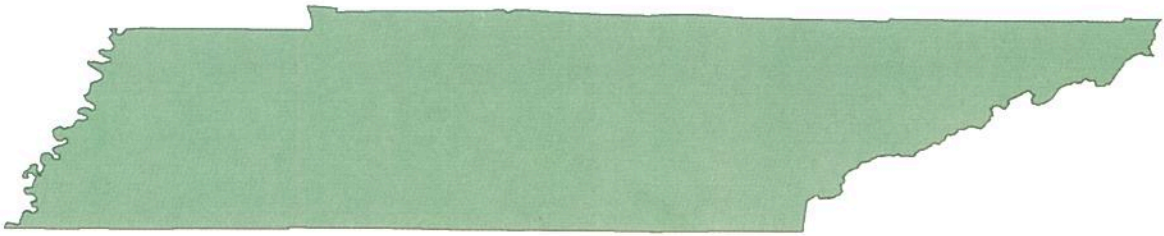


# Cancer in Tennessee 2004-2008



December 2011

Tennessee Department of Health  
Office of Policy, Planning, and Assessment  
Office of Cancer Surveillance  
Tennessee Cancer Registry

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## ACKNOWLEDGMENTS

The Office of Cancer Surveillance acknowledges the contributions of the following organizations and individuals in making the publication of this report possible:

- Cancer registrars from healthcare facilities throughout the State of Tennessee who completed the large majority of cancer abstracts available in the TCR database.
- The staff of the Division of Health Statistics, Tennessee Department of Health, for providing cancer mortality data.
- Drs. Yinmei Li and Audrey Bauer of the Tennessee Department of Health for analyzing data and compiling this report.
- The staff of the Tennessee Cancer Registry (TCR), Office of Cancer Surveillance, Tennessee Department of Health, who ensured the quality and completeness of Tennessee Cancer Registry data.

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This publication was supported by cooperative agreement grant number U55/DP000822-04 from the Centers for Disease Control and Prevention (CDC). Its contents are solely the responsibility of the authors and do not necessarily represent the views or opinions of the CDC.

Suggested citation:

Li Y, Bauer AM, Whiteside MA. *Cancer in Tennessee 2004-2008*. Office of Cancer Surveillance; Office of Policy, Planning & Assessment; Tennessee Department of Health. Nashville, Tennessee, September 2011.

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## EXECUTIVE SUMMARY

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. It is projected that cancer will soon become the leading cause of death nationally, surpassing heart disease, currently the leading cause of death.

Nationally, Tennessee (TN) has the 19<sup>th</sup> highest cancer incidence and the 3<sup>rd</sup> highest cancer mortality rate, all races and sexes combined<sup>1</sup>. Among blacks nationally, TN has the 24<sup>th</sup> highest cancer incidence and the 7<sup>th</sup> highest cancer mortality rate in the U.S.<sup>1</sup> Among whites nationally, TN has the 19<sup>th</sup> highest cancer incidence and the 5<sup>th</sup> highest cancer mortality rate in the U.S.<sup>1</sup> TN residents account for a disproportionate share of the national cancer burden.

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 report to the TN General Assembly of the cancer burden 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 5 consecutive years, 2004-2008, the time period covered by this report. 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 2005-2008

data exceeded the 95% completeness threshold; therefore, time trend data reported in this report should be interpreted with caution.

During 2004-2008, a total of 151,749 new cases of invasive cancer were diagnosed in TN residents, an incidence rate of 467.8 new cases of cancer per 100,000 Tennesseans; this number excludes all *in situ* cases except for urinary bladder cancer. There were 64,754 cancer deaths recorded as the principal cause of death in TN residents during the same period, a mortality rate of 202.2 cancer deaths per 100,000 Tennesseans.

Cancer incidence and mortality 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 2004-2008.

Half of all cancers were diagnosed at early stages in TN residents, when treatment is usually more effective. Approximately 549,000 years of potential life was lost in TN residents due to premature cancer deaths during the 5-year reporting period; therefore, on average, each person who died of cancer before the age of 75 during the 5-year period lost about 8.5 years of potential life due to cancer, more than 11% of the average lifespan.

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

and Upper Cumberland regions displayed the highest overall cancer incidence rates, whereas the Southwest 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, Morgan, Rhea, Putnam, Meigs and White counties had the highest overall cancer incidence rates statewide. The lowest overall cancer incidence rates were observed in Moore, Fayette, Van Buren, Chester and Bledsoe counties. The highest overall cancer mortality rates were observed in Lake, Macon, Marion, Claiborne and Smith counties. The lowest overall cancer mortality rates were observed in Moore, Bledsoe, Meigs, Williamson and Cumberland counties.

#### Cancer Incidence

The 10 most common incident cancers found in TN in decreasing order were:

1. lung
2. female breast
3. prostate
4. colorectal
5. melanoma of the skin
6. urinary bladder
7. non-Hodgkin lymphoma
8. kidney & renal pelvis
9. oral cavity & pharynx
10. leukemia.

In males, the 10 most common incident cancers in descending order were:

1. prostate
2. lung
3. colorectal
4. urinary bladder
5. melanoma of the skin
6. non-Hodgkin lymphoma
7. kidney & renal pelvis
8. oral cavity & pharynx

9. leukemia
10. pancreas

In females, the 10 most common incident cancers in descending order were:

1. breast
2. lung
3. colorectal
4. uterine
5. non-Hodgkin lymphoma
6. melanoma of the skin
7. thyroid
8. ovary
9. kidney & renal pelvis
10. pancreas

#### Cancer Deaths

The following cancers caused the greatest numbers of deaths, in decreasing order, in TN:

1. lung
2. colorectal
3. female breast
4. pancreas
5. prostate
6. leukemia
7. non-Hodgkin lymphoma
8. brain & other nervous system
9. liver & intrahepatic bile duct
10. ovary

For males, the 10 cancers causing the greatest numbers of deaths, in descending order, were:

1. lung
2. colorectal
3. prostate
4. pancreas
5. leukemia
6. non-Hodgkin lymphoma
7. liver & intrahepatic bile duct
8. esophagus
9. urinary bladder
10. kidney & renal pelvis

For females, the highest numbers of cancer deaths, in descending order, were:

1. lung
2. breast
3. colorectal
4. pancreas
5. ovary
6. non-Hodgkin lymphoma
7. leukemia
8. brain & other nervous system
9. uterine
10. myeloma

### Lung Cancer

Lung cancer incidence and mortality significantly decreased from 2004-2008. TN had the 7<sup>th</sup> highest incidence and the 3<sup>rd</sup> highest mortality rate in the U.S.<sup>1</sup> 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 rates are comparable among blacks and whites; however, mortality is significantly higher in blacks compared to whites.

### Prostate Cancer

Prostate cancer incidence increased from 2004-2008, which may be partly explained by changes in reporting procedures. Death rates decreased during this time period.

TN had the 21<sup>st</sup> highest incidence rate and the 12<sup>th</sup> highest mortality rate in the U.S.<sup>1</sup> Prostate cancer is the leading cause of new cases and the 3<sup>rd</sup> leading cause of death in TN males. About 82% are diagnosed at early stages, which is probably partially attributable to prostate cancer screening and that the disease typically displays a slow progressive course compared to most cancers. Black males are disproportionately affected by

this disease compared to white males; black men experience more than double the prostate cancer mortality rate observed in white men.

### Breast Cancer

Female breast cancer incidence rates remained stable during the 5-year period covered by this report, whereas mortality rates have significantly decreased. TN females experienced the 33<sup>rd</sup> highest breast cancer incidence rate and the 24<sup>th</sup> highest breast cancer mortality rate in the U.S.<sup>1</sup> It is the 1<sup>st</sup> leading cause of new cases and the 2<sup>nd</sup> leading cause of cancer deaths in TN females.

About 65% 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 are 63% more likely to die of the disease than white women.

### Colorectal Cancer

Colorectal cancer incidence and mortality rates remained stable over the 5-year period covered by this report. TN experienced the 14<sup>th</sup> highest incidence rate and the 12<sup>th</sup> highest mortality rate in the U.S. for colorectal cancer<sup>1</sup>.

Colorectal cancer is the 4<sup>th</sup> leading cause of cancer incidence and the 2<sup>nd</sup> leading cause of cancer deaths in TN. The fact that incidence and mortality rates for colorectal cancer are high and have not decreased over the 5-year period in TN, whereas decreases have been observed for the other top cancers, should elicit concern, especially since colorectal cancer screening is effective at diagnosing this disease in its early stages. Only 44% of cases are diagnosed at

early stages in TN. Blacks demonstrate a significantly greater burden of colorectal cancer than whites.

#### Melanoma of the Skin

Melanoma incidence and mortality were stable over the 5-year period covered by this report. Melanoma is the 5<sup>th</sup> leading cause of new cancer cases in TN; however, mortality rates are low. TN experienced the 33<sup>rd</sup> highest incidence rate and the 34<sup>th</sup> highest mortality rate in the U.S. for this disease<sup>1</sup>. Cancer screening is very effective at diagnosing the disease in the early stages, and 85% of all new cases during 2004-2008 were diagnosed in the early stages of disease.

#### Pancreatic Cancer

Pancreatic cancer is the 11<sup>th</sup> leading cause of new cancer cases and the 4<sup>th</sup> 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 29<sup>th</sup> highest pancreatic cancer incidence rate and the 27<sup>th</sup> highest pancreatic cancer mortality rate in the U.S.<sup>1</sup> 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 a greater burden of disease compared to whites.

#### Childhood Cancer

There were 1,364 new invasive cancer cases and 204 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 9<sup>th</sup> highest childhood cancer incidence rate and the 29<sup>th</sup> highest childhood cancer mortality rate in the U.S.<sup>1</sup>

The reason for the marked difference in the rates observed for childhood cancer incidence and mortality is not immediately apparent. 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 greater burden of cancer compared to black children, but the difference is not statistically significant.

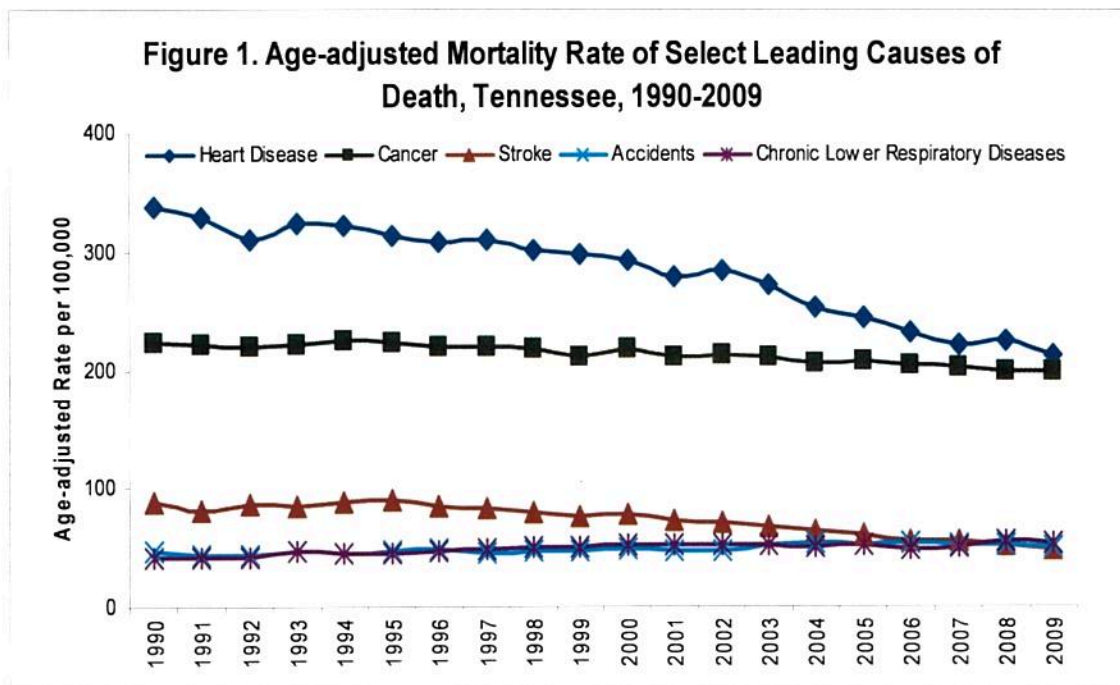


## INTRODUCTION

### OVERVIEW OF THE CANCER BURDEN IN TENNESSEE

Cancer is the general name for a group of more than 100 diseases in which cells in a part of the body begin to grow out of control. Untreated cancers can cause serious illness and even death.

Half of all men and one-third of all women in the U.S. will develop cancer during their lifetimes<sup>2</sup>. The American Cancer Society (ACS) estimates that over 33,000 Tennessee residents were diagnosed with cancer in 2010<sup>3</sup>. Cancer is the second leading cause of death in Tennessee, accounting for more than 13,000 deaths in each of the most recent five years (Figure 1)<sup>4†</sup>.

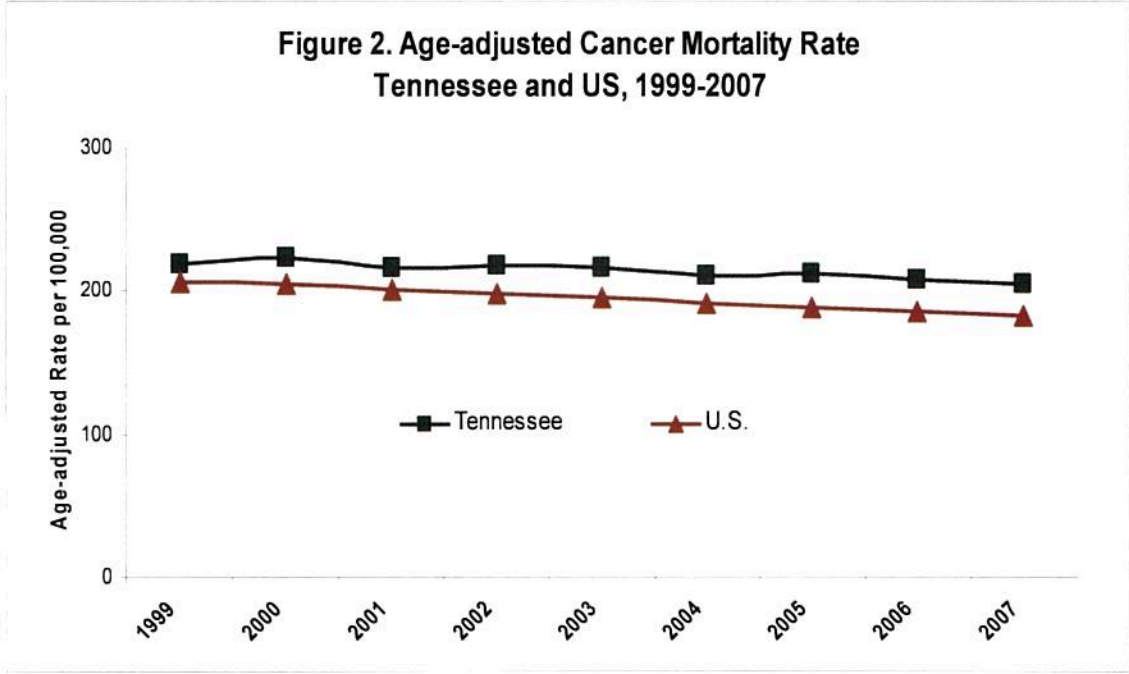


While the age-adjusted mortality rate for heart disease, the first leading cause of death in Tennessee, has declined significantly in the last two decades, from 338 per 100,000 of population in 1990 to 213 per 100,000 in 2009 (37% reduction), the mortality rate for cancer decreased to a lesser extent during this time, from 224 per 100,000 of population to 200 per 100,000 (11% reduction). If these trends continue, cancer is expected to surpass heart disease to be the number one killer in Tennessee.

Tennesseans experience a higher cancer mortality rate than the average American (Figure 2)<sup>4</sup>. Cancer mortality rates in Tennessee and the U.S. both decreased from 1999 to 2007.

<sup>†</sup> Mortality rates prior to 1999 were comparability adjusted to account for the change from ICD-9 to ICD-10 coding<sup>5</sup>.

However, the rate of decrease was slower in Tennessee than in the U.S. resulting in a widening cancer mortality gap.



## **TENNESSEE CANCER REGISTRY**

The Tennessee Cancer Reporting System Act (T.C.A. 68-1-1001) was passed in 1983 by the Tennessee Assembly, making cancer a reportable condition. It also established the Tennessee Cancer Registry (TCR) which is “dedicated to the collection and use of quality data for the purpose of decreasing the incidence and mortality of cancer in Tennessee.”

