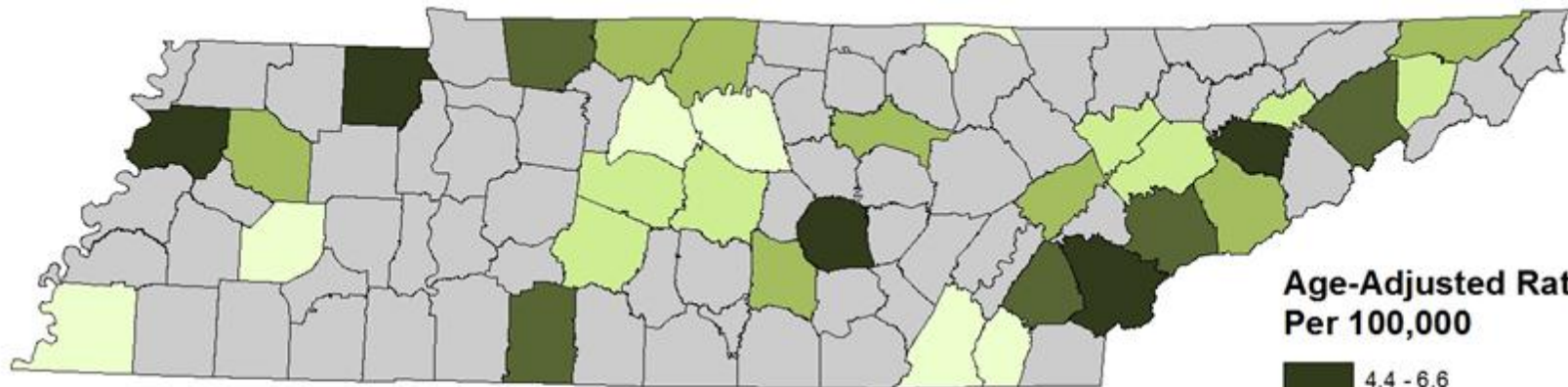
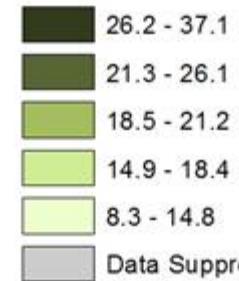
- 22.0 - 33.8
- 19.5 - 21.9
- 18.1 - 19.4
- 16.4 - 18.0
- 12.5 - 16.3
- Data Suppressed

7. AGE-ADJUSTED CANCER INCIDENCE AND MORTALITY RATES BY RESIDENT COUNTY, MELANOMA OF THE SKIN, TENNESSEE, 2005-2009



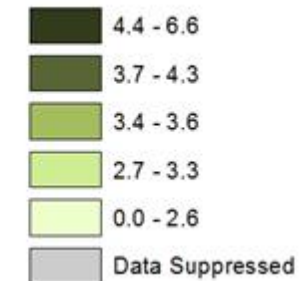
Incidence

**Age-Adjusted Rate
Per 100,000**

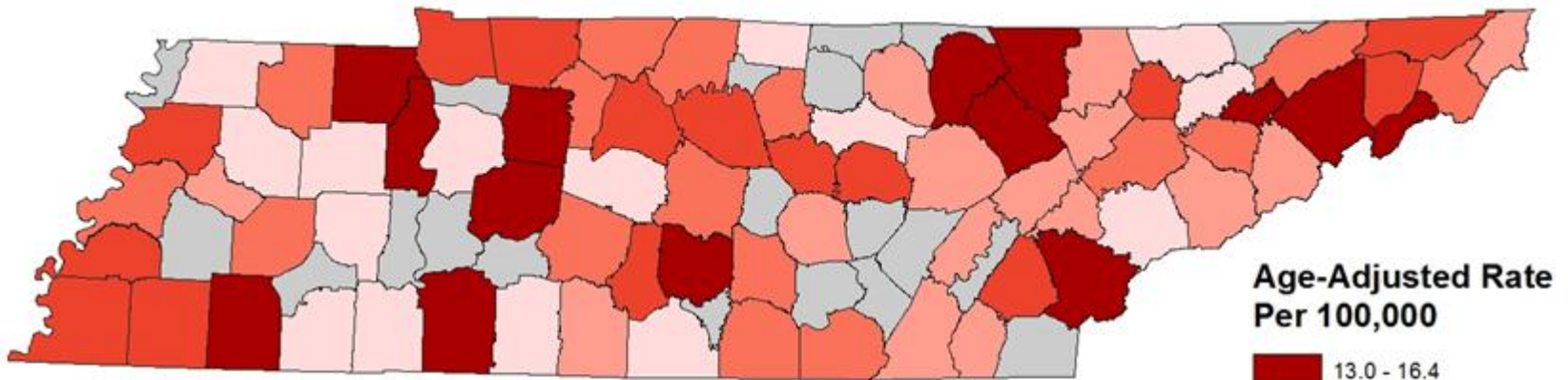


Mortality

**Age-Adjusted Rate
Per 100,000**

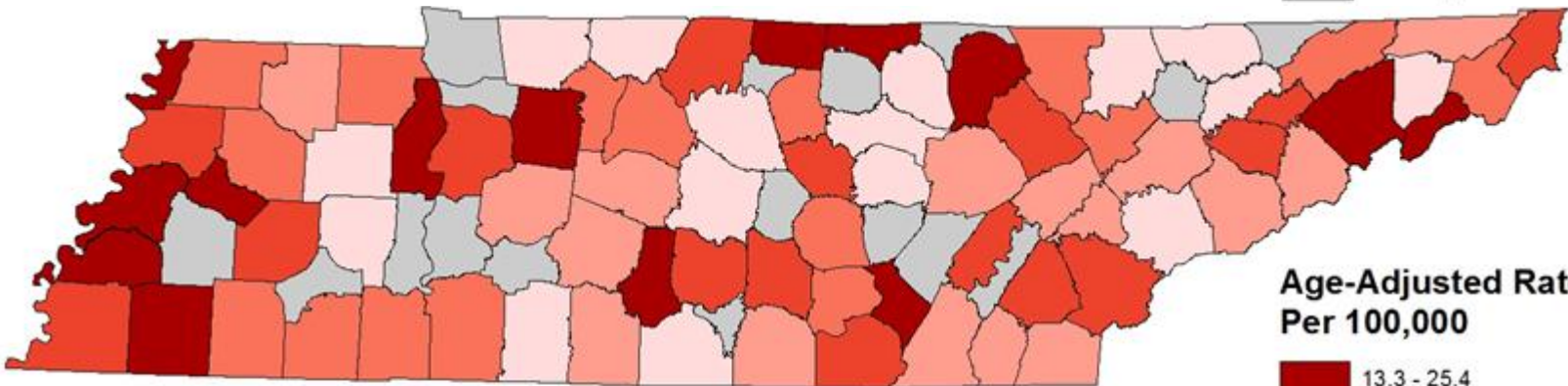
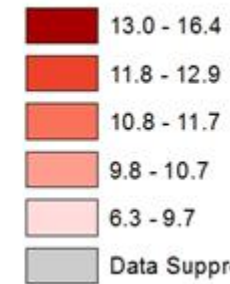


8. AGE-ADJUSTED CANCER INCIDENCE AND MORTALITY RATES BY RESIDENT COUNTY, PANCREAS, TENNESSEE, 2005-2009



Incidence

**Age-Adjusted Rate
Per 100,000**



Mortality

**Age-Adjusted Rate
Per 100,000**