The goals of the TCR are to (1) collaborate with hospitals and other cancer reporting facilities to assure the collection of accurate, timely, and high quality cancer data; (2) promote scientific research using TCR data both within and outside of the Tennessee Department of Health (TDH); (3) respond to Tennessee residents about cancer concerns; (4) educate the public; (5) provide information for planning and evaluating cancer prevention and control activities; and (6) share and compare cancer data with other states.

The TCR collects data on the occurrence of cancer (incidence), the types of cancer (morphology), the site in the body where the cancer first occurred (primary site), the extent of disease at the time of diagnosis (stage), the planned first course of treatment, vital status, and basic demographic information. Cancer data are reported to the TCR from a variety of medical facilities, including hospitals, physicians’ offices, free-

standing radiation facilities, ambulatory surgical treatment centers, pathology laboratories, and other sources.

Cancer death data are recorded on death certificates and submitted to the Office of Vital Records, TDH, which collects, compiles, and cleans death data and shares them with the TCR. Death certificates contain information regarding the primary cancer site, basic patient information and other useful information.

### **PURPOSE OF THE REPORT**

This report presents cancer incidence and mortality statistics for diagnoses or deaths that occurred in 2004-2008. Data are presented by primary site, stage at diagnosis (incidence data only), and population demographics including gender, race, and age at diagnosis.

Cancer statistics by county of residence are included in the appendices. Also presented are the leading causes of cancer incidence and mortality, a description of cancers among children 19 years and younger, and the prevalence of certain cancer risk factors and screening behaviors among the adult population. Unless specified otherwise, differences presented between comparison groups were statistically significant at the 0.05 alpha level.

# CANCER INCIDENCE AND MORTALITY

## ALL CANCER SITES COMBINED

- From 2004 to 2008, a total of 151,749 new cases of malignant cancer among Tennessee residents were reported to the TCR, resulting in an average, annual age-adjusted incidence rate of 467.8 per 100,000 population. In other words, approximately 83 Tennesseans were newly diagnosed with cancer every day.
- During this same period, a total of 64,754 cancer deaths were recorded, or approximately 35 deaths per day. The average, annual age-adjusted cancer mortality rate was 202.2/100,000.
- The mortality-to-incidence ratio was 0.43. In other words, for every 100 newly diagnosed cancer cases, 43 patients died of cancer (these deaths may or may not have occurred in the same people who were newly diagnosed).

**Table 1. Cancer Incidence and Mortality, All Sites Combined, Tennessee, 2004-2008**

Gender	Race	Incidence			Mortality			M:I Ratio <sup>‡</sup>
		Count	Rate**	CI	Count	Rate**	CI	
Both*	All Races <sup>†</sup>	151,749	467.8	465.4-470.1	64,754	202.2	200.6-203.8	0.43
	Black	18,535	468.1	461.2-475.0	9,193	249.8	244.6-255.1	0.53
	White	131,203	466.6	464.1-469.2	55,249	196.9	195.3-198.6	0.42
Female	All Races <sup>†</sup>	71,738	405.3	402.3-408.3	29,829	163.3	161.5-165.2	0.40
	Black	9,133	390.0	381.9-398.2	4,437	198.4	192.5-204.3	0.51
	White	61,614	407.0	403.8-410.3	25,232	158.9	157.0-160.9	0.39
Male	All Races <sup>†</sup>	80,011	559.1	555.2-563.1	34,925	260.5	257.7-263.3	0.47
	Black	9,402	595.3	582.6-608.3	4,756	340.7	330.4-351.2	0.57
	White	69,589	553.3	549.1-557.5	30,017	252.8	249.9-255.7	0.46
<b>Age at Diagnosis or Death</b>								
	0-19	1,364	16.7	15.8-17.6	204	2.5	2.2-2.9	0.15
	20-44	11,901	116.5	114.4-118.6	2,263	22.3	21.3-23.2	0.19
	45-64	58,995	725.5	719.7-731.4	19,565	238.8	235.5-242.2	0.33
	65+	79,489	2052.1	2037.9-2066.5	42,722	1110.4	1099.8-1121.0	0.54
<b>Year of Diagnosis or Death</b>								
	2004	27,408	444.2	438.9-449.5	12,557	206.7	203.1-210.4	0.47
	2005	29,900	473.2	467.8-478.6	12,970	208.7	205.1-212.3	0.44
	2006	30,549	470.8	465.5-476.2	13,007	202.7	199.2-206.3	0.43
	2007	31,646	475.8	470.6-481.2	13,112	199.2	195.8-202.6	0.42
	2008	32,246	473.3	468.1-478.5	13,108	194.5	191.2-197.9	0.41

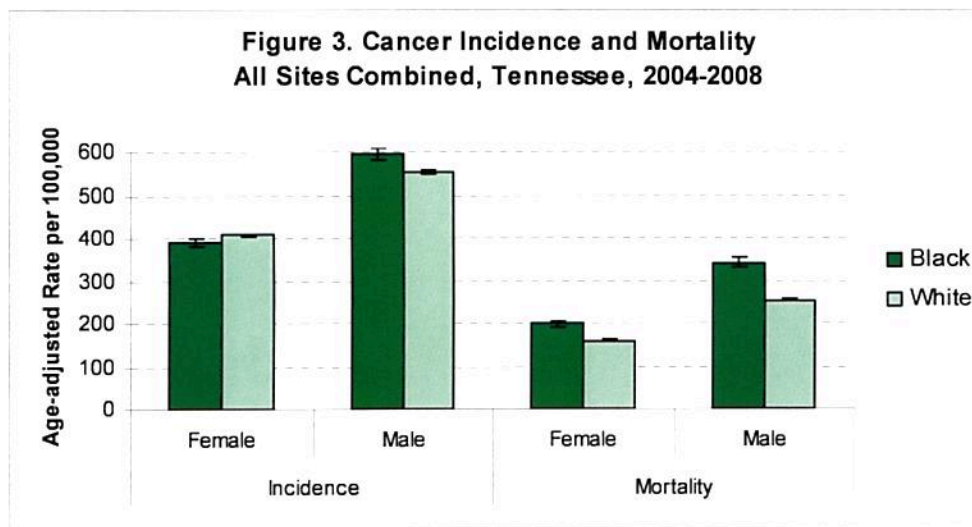
\*Excluded hermaphrodite and transsexual.

\*\*Rate per 100,000. All rates except age specific rates were adjusted to the 2000 U.S. standard population.

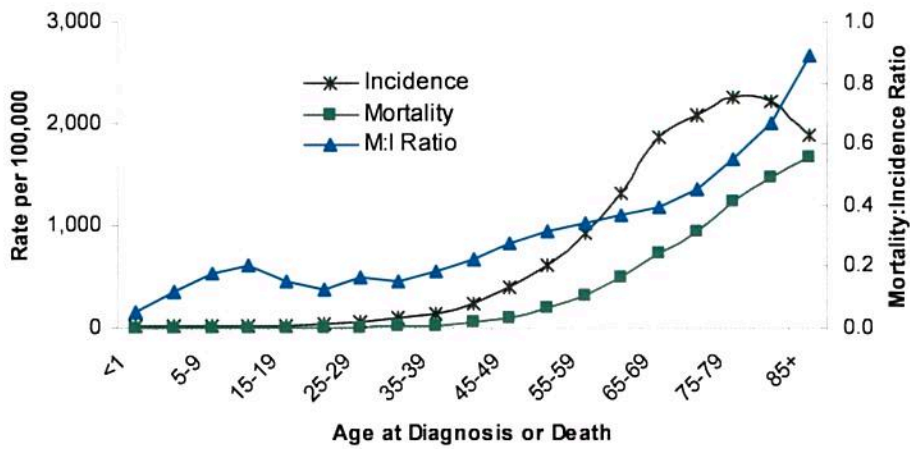
<sup>†</sup>Included white, black, other races and missing race information.

<sup>‡</sup>Mortality incidence ratio. See Technical Notes for details.

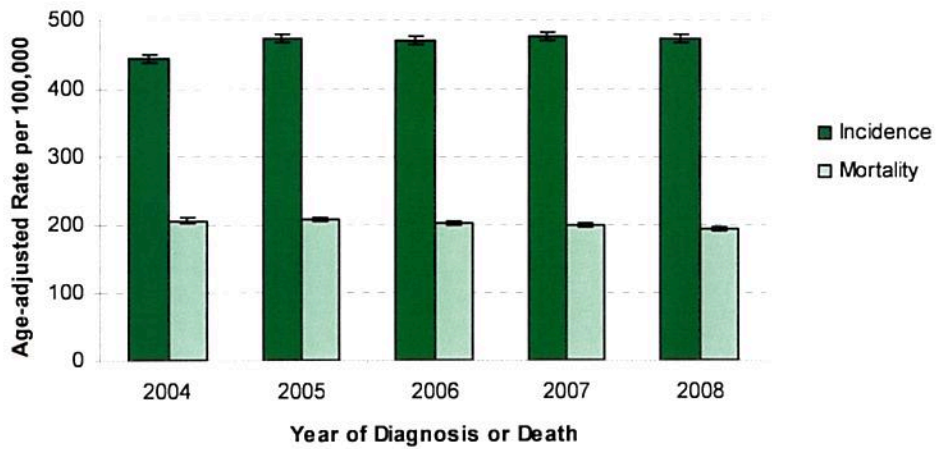
- The age-adjusted cancer incidence rate among black Tennesseans (468.1/100,000) was similar to that among whites (466.6/100,000).
- The age-adjusted cancer mortality rate among black Tennesseans (249.8/100,000) was 27% higher than among whites (196.9/100,000).
- Blacks accounted for 12.2% of incident cancer cases and 14.2% of cancer deaths, while whites accounted for 86.5% of incident cancer cases and 85.3% of cancer deaths.
- Black males had higher incidence and mortality rates than their white counterparts.
- Black females had a higher mortality rate than white females but a slightly lower incidence rate.
- Regardless of race, males had higher incidence and mortality rates than females.
- Both cancer incidence and mortality rates were lower in younger age groups.
- Incidence rates started increasing at 20-24 years, then increased sharply from 50-54 to 70-74, and peaked at 75-79. After that incidence decreased sharply.
- Mortality rates started increasing at 35-39 years, and increased steeply from age 60-64 to age 85+.
- The mortality-incidence ratio (M:I ratio. See Technical Notes for details) increased steadily with age among adults, suggesting that the five-year survival decreased with age.
- Age-adjusted cancer incidence rates increased from 2004 (444.2/100,000) to 2008 (473.3/100,000). In contrast, cancer mortality rates decreased slightly during this period (from 206.7/100,000 in 2004 to 194.5/100,000 in 2008).
- Eight percent of new cancer cases were first diagnosed at the in situ stage, 42% were localized, 20% regional, 21% distant, and 9% were of unknown stage.



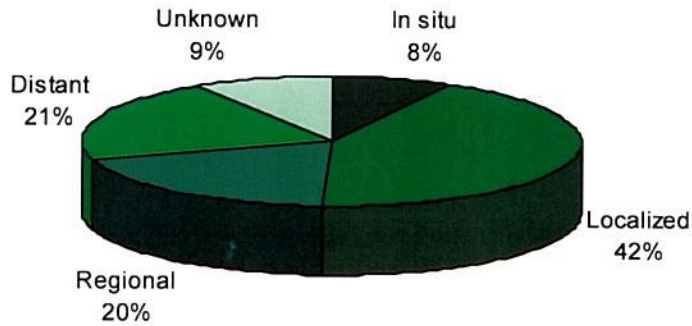
**Figure 4. Cancer Incidence and Mortality by Age  
All Sites Combined Tennessee, 2004-2008**



**Figure 5. Cancer Incidence and Mortality Time Trends  
All Sites Combined, Tennessee, 2004-2008**

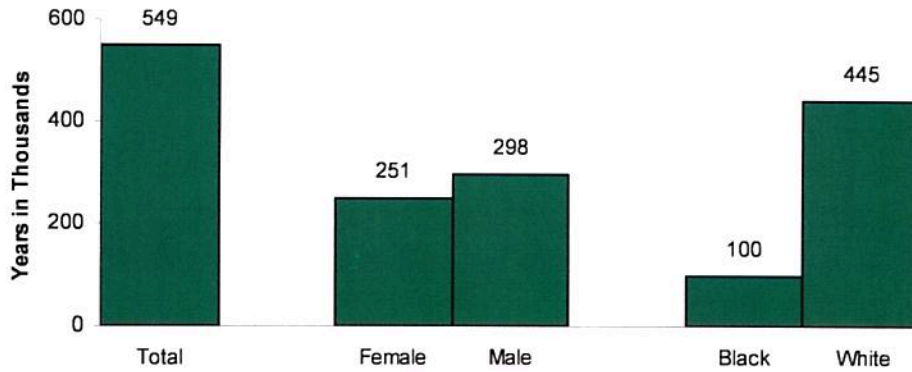


**Figure 6. Cancer Stage, All Sites Combined  
Tennessee, 2004-2008**



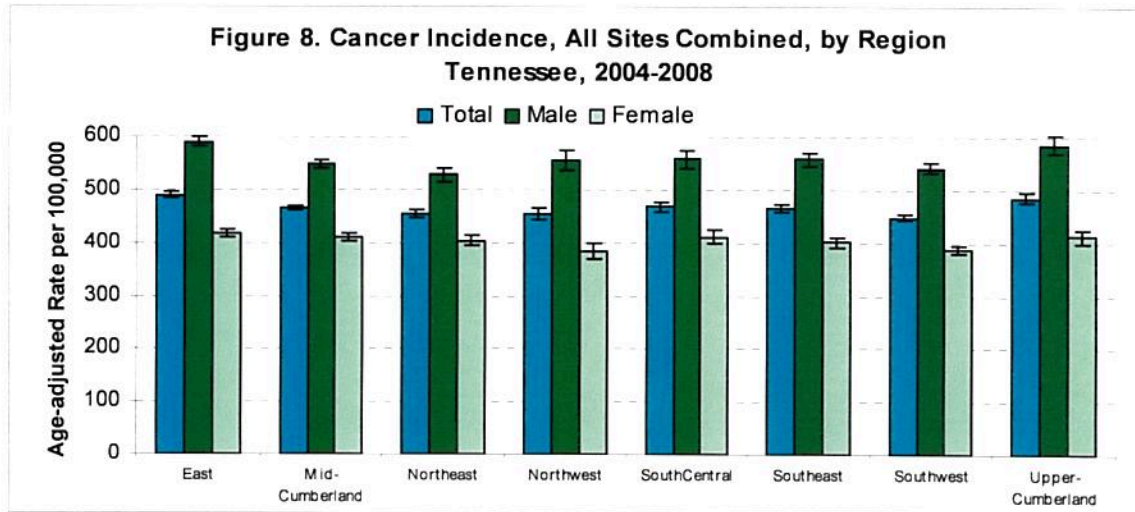
- In the period from 2004-2008, a total of 549,000 years of potential life lost (YPLL) were lost due to premature cancer deaths for the total population: 251,000 years for females and 298,000 for males; 100,000 years for blacks and 445,000 for whites.

**Figure 7. Years of Potential Life Lost to Cancer  
Tennessee, 2004-2008**



## CANCER BY REGION AND COUNTY

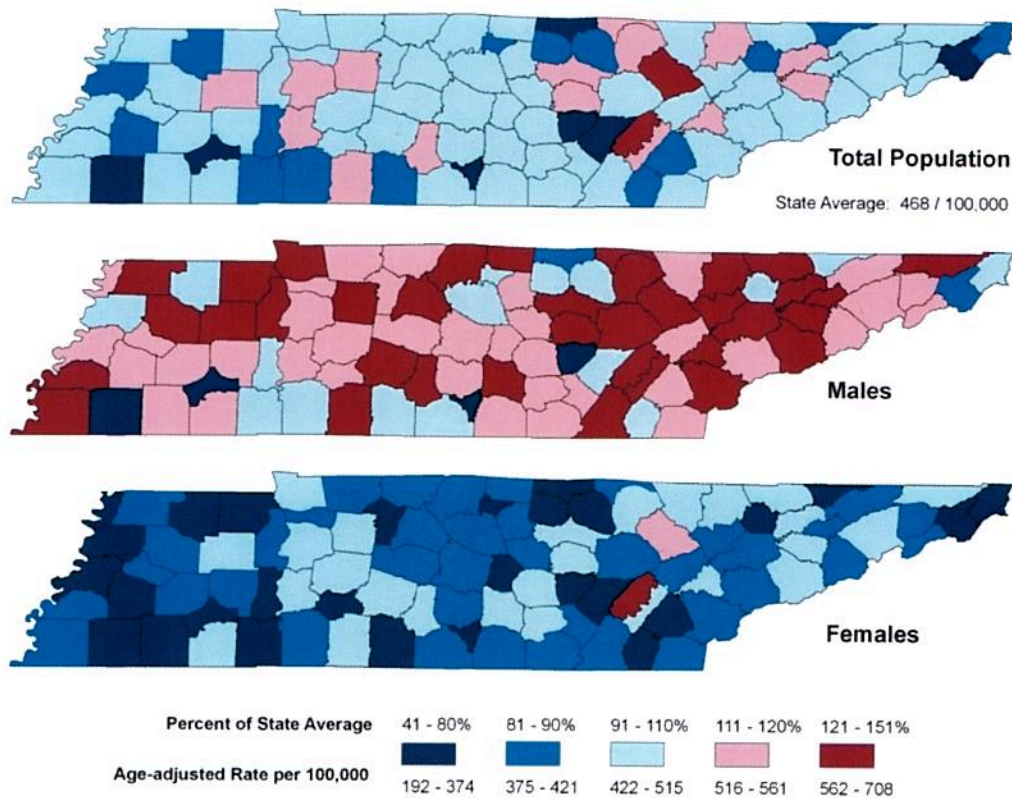
- Age-adjusted cancer incidence rates for all sites combined varied among Tennessee Department of Health regions (see Technical Notes section for a map of Tennessee regions and counties). Northeast, Northwest, Southwest and Mid-Cumberland had lower rates than East and Upper-Cumberland.
- In all 8 regions, males had a higher overall cancer incidence rate than females.



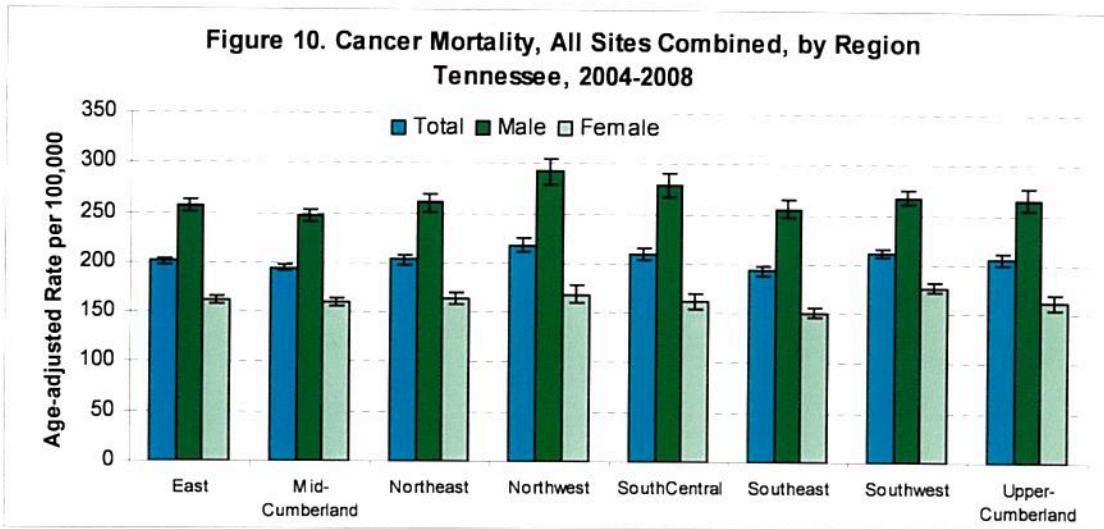
- Age-adjusted cancer incidence rates varied among Tennessee's 95 resident counties, ranging from 248.1/100,000 in Moore County to 616.4/100,000 in Morgan County for the total population.
- The five counties with the highest age-adjusted cancer incidence rates were Morgan (616.4/100,000), Rhea (609.6), Putnam (555.6), Meigs (555.1), and White (549.2).
- The five counties with the lowest incidence rates were Moore (248.1/100,000), Fayette (259.2), Van Buren (319.0), Chester (323.3), and Bledsoe (348.3).
- The age-adjusted rate for males was at least 10% higher than the state average rate for the majority of the 95 counties. In contrast, most county-level rates for females were less than 90% of the state average.



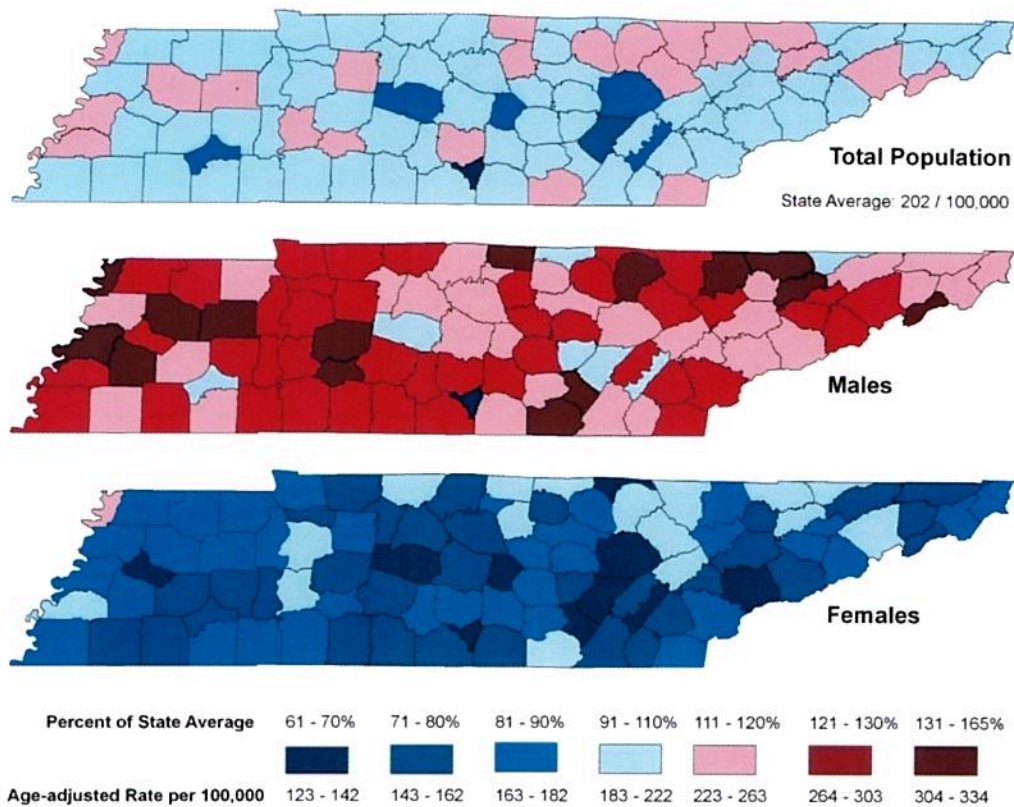
**Figure 9. Cancer Incidence by County and Gender**  
**All Sites Combined, Tennessee, 2004 - 2008**



- Northwest, Southwest, South Central, and Upper-Cumberland regions had higher mortality rates than Mid-Cumberland and Southeast regions.
- Males had higher mortality rates than females for all regions.
- Age-adjusted mortality rates varied among the 95 resident counties, ranging from 139.8/100,000 in Moore County to 256.7/100,000 in Lake County for the total population.
- The five counties with the highest age-adjusted mortality rates were Lake (256.7/100,000), Macon (248.7), Marion (246.5), Claiborne (242.0), and Smith (239.4).
- The five counties with the lowest age-adjusted mortality rates were Moore (139.8/100,000), Bledsoe (159.9), Meigs (163.7), Williamson (170.2) and Cumberland (174.5).
- The majority of the county-level age-adjusted mortality rates for males were at least 10% higher than the state average. In contrast, most counties' rates for females were less than 90% of the state average.
- More detailed information on cancer incidence and mortality by region and county can be found in Appendix VI.



**Figure 11. Cancer Mortality by County and Gender  
All Sites Combined, Tennessee, 2004 - 2008**



## LEADING CAUSES OF CANCER

### Incidence

- From 2004-2008, a total of 26,405 new cases of malignant lung and bronchus cancer were reported to the TCR, making it the leading cause of cancer among all Tennesseans. The second leading cause of cancer incidence was female breast cancer followed by prostate cancer and colorectal cancer.
- The 5<sup>th</sup> to 10<sup>th</sup> leading cancer incidence causes were melanoma of the skin; urinary bladder; non-Hodgkin lymphoma; kidney and renal pelvis; oral cavity and pharynx; and leukemia; respectively.
- Breast cancer was the leading cause of cancer incidence among females and prostate cancer was the leading cause among males.
- Lung and bronchus cancer was the 2<sup>nd</sup> leading cause for females and males separately.
- Colorectal cancer was the 3<sup>rd</sup> leading cause for females and males separately.
- Three of the top 10 leading causes of cancer incidence among females were cancers of the genital organs, i.e. breast; corpus and uterus, NOS (Not Otherwise Specified); and ovary.
- Among black Tennesseans, prostate cancer was the leading cause followed by lung and bronchus cancer and breast cancer. Myeloma was the 8<sup>th</sup> leading cause among blacks.
- The ranking of cancer incidence sites among whites was identical to that of the total population

**Table 2. Top Ten Leading Causes of Cancer Incidence, Tennessee, 2004-2008**

Cancer Site	Number of Cases (Rank)				
	Total Population	Gender		Race	
		Female	Male	Black	White
Lung and Bronchus	26,405 (1)	10,985 (2)	15,420 (2)	2,958 (2)	23,283 (1)
Female Breast	20,661 (2)	20,661 (1)		2,817 (3)	17,577 (2)
Prostate	20,843 (3)		20,843 (1)	3,152 (1)	17,398 (3)
Colon and Rectum	15,776 (4)	7,671 (3)	8,105 (3)	2,268 (4)	13,323 (4)
Melanoma of the Skin	6,300 (5)	2,657 (6)	3,643 (5)		6,051 (5)
Urinary Bladder*	6,130 (6)		4,613 (4)	397 (10)	5,676 (6)
Non-Hodgkin Lymphoma	6,017 (7)	2,885 (5)	3,132 (6)	488 (7)	5,437 (7)
Kidney and Renal Pelvis	5,116 (8)	1,993 (9)	3,123 (7)	655 (5)	4,415 (8)
Oral Cavity and Pharynx	3,695 (9)		2,607 (8)	418 (9)	3,224 (9)
Leukemia	3,625 (10)		2,073 (9)		3,153 (10)
Corpus and Uterus, NOS		3,447 (4)		397 (10)	
Thyroid		2,499 (7)			
Ovary		2,039 (8)			
Pancreas		1,729 (10)	1,767 (10)	503 (6)	
Myeloma				419 (8)	

\*Included both invasive and in situ bladder cancer cases.

## Mortality

- From 2004-2008, a total of 21,493 Tennesseans died from lung and bronchus cancer, making it the leading cause of cancer death for the total population. It was also the leading cause of death for females, males, blacks and whites.
- Colorectal cancer was the 2<sup>nd</sup> leading cause of cancer deaths for the total population, males, blacks and whites and the 3<sup>rd</sup> leading cause for females.
- Female breast cancer ranked 2<sup>nd</sup> among females and 3<sup>rd</sup> among blacks and whites as well as the total population.
- Pancreas cancer ranked 4<sup>th</sup> for all population groups examined except blacks, among which it was ranked 5<sup>th</sup>.
- Prostate cancer ranked 5<sup>th</sup> in the total population; 3<sup>rd</sup> among males; 4<sup>th</sup> among blacks; and 5<sup>th</sup> among whites.
- The 6<sup>th</sup> to 10<sup>th</sup> leading causes of cancer death among the total population were leukemia; non-Hodgkin lymphoma; liver and intrahepatic bile duct; brain and other nervous system; and ovary, respectively.
- Three of the top 10 leading causes of cancer death among females were cancers of the genital organs, i.e. breast; ovary; and corpus and uterus, NOS.
- Myeloma, stomach cancer and esophagus cancer were the 8<sup>th</sup>, 9<sup>th</sup> and 10<sup>th</sup> leading causes of cancer death among blacks.
- Esophagus, urinary bladder, and kidney and renal pelvis cancers were the 8<sup>th</sup>, 9<sup>th</sup> and 10<sup>th</sup> leading causes of cancer death among males.

**Table 3. Top Ten Leading Causes of Cancer Mortality, Tennessee, 2004-2008**

Cancer Site	Number of Cases (Rank)				
	Total Population	Gender		Race	
		Female	Male	Black	White
Lung and Bronchus	21,493 (1)	8,557 (1)	12,936 (1)	2,609 (1)	18,804 (1)
Colon and Rectum	5,885 (2)	2,881 (3)	3,004 (2)	1,026 (2)	4,831 (2)
Female Breast	4,411 (3)	4,411 (2)		848 (3)	3,534 (3)
Pancreas	3,489 (4)	1,736 (4)	1,753 (4)	495 (5)	2,978 (4)
Prostate	2,979 (5)		2,979 (3)	668 (4)	2,297 (5)
Leukemia	2,369 (6)	1,008 (7)	1,361 (5)	268 (7)	2,090 (6)
Non-Hodgkin Lymphoma	2,234 (7)	1,019 (6)	1,215 (6)		2,027 (7)
Brain and Other Nervous System	1,619 (8)	731 (8)			1,475 (8)
Liver and Intrahepatic Bile Duct	1,619 (8)		1,080 (7)	276 (6)	1,309 (10)
Ovary	1,517 (10)	1,517 (5)			1,331 (9)
Corpus and Uterus, NOS		683 (9)			
Myeloma		585 (10)		259 (8)	
Esophagus			1,070 (8)	221 (10)	
Urinary Bladder			908 (9)		
Kidney and Renal Pelvis			889 (10)		
Stomach				258 (9)	

## MOST COMMON CANCERS

### Lung and Bronchus Cancer

- Lung and bronchus cancer was the leading cause of cancer death for all population groups examined in this report. It was also the leading cause of cancer incidence for the total population.
- The average, annual age-adjusted incidence rate for lung and bronchus cancer was 81.0/100,000 in 2004-2008. The mortality rate was 66.5/100,000 during the same time period. The mortality-to-incidence ratio was 0.82, indicating a low survival for patients with this cancer.
- Incidence rates were not statistically significantly different between whites and blacks for either males or females.
- The mortality rate was higher among black males than among white males, but was not statistically significantly different between black females and white females.
- Males had much higher incidence and mortality rates than females regardless of race.

**Table 4. Cancer Incidence and Mortality, Lung and Bronchus, Tennessee, 2004-2008**

Gender	Race	Incidence			Mortality			M:I Ratio <sup>†</sup>
		Count	Rate**	CI	Count	Rate**	CI	
Both*	All Races <sup>†</sup>	26,405	81.0	80.0-82.0	21,493	66.5	65.6-67.4	0.82
	Black	2,958	77.8	75.0-80.7	2,609	70.7	67.9-73.5	0.91
	White	23,283	81.7	80.6-82.7	18,804	66.4	65.4-67.3	0.81
Female	All Races <sup>†</sup>	10,985	60.8	59.7-62.0	8,557	47.0	46.0-48.0	0.77
	Black	1,276	57.0	53.9-60.3	1,031	46.9	44.0-49.9	0.82
	White	9,628	61.5	60.3-62.8	7,483	47.3	46.3-48.4	0.77
Male	All Races <sup>†</sup>	15,420	108.8	107.0-110.6	12,936	93.8	92.1-95.5	0.86
	Black	1,682	110.1	104.6-115.8	1,578	108.5	102.9-114.4	0.99
	White	13,655	108.9	107.1-110.8	11,321	92.6	90.9-94.4	0.85
<b>Age at Diagnosis or Death</b>								
	0-19	^	^	^_^	0	0.0	0.0-0.0	^
	20-44	583	5.8	5.3-6.3	353	3.5	3.2-3.9	0.60
	45-64	9,487	115.1	112.8-117.5	6,831	82.7	80.8-84.7	0.72
	65+	16,332	421.9	415.4-428.4	14,309	370.7	364.7-376.9	0.88
<b>Year of Diagnosis or Death</b>								
	2004	5,149	83.2	81.0-85.6	4,164	67.7	65.7-69.8	0.81
	2005	5,286	83.4	81.2-85.7	4,365	69.5	67.4-71.6	0.83
	2006	5,357	82.2	80.0-84.4	4,358	67.4	65.4-69.4	0.82
	2007	5,249	78.6	76.5-80.8	4,325	65.3	63.3-67.3	0.83
	2008	5,364	78.0	75.9-80.1	4,281	63.0	61.1-64.9	0.81

\*Excluded hermaphrodite and transsexual.

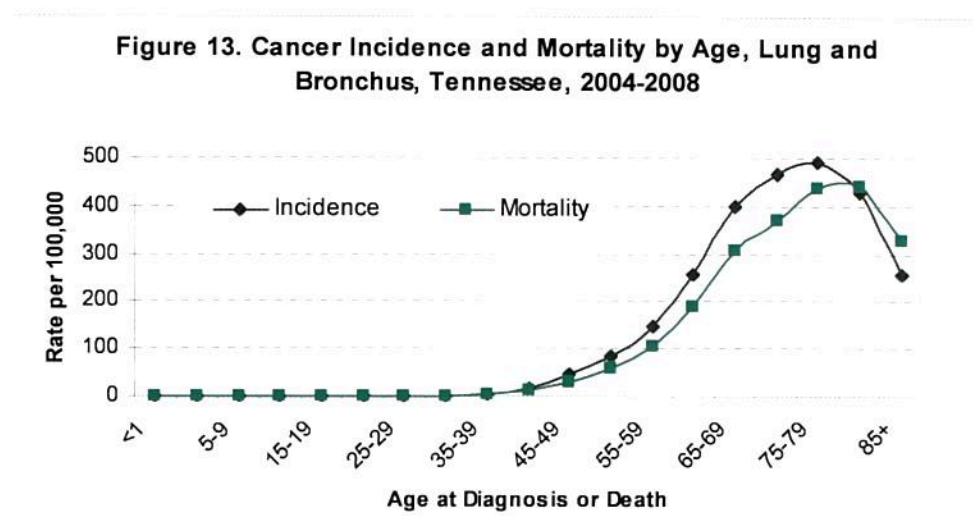
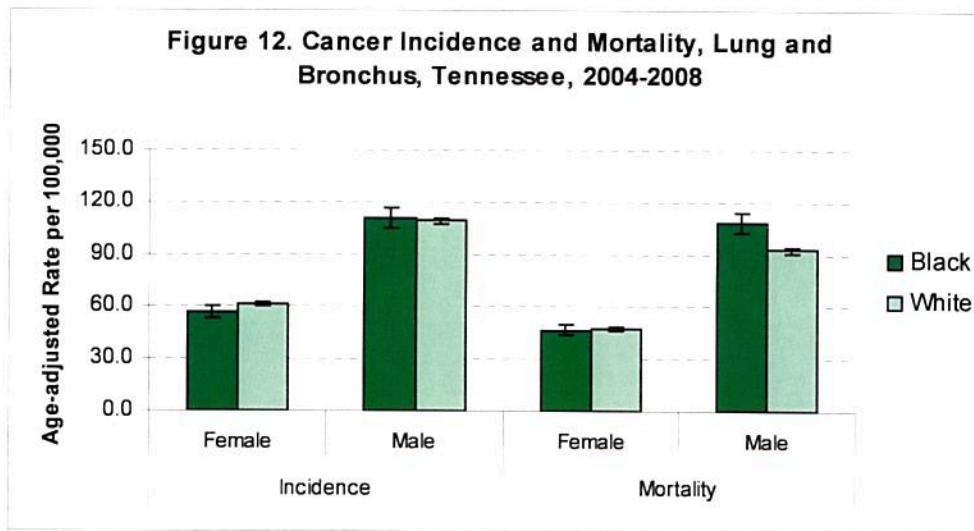
\*\*Rate per 100,000. All rates except age specific rates were adjusted to the 2000 U.S. standard population.

<sup>†</sup>Included white, black, other races and missing race information.

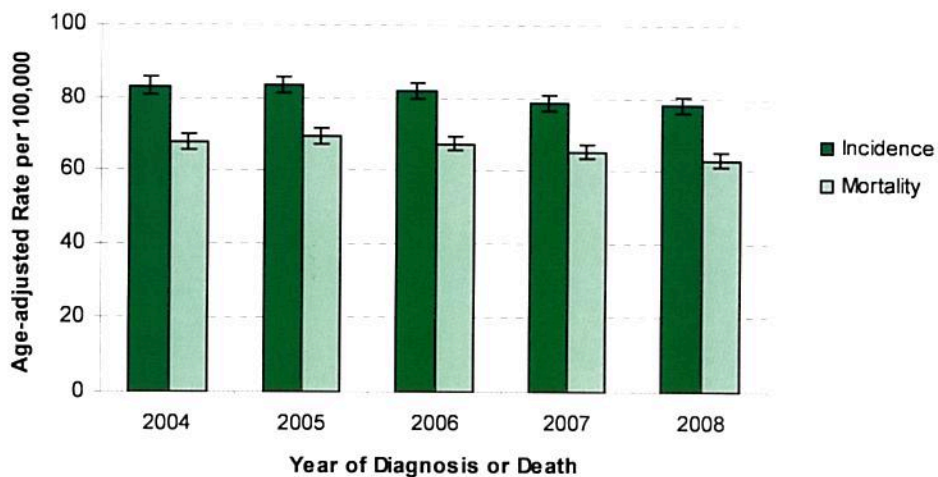
<sup>†</sup>Mortality incidence ratio. See Technical Notes for details.

^Cell suppressed where there were 1-9 cases.

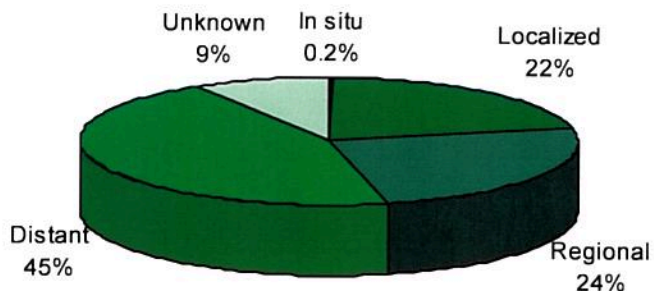
- Both lung cancer incidence and mortality rates increased with age and peaked at 75-79 years of age, after which rates declined.
- About 2% of new cases and of deaths occurred among people younger than 45 years. More than 60% of cases and of deaths occurred among people 65 years and older.
- The M:I ratio was high in all age groups, but highest in people 65 years and older.
- Both incidence and mortality rates decreased slightly from 2004 to 2008: the incidence rate decreased from 83.2/100,000 to 78.0/100,000 and the mortality rate decreased from 67.7/100,000 to 63.0/100,000 during this time period.
- Of new cases, 69% were diagnosed at late stages (24% regional and 45% distant). Only 42 cases were diagnosed at an in situ stage, accounting for just 0.2% of all lung cancer cases. 9% of cases were of unknown stage.



**Figure 14. Cancer Incidence and Mortality Time Trends  
Lung and Bronchus, Tennessee, 2004-2008**

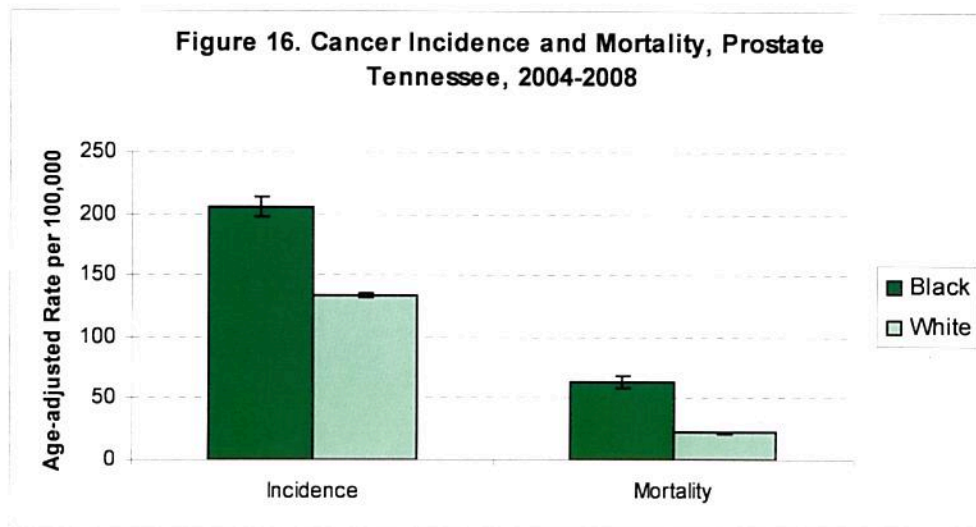


**Figure 15. Cancer Stage, Lung and Bronchus  
Tennessee, 2004-2008**



## Prostate Cancer

- In Tennessee, prostate cancer was the leading cause of cancer incidence and the 3<sup>rd</sup> leading cause of cancer death for men from 2004-2008.
- Almost 21,000 men were diagnosed with prostate cancer and almost 3,000 died of this cancer from 2004-2008.
- Black men experienced higher prostate cancer incidence (53% higher) and mortality (179% higher) rates than their white counterparts.
- About 0.5% and 60% of prostate cancer cases were diagnosed among males younger than 45 years of age and 65 and older, respectively.
- Prostate cancer incidence rates increased with age and peaked at 70-74, while mortality rates also increased with age but peaked at 85+.
- The M:I ratio for prostate cancer was 0.18 for the total population, indicating a much higher survival compared to lung and bronchus cancer.
- The M:I ratio for prostate cancer increased with age. No deaths occurred in men under the age of 45 from 2004-2008. The M:I ratio was 0.04 for the 45-64 age group and increased to 0.26 for men 65 and older.
- The age-adjusted prostate cancer incidence rate increased from 2004 (120.7/100,000) to 2008 (153.2/100,000) while the age-adjusted mortality rate decreased during that period (27.7/100,000 in 2004 to 23.4/100,000 in 2008). As a result of the differential changes in incidence and mortality rates, the M:I ratio also decreased from 0.23 in 2004 to 0.15 in 2008.
- 82% of cases were diagnosed at a localized stage, 3% were diagnosed at a distant stage, and 10% at a regional stage.





**Table 5. Cancer Incidence and Mortality, Prostate, Tennessee, 2004-2008**

Gender	Race	Incidence			Mortality			M:I Ratio <sup>‡</sup>
		Count	Rate*	CI	Count	Rate*	CI	
Male	All Races <sup>†</sup>	20,843	142.5	140.6-144.5	2,979	26.2	25.3 - 27.2	0.18
	Black	3,152	205.7	198.2-213.4	668	63.1	58.2 - 68.2	0.31
	White	17,398	134.3	132.2-136.3	2,297	22.6	21.7 - 23.6	0.17
<b>Age at Diagnosis or Death</b>								
0-19		^	^	^_^	0	0.0	0.0 - 0.1	^
20-44		105	2.1	1.7-2.6	1	0.0	0.0 - 0.1	0.00
45-64		8,317	206.2	201.7-210.6	322	7.9	7.0 - 8.8	0.04
65+		12,418	759.3	745.8-772.9	2,656	193.7	186.3 - 201.4	0.26
<b>Year of Diagnosis or Death</b>								
2004		3,303	120.7	116.5-125.0	583	27.7	25.4 - 30.1	0.23
2005		3,867	137.2	132.8-141.7	593	27.5	25.2 - 29.8	0.20
2006		4,154	142.4	138.0-146.9	601	26.8	24.7 - 29.1	0.19
2007		4,711	156.7	152.2-161.4	631	26.2	24.2 - 28.4	0.17
2008		4,808	153.2	148.8-157.7	571	23.4	21.5 - 25.4	0.15

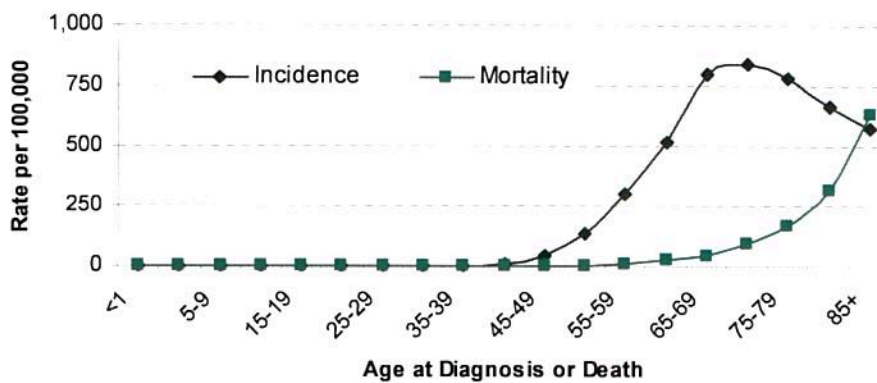
\*Rate per 100,000. All rates except age specific rates were adjusted to the 2000 U.S. standard population.

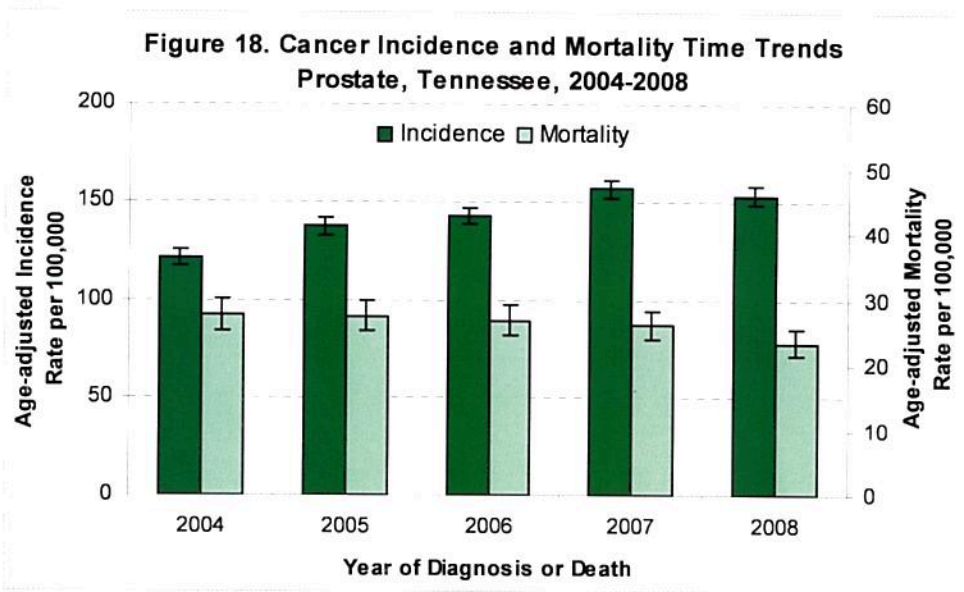
<sup>†</sup>Included white, black, other races and missing race information.

<sup>‡</sup>Mortality incidence ratio. See Technical Notes for details.

^Cell suppressed where there were 1-9 cases

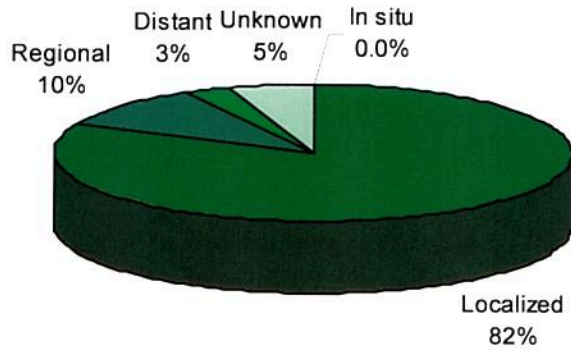
**Figure 17. Cancer Incidence and Mortality by Age, Prostate Tennessee, 2004-2008**





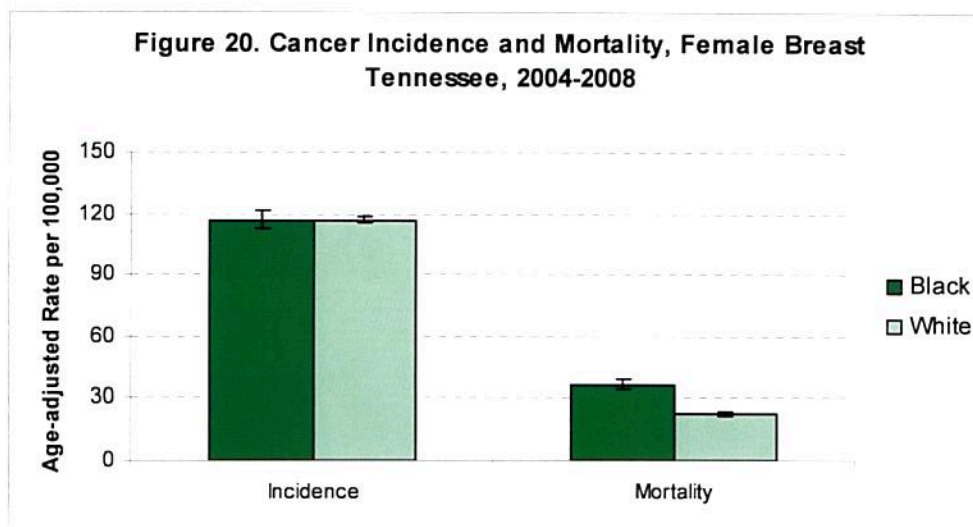
- For blacks, 5.1% were diagnosed at a distant stage, compared to 2.8% of whites. This difference may partially contribute to a racial disparity in prostate cancer mortality that is much larger than the racial disparity in prostate cancer incidence.

**Figure 19. Cancer Stage, Prostate Cancer  
Tennessee, 2004-2008**



## Female Breast Cancer

- In 2004-2008, a total of 20,883 incident breast cancer cases and 4,446 breast cancer deaths were reported. The vast majority of these occurred among women. However, 222 (1.1%) incident cases and 35 (0.8%) deaths were reported among men (See Appendix I for details).
- More than 20,000 women were diagnosed with breast cancer and more than 4,400 women died of this cancer between 2004 and 2008.
- Breast cancer was the leading cause of cancer incidence and the 2<sup>nd</sup> leading cause of cancer death for Tennessee women from 2004-2008.
- Black and white females experienced a similar burden of breast cancer incidence but blacks were at a higher risk of dying (63% higher) from breast cancer than their white counterparts.
- Breast cancer incidence and mortality increased with age, with the incidence rate reaching a plateau at 70-74 years of age, and the mortality rate continuing to increase until 85+.
- Of new cases, 47% were among 45-64 year-olds and 41% among women 65 and older. In comparison, 38% of breast cancer deaths were among 45-64 year-olds and 55% among women 65+.
- The M:I ratio increased with age, from 0.12 for 20-24 year olds to 0.28 for women 65+.
- Female breast cancer incidence rates increased slightly but statistically significantly from 2004 (110.4/100,000) to 2008 (119.7/100,000). In contrast, breast cancer mortality rates decreased slightly from 2004 (25.4/100,000) to 2008 (22.2/100,000).
- The majority of breast cancer cases were diagnosed at an early stage (17% in situ and 48% localized).



**Table 6. Cancer Incidence and Mortality, Female Breast, Tennessee, 2004-2008**

Gender	Race	Incidence			Mortality			M:I Ratio <sup>‡</sup>
		Count	Rate <sup>*</sup>	CI	Count	Rate <sup>*</sup>	CI	
Female	All Races <sup>†</sup>	20,661	117.3	115.7-119.0	4,411	24.3	23.6-25.0	0.21
	Black	2,817	116.7	112.4-121.2	848	36.6	34.1-39.1	0.31
	White	17,577	116.9	115.2-118.7	3,534	22.4	21.7-23.2	0.19
<b>Age at Diagnosis or Death</b>								
	0-19	^	^	^ - ^	0	0.0	0.0-0.1	^
	20-44	2,436	47.9	46.0-49.8	296	5.8	5.2-6.5	0.12
	45-64	9,732	235.9	231.2-240.7	1,669	40.0	38.1-42.0	0.17
	65+	8,490	375.5	367.5-383.6	2,446	105.0	100.8-109.2	0.28
<b>Year of Diagnosis or Death</b>								
	2004	3,720	110.4	106.9-114.1	882	25.4	23.8-27.2	0.23
	2005	4,163	121.1	117.5-124.9	924	26.2	24.5-28.0	0.22
	2006	4,141	117.3	113.7-120.9	885	24.3	22.7-26.0	0.21
	2007	4,244	117.9	114.3-121.5	873	23.3	21.8-24.9	0.20
	2008	4,393	119.7	116.1-123.3	847	22.2	20.7-23.8	0.19

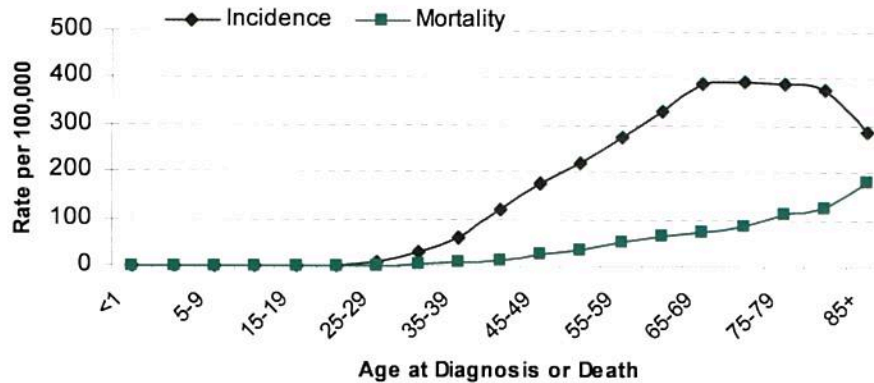
\*Rate per 100,000. All rates except age specific rates were adjusted to the 2000 U.S. standard population.

<sup>†</sup>Included white, black, other races and missing race information.

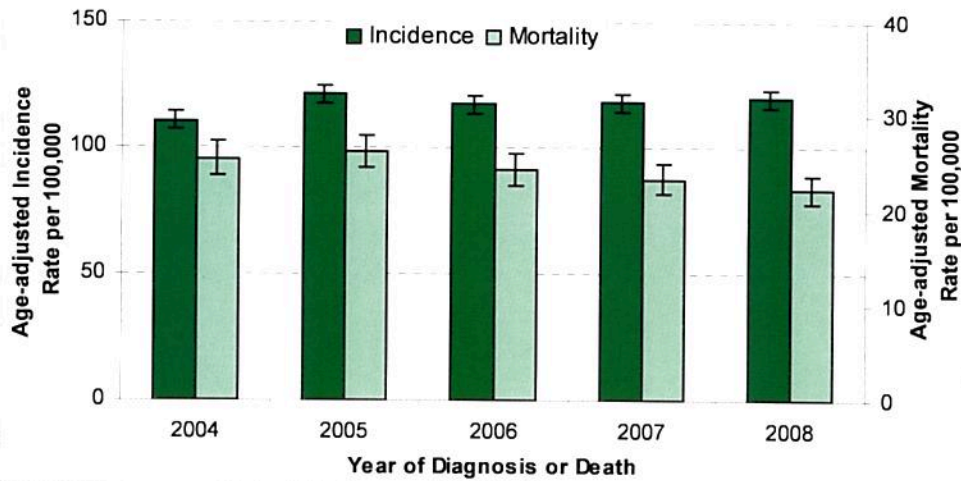
<sup>‡</sup>Mortality incidence ratio. See Technical Notes for details.

<sup>^</sup>Cell suppressed where there were 1-9 cases

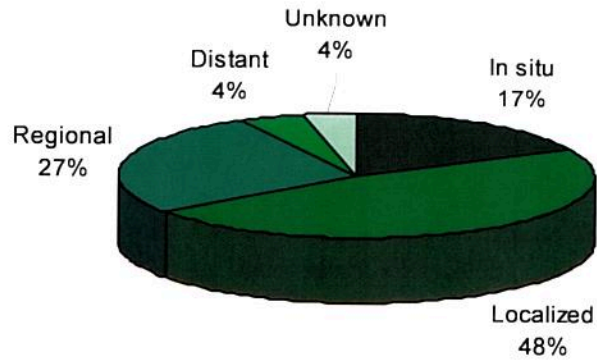
**Figure 21. Cancer Incidence and Mortality by Age  
Female Breast, Tennessee, 2004-2008**



**Figure 22. Cancer Incidence and Mortality Time Trends  
Female Breast, Tennessee, 2004-2008**



**Figure 23. Cancer Stage, Female Breast Cancer  
Tennessee, 2004-2008**



## Colon and Rectum Cancer

- Almost 16,000 Tennesseans were diagnosed with colorectal cancer in 2004-2008, making colorectal cancer the 4<sup>th</sup> leading cause of cancer incidence for the total population.
- Almost 6,000 Tennesseans died of colorectal cancer in 2004-2008 and it was the 2<sup>nd</sup> leading cause of cancer deaths in the total population.
- The average, annual age-adjusted rates for colorectal cancer were 48.8/100,000 for incidence and 18.5/100,000 for mortality.
- Blacks had higher colorectal cancer incidence and mortality rates than whites regardless of gender, and males had higher colorectal cancer incidence and mortality rates than females regardless of race.
- Colorectal cancer incidence and mortality increased with age: 58% of new cases were among persons 65+ and 68% of deaths were among those 65+.
- The M:I ratio also increased with age, from 0.27 for 20-24 year olds to 0.44 for 65+.

**Table 7. Cancer Incidence and Mortality, Colon and Rectum, Tennessee, 2004-2008**

Gender	Race	Incidence			Mortality			M:I Ratio <sup>‡</sup>
		Count	Rate**	CI	Count	Rate**	CI	
Both*	All Races <sup>†</sup>	15,776	48.8	48.1-49.6	5,885	18.5	18.0-19.0	0.38
	Black	2,268	58.6	56.1-61.1	1,026	28.4	26.7-30.3	0.48
	White	13,323	47.3	46.5-48.2	4,831	17.3	16.8-17.8	0.37
Female	All Races <sup>†</sup>	7,671	42.2	41.3-43.2	2,881	15.5	14.9-16.1	0.37
	Black	1,212	53.2	50.2-56.3	526	23.8	21.8-25.9	0.45
	White	6,374	40.5	39.5-41.6	2,345	14.5	13.9-15.1	0.36
Male	All Races <sup>†</sup>	8,105	57.5	56.2-58.8	3,004	22.6	21.7-23.4	0.39
	Black	1,056	66.8	62.6-71.3	500	36.0	32.6-39.5	0.54
	White	6,949	56.0	54.7-57.4	2,486	21.1	20.3-22.0	0.38
<b>Age at Diagnosis or Death</b>								
	0-19	^	^	^_^	2	0.0	0.0-0.1	^
	20-44	821	8.1	7.6-8.7	221	2.2	1.9-2.5	0.27
	45-64	5,721	70.3	68.5-72.2	1,658	20.3	19.4-21.3	0.29
	65+	9,226	239.1	234.3-244.1	4,004	104.3	101.0-107.5	0.44
<b>Year of Diagnosis or Death</b>								
	2004	2,998	48.9	47.2-50.7	1,157	19.3	18.2-20.4	0.39
	2005	3,265	52.0	50.2-53.8	1,160	18.8	17.8-20.0	0.36
	2006	3,167	48.9	47.2-50.6	1,114	17.5	16.5-18.6	0.36
	2007	3,161	47.7	46.0-49.4	1,229	18.6	17.6-19.7	0.39
	2008	3,185	47.0	45.3-48.6	1,225	18.2	17.2-19.3	0.39

\*Excluded hermaphrodite and transsexual.

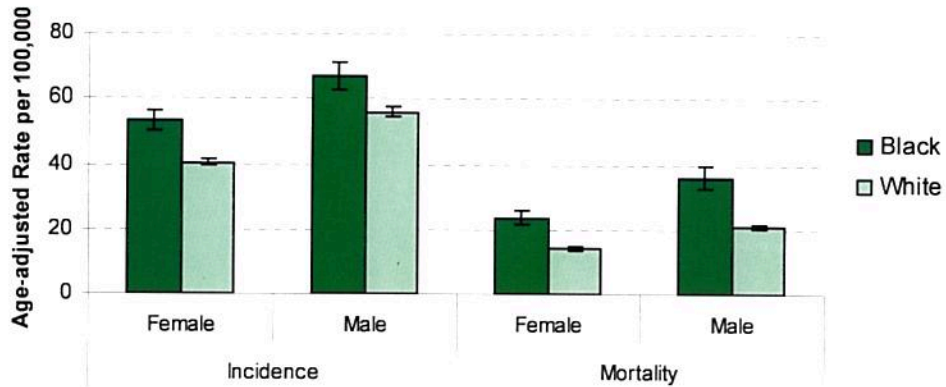
\*\*Rate per 100,000. All rates except age specific rates were adjusted to the 2000 U.S. standard population.

†Included white, black, other races and missing race information.

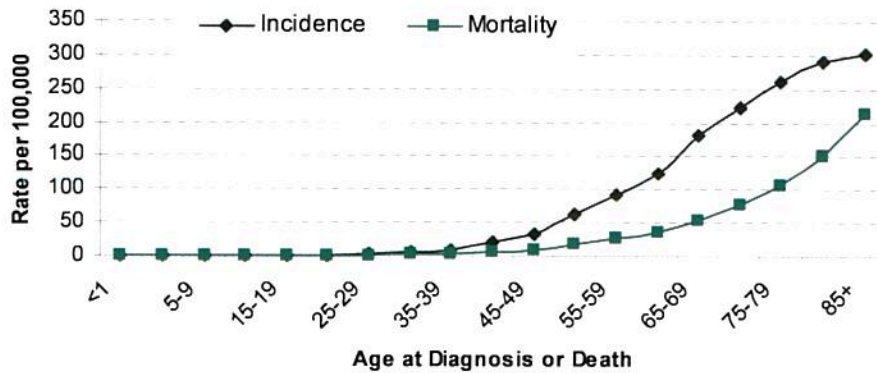
‡Mortality incidence ratio. See Technical Notes for details.

^Cell suppressed where there were 1-9 cases.

**Figure 24. Cancer Incidence and Mortality  
Colon and Rectum, Tennessee, 2004-2008**

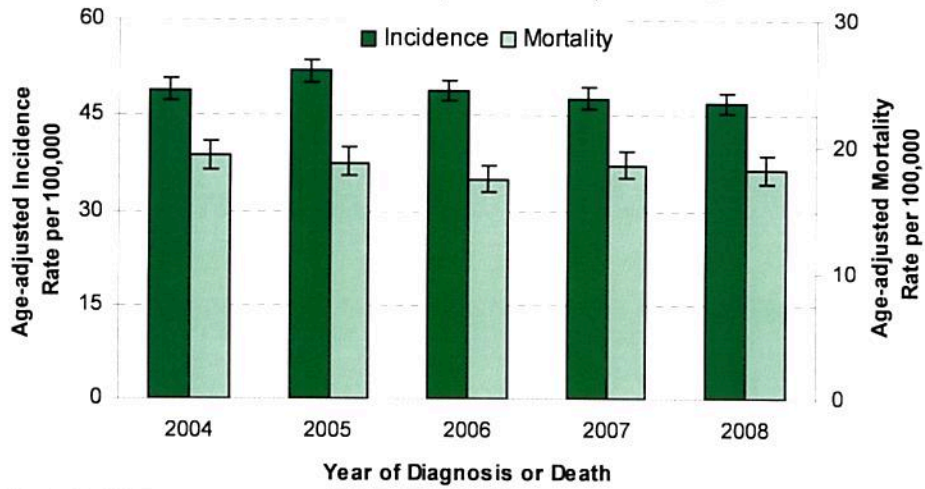


**Figure 25. Cancer Incidence and Mortality by Age  
Colon and Rectum, Tennessee, 2004-2008**

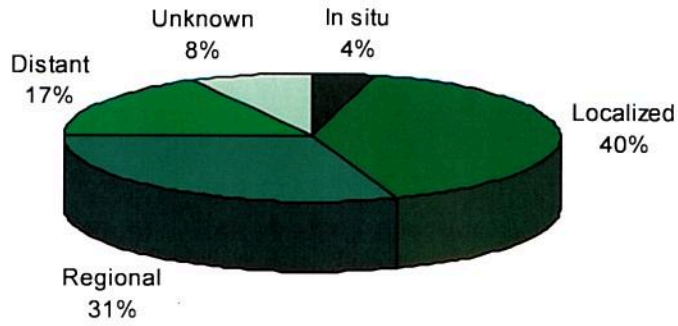


- There were no statistically significant changes in incidence or mortality rates for colorectal cancer from 2004 to 2008.
- Of the colorectal cancer cases, 44% were diagnosed at early stages (4% in situ and 40% localized), and almost half were diagnosed at later stages (31% regional and 17% distant). In 8% of cases stage was unknown or could not be determined.

**Figure 26. Cancer Incidence and Mortality Time Trends  
Colon and Rectum, Tennessee, 2004-2008**



**Figure 27. Cancer Stage, Colon and Rectum  
Tennessee, 2004-2008**





## Melanoma of the Skin

- Melanoma of the skin was the 5<sup>th</sup> leading cause of new cancer cases in 2004-2008. There were more than 6,000 Tennesseans diagnosed with skin cancer during this time period.
- The average, annual age-adjusted incidence rate for skin cancer was 19.6/100,000, its age-adjusted mortality rate was 3.0/100,000, and its M:I ratio was 0.15, making it one of the least lethal cancers among the top leading causes of cancer.
- Whites had a much higher skin cancer burden than blacks: 19 times higher for incidence and almost 6 times higher for mortality.
- Despite the lower skin cancer incidence and mortality rates, blacks had a much higher M:I ratio than whites, 0.45 among blacks vs. 0.15 among whites, indicating a much worse prognosis for skin cancer among blacks.
- Males had a higher incidence rate (25.3/100,000) and mortality rate (4.6/100,000) than females (15.8/100,000 and 1.8/100,000, respectively).
- Skin cancer incidence and mortality rates increased with increasing age.
- The M:I ratio also increased with age.

**Table 8. Cancer Incidence and Mortality, Melanoma of the Skin, Tennessee, 2004-2008**

Gender	Race	Incidence			Mortality			M:I Ratio <sup>‡</sup>
		Count	Rate**	CI	Count	Rate**	CI	
Both*	All Races <sup>†</sup>	6,299	19.6	19.2-20.1	946	3.0	2.8-3.2	0.15
	Black	40	1.1	0.8-1.5	18	0.5	0.3-0.8	0.45
	White	6,051	22.1	21.6-22.7	926	3.4	3.1-3.6	0.15
Female	All Races <sup>†</sup>	2,657	15.8	15.2-16.4	318	1.8	1.6-2.0	0.11
	Black	31	1.3	0.9-1.9	10	0.4	0.2-0.8	0.31
	White	2,529	18.1	17.4-18.8	307	2.1	1.8-2.3	0.12
Male	All Races <sup>†</sup>	3,642	25.3	24.4-26.1	628	4.6	4.2-5.0	0.18
	Black	^	^	^_^	8	0.6	0.2-1.2	^
	White	3,522	27.9	27.0-28.9	619	5.1	4.7-5.6	0.18
<b>Age at Diagnosis or Death</b>								
	0-19	57	0.7	0.5-0.9	0	0.0	0.0-0.0	0.00
	20-44	1,184	11.5	10.8-12.1	95	0.9	0.8-1.1	0.08
	45-64	2,619	32.9	31.6-34.2	322	4.0	3.6-4.5	0.12
	65+	2,439	63.0	60.6-65.6	529	13.7	12.6-15.0	0.22
<b>Year of Diagnosis or Death</b>								
	2004	1,157	18.8	17.8-20.0	181	3.0	2.6-3.5	0.16
	2005	1,255	19.9	18.8-21.1	194	3.1	2.7-3.6	0.16
	2006	1,288	20.1	19.0-21.2	195	3.0	2.6-3.5	0.15
	2007	1,359	20.7	19.6-21.9	172	2.6	2.2-3.1	0.13
	2008	1,240	18.6	17.6-19.7	204	3.1	2.6-3.5	0.17

\*Excluded hermaphrodite and transsexual.

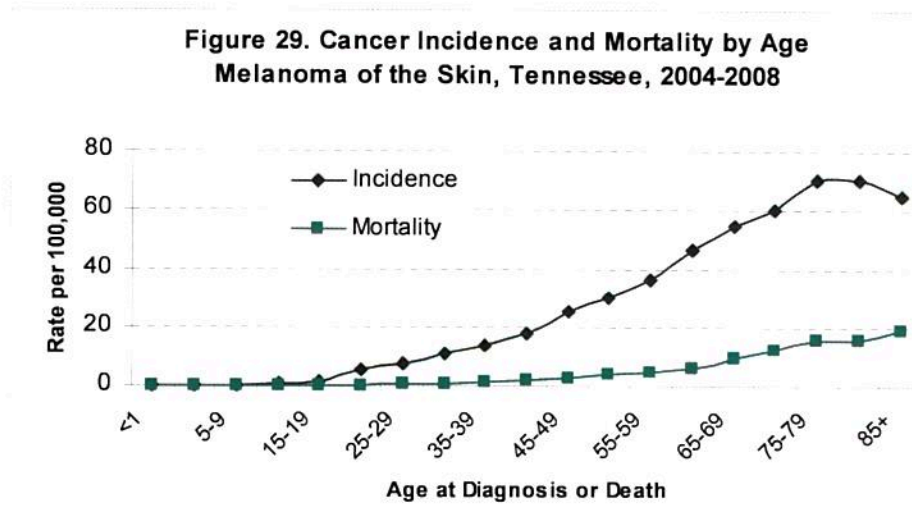
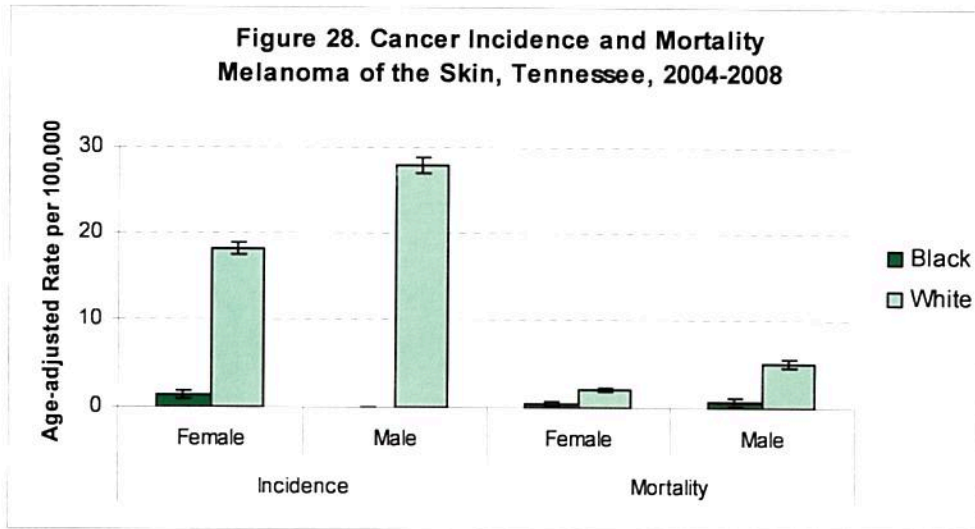
\*\* Rate per 100,000. All rates except age specific rates were adjusted to the 2000 U.S. standard population.

<sup>†</sup>Included white, black, other races and missing race information.

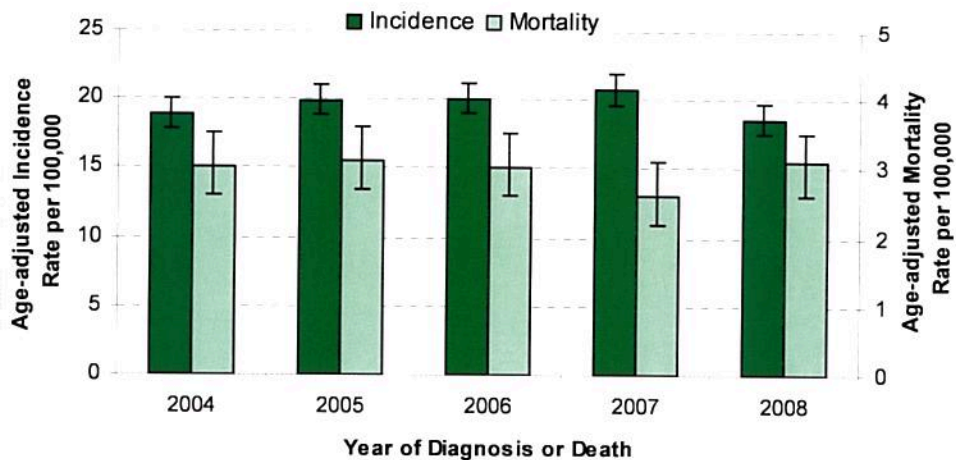
<sup>‡</sup>Mortality incidence ratio. See Technical Notes for details.

^Cell suppressed where there were 1-9 cases.

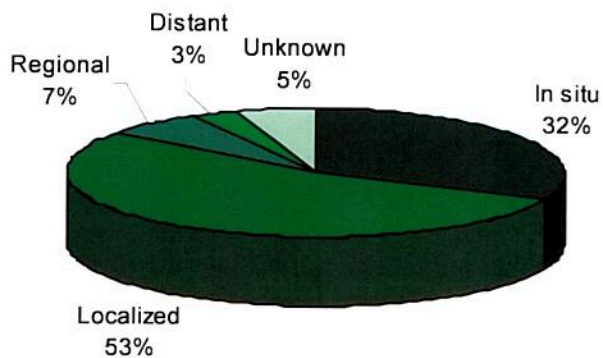
- There were some variations in skin cancer incidence and mortality rates from 2004-2008, but there were no statistically significant increasing or decreasing trends.
- Of the skin cancer cases, 85% were diagnosed at an early stage (32% in situ and 53% localized), and 10% were diagnosed at later stages (7% regional and 3% distant). However, in 5% of cases stage was either missing or could not be determined.



**Figure 30. Cancer Incidence and Mortality Time Trends  
Melanoma of the Skin, Tennessee, 2004-2008**



**Figure 31. Cancer Stage, Melanoma of the Skin  
Tennessee, 2004-2008**



## Pancreas Cancer

- Pancreas cancer was the 11<sup>th</sup> leading cause of new cancer cases but the 4<sup>th</sup> leading cause of cancer deaths in 2004-2008. There were 3,494 new cases and 3,489 deaths due to pancreas cancer during this time period.
- Average, annual age-adjusted incidence and mortality rates were both 10.9/100,000, making pancreas cancer the deadliest among all top cancers with an M:I ratio of 1.00.
- Blacks had a higher incidence rate than whites among males and females; a similar racial disparity in mortality was seen among females but not among males.
- Females had higher incidence and mortality rates than males among whites, but not blacks.
- Pancreas cancer incidence and mortality rates increased with increasing age.
- Of new pancreas cancer cases, 64% and 69% of deaths were among the elderly (65+).
- The M:I ratio increased with age from 0.64 among 20-44 year olds to 1.08 among those 65 and older.

**Table 9. Cancer Incidence and Mortality, Pancreas, Tennessee, 2004-2008**

Gender	Race	Incidence			Mortality			M:I Ratio <sup>‡</sup>
		Count	Rate**	CI	Count	Rate**	CI	
Both*	All Races <sup>†</sup>	3,496	10.9	10.5-11.2	3,489	10.9	10.5 - 11.3	1.00
	Black	503	13.7	12.5-15.0	495	13.7	12.5 - 15.0	1.00
	White	2,967	10.5	10.1-10.9	2,978	10.6	10.2 - 11.0	1.01
Female	All Races <sup>†</sup>	1,729	9.4	9.0-9.9	1,736	9.4	9.0 - 9.9	1.00
	Black	268	12.3	10.8-13.9	274	12.7	11.3 - 14.4	1.03
	White	1,449	9.1	8.6-9.6	1,456	9.0	8.5 - 9.5	0.99
Male	All Races <sup>†</sup>	1,767	12.6	12.0-13.2	1,753	12.8	12.2 - 13.4	1.02
	Black	235	15.6	13.5-17.9	221	14.8	12.8 - 17.0	0.95
	White	1,518	12.3	11.7-12.9	1,522	12.6	11.9 - 13.3	1.02
<b>Age at Diagnosis or Death</b>								
	0-19	^	^	^_^	0	0.0	0.0 - 0.0	^
	20-44	112	1.1	0.9-1.3	73	0.7	0.6 - 0.9	0.64
	45-64	1,161	14.1	13.3-15.0	1,017	12.4	11.6 - 13.1	0.88
	65+	2,220	57.7	55.4-60.2	2,399	62.4	59.9 - 65.0	1.08
<b>Year of Diagnosis or Death</b>								
	2004	619	10.1	9.3-10.9	676	11.1	10.3 - 12.0	1.10
	2005	651	10.4	9.6-11.2	691	11.1	10.3 - 12.0	1.07
	2006	693	10.7	9.9-11.6	664	10.3	9.5 - 11.1	0.96
	2007	753	11.5	10.6-12.3	699	10.7	9.9 - 11.5	0.93
	2008	780	11.5	10.7-12.4	759	11.3	10.5 - 12.2	0.98

\*Excluded hermaphrodite and transsexual.

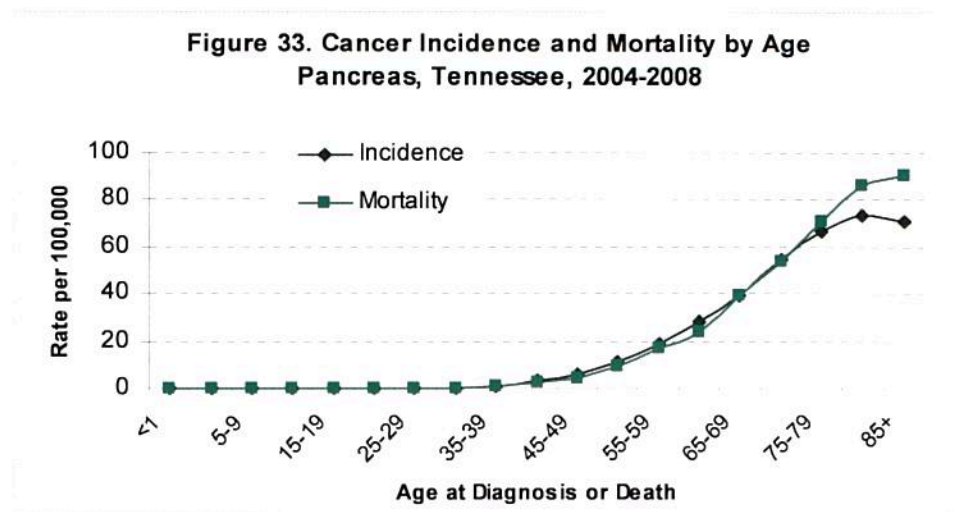
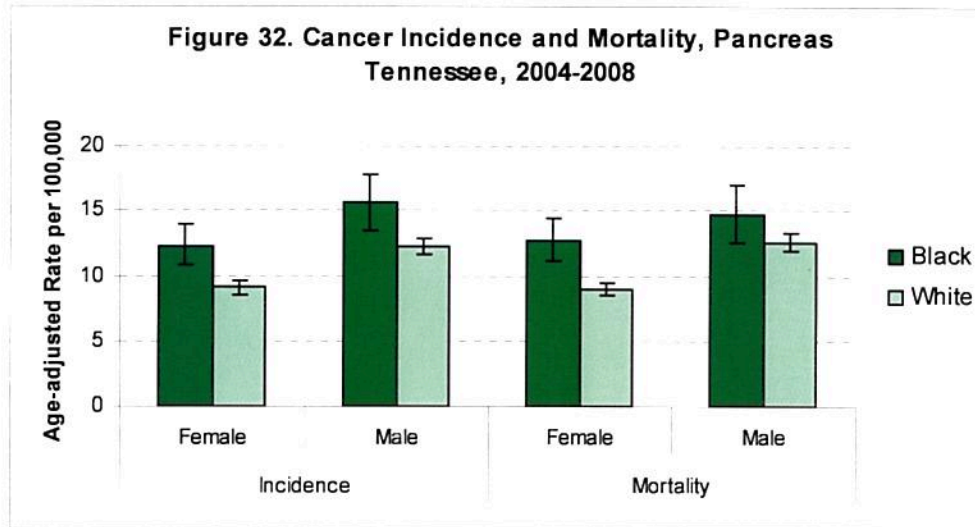
\*\*Rate per 100,000. All rates except age specific rates were adjusted to the 2000 U.S. standard population.

<sup>†</sup>Included white, black, other races and missing race information.

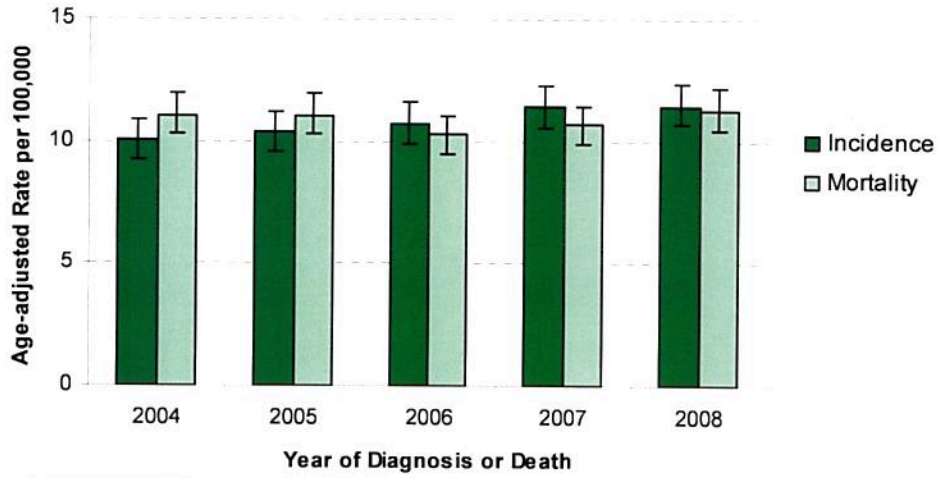
<sup>‡</sup>Mortality incidence ratio. See Technical Notes for details.

^Cell suppressed where there were 1-9 cases.

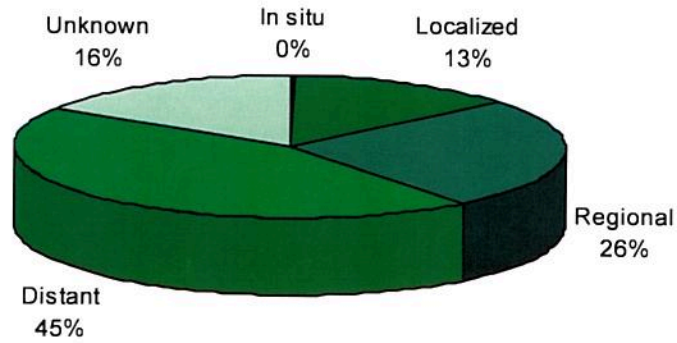
- There were some variations in pancreas cancer incidence and mortality rates from 2004-2008, but there were no statistically significant increasing or decreasing trends during this time period.
- Of pancreas cancer cases, 14% were diagnosed at early stages, and two-thirds were diagnosed at later stages (26% regional and 45% distant). However, in as many as 16% of cases stage was either missing or could not be determined.



**Figure 34. Cancer Incidence and Mortality Time Trends  
Pancreas, Tennessee, 2004-2008**



**Figure 35. Cancer Stage, Pancreas, Tennessee, 2004-2008**



## CHILDHOOD CANCER

- As described in previous sections, both incidence and mortality rates for cancer were lower among children when compared to adults. However, childhood cancer has its own characteristics and they are discussed in this section. Due to the low rate of childhood cancer, rates below are presented as cases or deaths per 1,000,000 population.
- In 2004-2008 a total of 1,364 new invasive cancer cases were reported among children 19 years and younger, resulting in an average, annual age-adjusted incidence rate of 166.9/1,000,000.
- In the same period 204 children died from cancer and the mortality rate was 25.1/1,000,000.
- The M:I ratio for childhood cancer was 0.15, which was less fatal than cancers among older ages (0.19 for 20-44; 0.33 for 45-65; and 0.54 for 65+).
- Although black children tended to have lower incidence rates than whites, for boys and girls, these differences were not statistically different.

**Table 10. Cancer Incidence and Mortality, Children 0-19 Years, Tennessee, 2004-2008**

Gender	Race	Incidence			Mortality			M:I Ratio <sup>‡</sup>
		Count	Rate**	CI	Count	Rate**	CI	
Both*	All Races <sup>†</sup>	1,364	166.9	158.1-176.0	204	25.1	21.8-28.8	0.15
	Black	259	145.0	127.8-163.7	45	25.2	18.4-33.7	0.17
	White	1,058	170.1	160.0-180.7	155	25.1	21.3-29.4	0.15
Female	All Races <sup>†</sup>	637	159.5	147.3-172.3	99	25.0	20.3-30.4	0.16
	Black	126	142.7	118.8-169.9	14	15.6	8.5-26.3	0.11
	White	490	161.9	147.9-176.9	85	28.3	22.6-35.0	0.17
Male	All Races <sup>†</sup>	727	174.0	161.5-187.1	105	25.3	20.7-30.6	0.15
	Black	133	147.1	123.2-174.4	31	34.5	23.5-49.0	0.23
	White	568	177.8	163.5-193.1	70	22.0	17.2-27.9	0.12
<b>Age at Diagnosis or Death</b>								
	<01	100	240.9	196.0-293.0	^	^	^	^
	01-04	371	229.3	206.6-253.9	43	26.6	19.2-35.8	0.12
	05-09	226	113.9	99.5-129.7	39	19.7	14.0-26.9	0.17
	10-14	277	136.1	120.6-153.1	57	28.0	21.2-36.3	0.21
	15-19	390	189.2	170.9-209.0	60	29.1	22.2-37.5	0.15
<b>Year of Diagnosis or Death</b>								
	2004	285	178.5	158.3-200.4	37	23.2	16.4-32.0	0.13
	2005	260	161.2	142.2-182.0	56	34.9	26.3-45.3	0.22
	2006	246	150.6	132.4-170.7	37	22.8	16.1-31.5	0.15
	2007	260	156.6	138.1-176.9	35	21.4	14.9-29.8	0.14
	2008	313	187.6	167.4-209.6	39	23.6	16.8-32.2	0.13

\*Excluded hermaphrodite and transsexual.

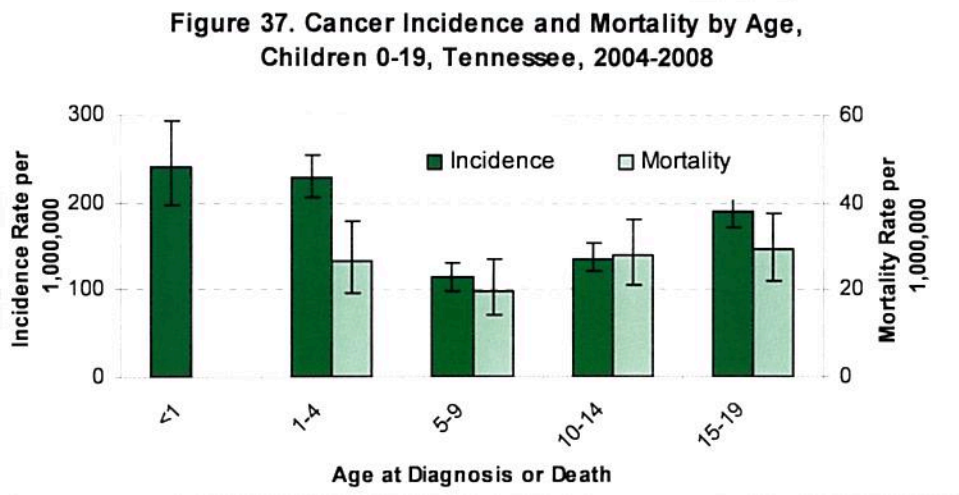
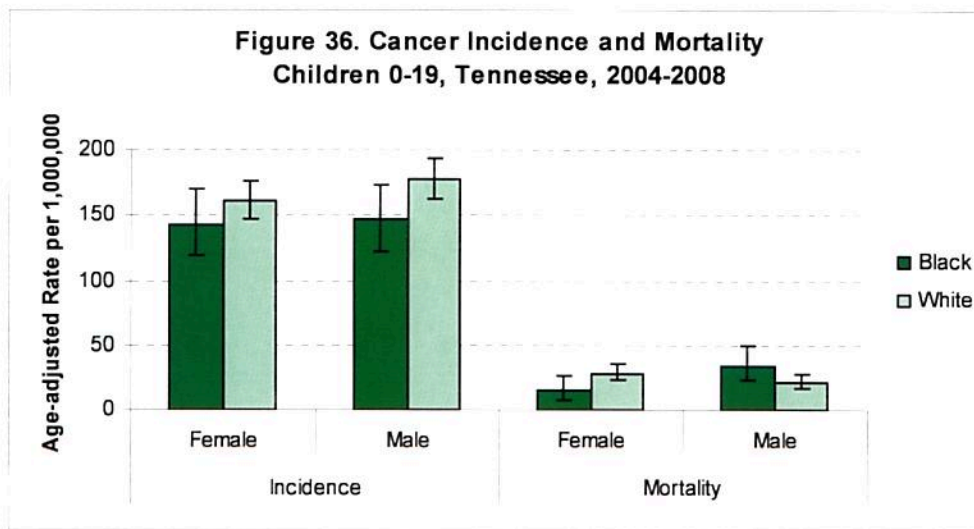
\*\*All rates except age specific rates were adjusted to the 2000 U.S. standard population and reported as rate per 1,000,000.

<sup>†</sup>Included white, black, other races and missing race information.

<sup>‡</sup>Mortality incidence ratio. See Technical Notes for details.

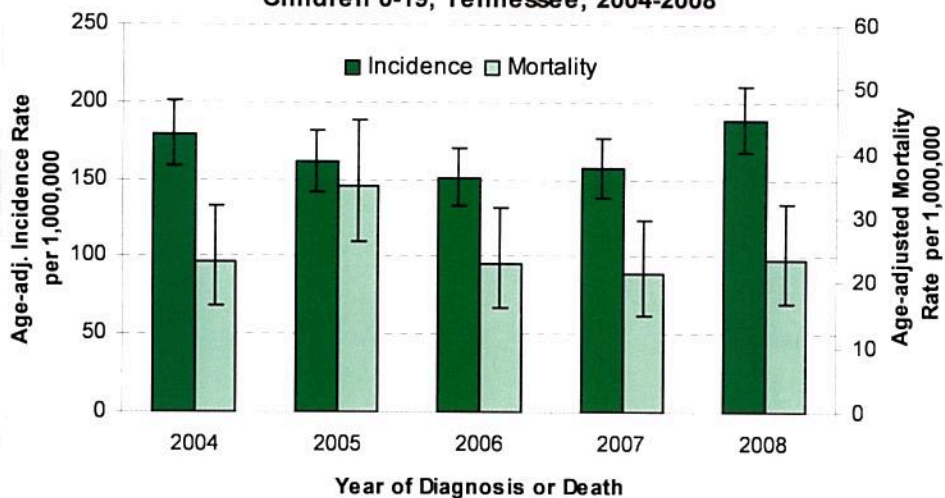
^Cell suppressed where there were 1-9 cases.

- Black girls had a lower mortality rate than white girls, and black boys had a higher mortality rate than white boys, however, these differences were not statistically different.
- Childhood cancer incidence rates were highest among children under the age of 5, then decreased sharply among 5-9 years olds and increased slightly after that.
- There were some variations in childhood cancer incidence and mortality rates from 2004 to 2008, but there were no statistically significant increasing or decreasing trends.
- Of childhood cancer cases, 39% were diagnosed at early stages (2% in situ and 37% localized) and more than half were diagnosed at later stages (16% regional and 41% distant).

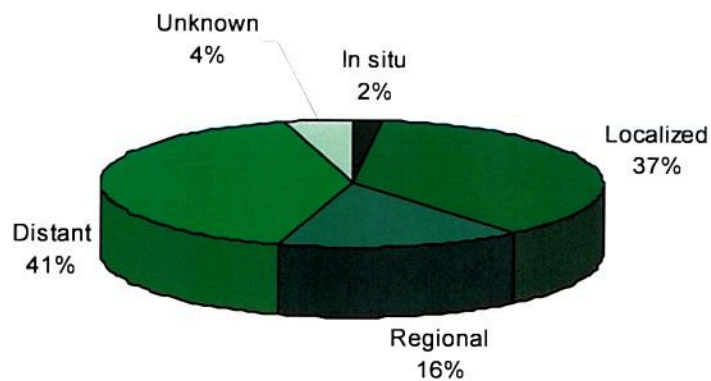




**Figure 38. Cancer Incidence and Mortality Time Trends  
Children 0-19, Tennessee, 2004-2008**

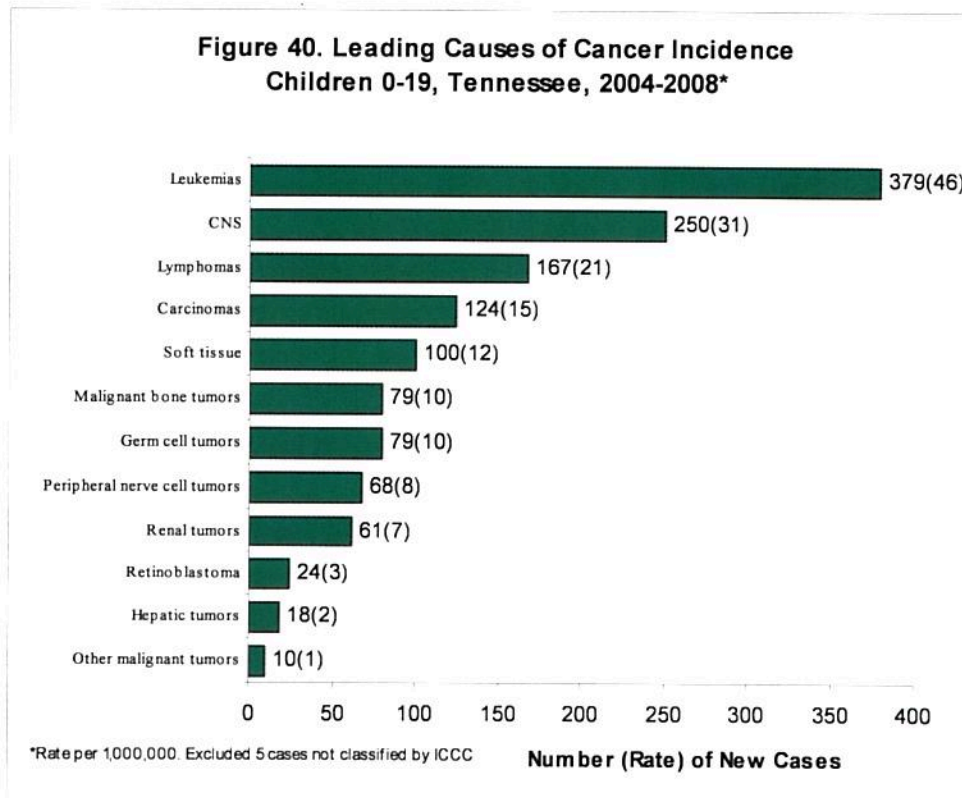


**Figure 39. Cancer Stage, All Sites Combined  
Children 0-19, Tennessee, 2004-2008**



## LEADING CAUSES OF INCIDENCE IN CHILDREN

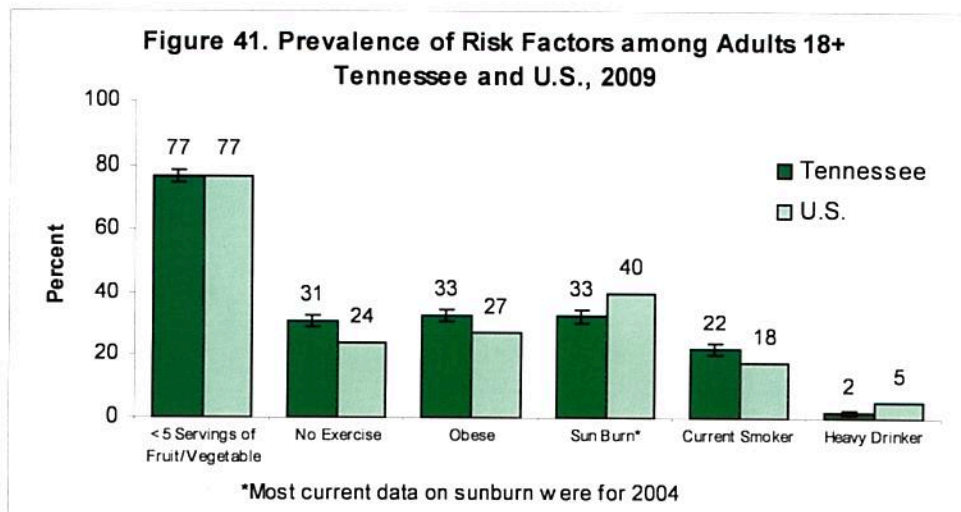
- The most common cause of childhood cancer incidence was leukemia with an average, annual age-adjusted rate of 46.3/1,000,000, and accounting for 28% of childhood cancer cases reported in 2004-2008.
- The second most common cause of childhood cancer was cancers of the central nervous system (CNS), followed by lymphomas (3<sup>rd</sup>), carcinomas (4<sup>th</sup>), and soft tissue cancer (5<sup>th</sup>).



## PREVALENCE OF CANCER RISK FACTORS

The most common risk factors for cancer are older age, tobacco use, sunlight, ionizing radiation, certain chemicals and other substances, some viruses and bacteria, alcohol use, use of certain hormones, family history of cancer, poor diet, lack of physical activity, and being overweight<sup>6</sup>. These risk factors increase the risk of cancer as well as other health problems. It is estimated that tobacco use contributes to 18.1% of total US deaths; poor diet and physical inactivity to 16.6% of deaths; and alcohol consumption to 3.5% of deaths<sup>7</sup>.

This section presents self-reported prevalence data on select risk factors among Tennessee adults aged 18 years and older from the CDC's Behavioral Risk Factor Surveillance System (BRFSS). The risk factors examined include cigarette smoking, heavy drinking, lack of physical activity, fruit and vegetable consumption, obesity, and sunburn<sup>8, 9</sup>.

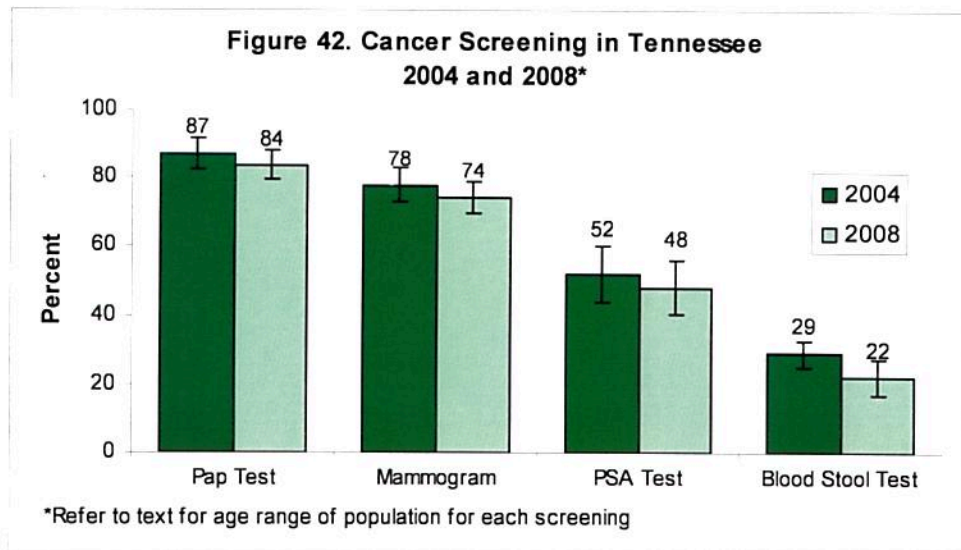


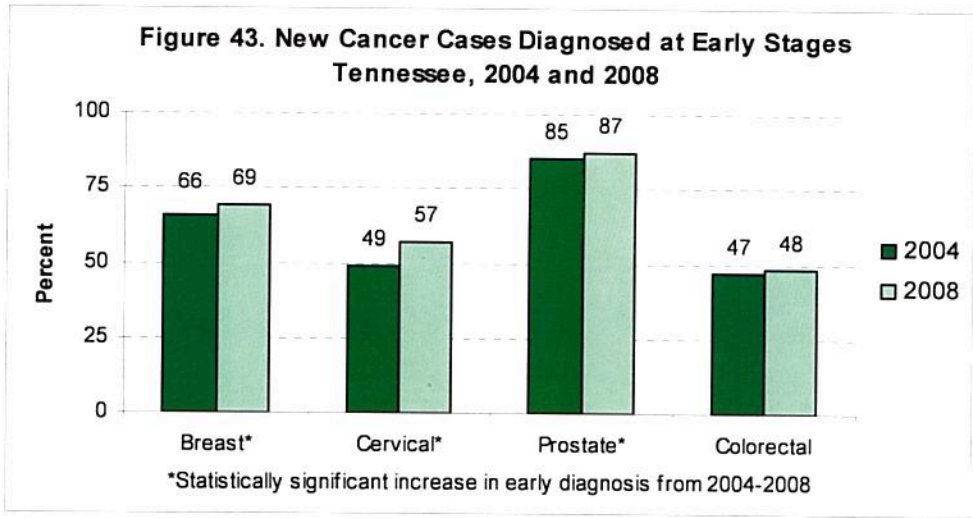
- In 2009, 77% of adult Tennesseans reported that they did not eat a minimum of 5 servings of fruits and vegetables a day, similar to the U.S. as a whole.
- Of adult Tennesseans, 31% did not participate in any physical activities during the past month, compared to 24% nationwide.
- Of adult Tennesseans, 33% were obese compared to 27% nationwide.
- 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 40% nationwide.
- 22% of adult Tennesseans were current cigarette smokers compared to 18% nationwide.
- Of adult Tennesseans, 2% 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 5% nationwide.

## CANCER SCREENING AND STAGE AT DIAGNOSIS

The section will discuss cancers that are screened for on a large scale, such as female breast cancer, cervical cancer, prostate cancer, and colorectal cancer. It will examine changes in cancer screening behaviors and cancer stage at diagnosis among Tennessee residents for 2004 and 2008.

- Pap test screening for cervical cancer: 87% of women 18+ self-reported that they had a Pap test in the past three years in 2004, compared to 84% in 2008. This difference was not statistically significant.
- Mammogram screening for female breast cancer: 78% of women 40+ had a mammogram in the past two years in 2004. The percentage of women screened dropped slightly to 74% in 2008 but this difference was not statistically significant.
- Prostate-Specific Antigen (PSA) test for prostate cancer: 52% and 48% of men 40+ reported that they had a PSA test in the past two years in 2004 and 2008, respectively. However, this difference was not statistically significant.
- Blood stool test for colorectal cancer: The percentage of Tennesseans 50+ that reported a blood stool test in the past two years dropped from 29% in 2004 to 22% in 2008. Again, this difference in screening rates from 2004 to 2008 was not statistically significant.





- We compared the percent of new incident cases diagnosed at early stages, i.e. in situ or localized stages, in 2004 versus 2008 for female breast cancer, cervical cancer, prostate cancer and colorectal cancer.
- For female breast cancer, 69% of cases were diagnosed at early stages in 2008. This was a 3% increase from 2004 (p<0.01).
- The percent of cervical cancer cases diagnosed at early stages increased from 49% in 2004 to 57% in 2008 (p<0.05).
- Prostate cancer had the highest percentage of cases diagnosed at early stages among the four cancers examined, and it increased from 85% to 87% between 2004 and 2008 (p<0.001).
- Colorectal cancer had the smallest percentage of cases diagnosed at early stages among the four cancers examined. Although it increased from 47% in 2004 to 48% in 2008 this change was not statistically significant (p=0.15).
- Three out of the four cancers saw increases in early diagnosis although no significant changes in screening behaviors were observed from 2004 to 2008. One possible explanation is that the increases in early diagnosis are due to improvements in screening sensitivity rather than increases in screening itself.

## 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 cancers only, unless otherwise specified.

**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 US 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. Literature suggests that the compliment of M:I (i.e. 1-M:I) is a good approximation of the 5-year relative survival for most cancers<sup>10</sup>. 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. pancreas 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 report<sup>11</sup>.

**Confidence Interval:** The confidence interval is a range of values that has a specified probability of containing the true rates of interest in the population. The width of a confidence interval reflects the amount of variability in the estimated rates. In this report the 95% confidence intervals were calculated using a gamma distribution method developed by Fay and Feuer<sup>12</sup> and modified by Tiwari, Clegg, and Zou<sup>13</sup>.

**Suppression of Rates and Counts:** Due to concerns regarding privacy, 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, 3<sup>rd</sup> Edition (ICD-O-3), to code site (topography), histology (morphology), and behavior (e.g. whether malignant or not) of incident cases<sup>14</sup>. 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 International Classification of Childhood Cancer, 3<sup>rd</sup> Edition (ICCC-3) is used. For cancer mortality data, the International Classification of Diseases, 10<sup>th</sup> 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 stages<sup>15</sup>:

- 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 (Figure 44). Metropolitan counties are grouped into the regions where they are located.

## **STATISTICAL METHODS**

SAS 9.2 was used to prepare the incidence and mortality data<sup>16</sup> and SEER\*Stat 7.0.4 was used for counting numbers of new cases and deaths due to cancer and calculating age-adjusted rates and confidence intervals<sup>17</sup>.

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 2004 vs. 2008, 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<sup>12, 13</sup>. 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 change in percent of cases diagnosed at early stages for female breast cancer, cervical cancer, prostate cancer and colorectal cancer.

## **DATA SOURCES**

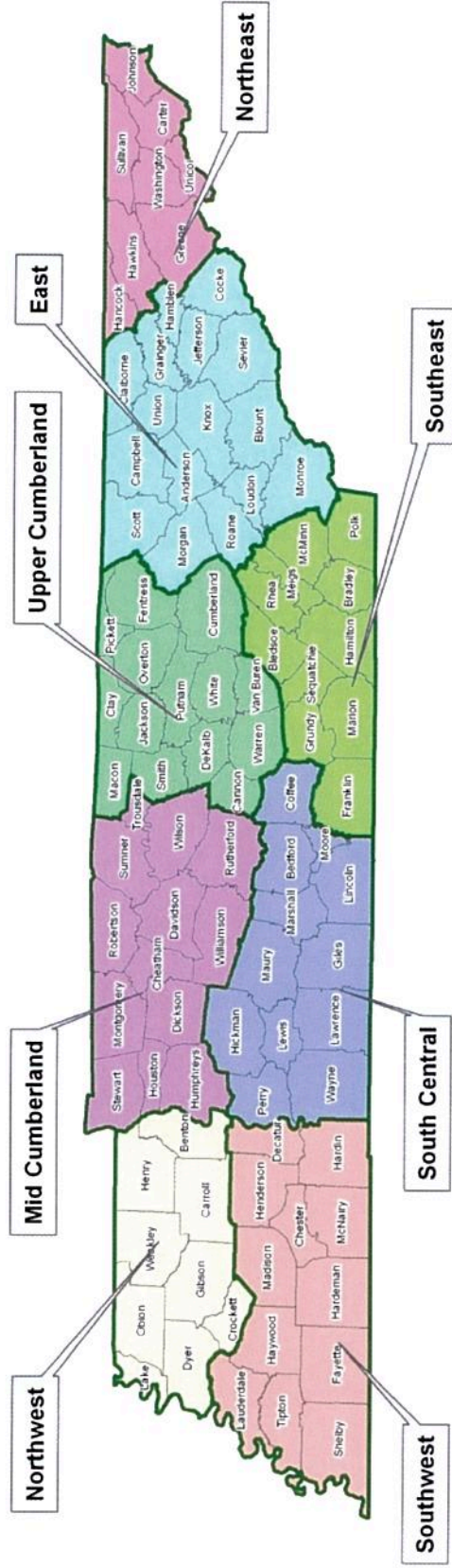
**Tennessee Cancer Registry Data:** Cancer incidence data contain records of cases of primary cancer that were first diagnosed among Tennessee residents between January 1, 2004 and December 31, 2008, and were reported to the TCR as of December 2010. Cases with gender reported as hermaphrodite or transsexual were not included in this report (7 hermaphrodite or transsexual cases). Cases with unknown race (732 cases) were included in the "All Races" category. Twelve cases with unknown age were excluded from all analyses except the calculation of the leading causes of cancer incidence.

**Cancer Mortality Data:** Record-level mortality data were provided by the Division 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 average for 50 states and Washington D.C.



**Figure 44. Tennessee Counties and Regional Groupings**



**Tennessee Population Estimates Data:** Tennessee population data from 2004-2008 with 19 age groups were obtained from the SEER website online on May 17<sup>th</sup> 2011 (<http://www.seer.cancer.gov/popdata/download.html>). They represent a modification of the Vintage 2009 annual time series of July 1 county population estimates by age, sex, race and Hispanic origin produced by the US Census Bureau's Population Estimates Program, in collaboration with the National Center for Health Statistics, and with support from the NCI through an interagency agreement (<http://www.census.gov/popest/counties/asrh/>).

**The U.S. 2000 Standard Population Data:** The U.S. 2000 standard population with 19 age groups were also obtained from the SEER website (<http://www.seer.cancer.gov/stdpopulations/stdpop.19ages.html>). They were used for age-adjustment of cancer incidence and mortality rates.

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# APPENDICES

## Appendix I. Cancer Incidence and Mortality, by Sites, Tennessee, 2004-2008

Primary Cancer Site	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>All Sites</b>	<b>151,749</b>	<b>467.8</b>	<b>465.4-470.1</b>	<b>64,754</b>	<b>202.2</b>	<b>200.6-203.8</b>	<b>0.43</b>
<b>Oral Cavity and Pharynx</b>	<b>3,695</b>	<b>11.2</b>	<b>10.8-11.6</b>	<b>959</b>	<b>2.9</b>	<b>2.8-3.1</b>	<b>0.26</b>
Lip	237	0.7	0.7-0.8	^	^	^_^	^
Tongue	988	3.0	2.8-3.2	214	0.6	0.6-0.7	0.20
Salivary Gland	367	1.2	1.0-1.3	88	0.3	0.2-0.3	0.25
Floor of Mouth	223	0.7	0.6-0.8	13	0.0	0.0-0.1	0.00
Gum and Other Mouth	545	1.7	1.5-1.8	151	0.5	0.4-0.6	0.29
<b>Nasopharynx</b>	<b>175</b>	<b>0.5</b>	<b>0.5-0.6</b>	<b>55</b>	<b>0.2</b>	<b>0.1-0.2</b>	<b>0.40</b>
Tonsil	692	2.1	1.9-2.2	103	0.3	0.2-0.4	0.14
<b>Oropharynx</b>	<b>157</b>	<b>0.5</b>	<b>0.4-0.5</b>	<b>75</b>	<b>0.2</b>	<b>0.2-0.3</b>	<b>0.40</b>
Hypopharynx	228	0.7	0.6-0.8	33	0.1	0.1-0.1	0.14
<b>Other Oral Cavity and Pharynx</b>	<b>83</b>	<b>0.3</b>	<b>0.2-0.3</b>	<b>220</b>	<b>0.7</b>	<b>0.6-0.8</b>	<b>2.33</b>
<b>Digestive System</b>	<b>26,537</b>	<b>82.0</b>	<b>81.0-83.0</b>	<b>14,136</b>	<b>44.1</b>	<b>43.4-44.8</b>	<b>0.54</b>
<b>Esophagus</b>	<b>1,503</b>	<b>4.5</b>	<b>4.3-4.8</b>	<b>1,339</b>	<b>4.1</b>	<b>3.9-4.3</b>	<b>0.91</b>
Stomach	1,879	5.8	5.6-6.1	1,071	3.4	3.2-3.6	0.59
<b>Small Intestine</b>	<b>638</b>	<b>1.9</b>	<b>1.8-2.1</b>	<b>125</b>	<b>0.4</b>	<b>0.3-0.5</b>	<b>0.21</b>
Colon and Rectum	15,776	48.8	48.1-49.6	5,885	18.5	18.0-19.0	0.38
<b>Colon excluding Rectum</b>	<b>11,385</b>	<b>35.4</b>	<b>34.7-36.0</b>	<b>4,800</b>	<b>15.1</b>	<b>14.7-15.6</b>	<b>0.43</b>
Cecum	2,329	7.3	7.0-7.6	~	~	~--	~
<b>Appendix</b>	<b>208</b>	<b>0.7</b>	<b>0.6-0.8</b>	<b>~</b>	<b>~</b>	<b>~--</b>	<b>~</b>
Ascending Colon	2,339	7.3	7.0-7.6	~	~	~--	~
<b>Hepatic Flexure</b>	<b>522</b>	<b>1.6</b>	<b>1.5-1.8</b>	<b>~</b>	<b>~</b>	<b>~--</b>	<b>~</b>
Transverse Colon	923	2.9	2.7-3.1	~	~	~--	~
<b>Splenic Flexure</b>	<b>338</b>	<b>1.0</b>	<b>0.9-1.2</b>	<b>~</b>	<b>~</b>	<b>~--</b>	<b>~</b>
Descending Colon	683	2.1	1.9-2.3	~	~	~--	~
<b>Sigmoid Colon</b>	<b>3,002</b>	<b>9.3</b>	<b>8.9-9.6</b>	<b>~</b>	<b>~</b>	<b>~--</b>	<b>~</b>
Large Intestine, NOS	1,041	3.3	3.1-3.5	~	~	~--	~
<b>Rectum and Rectosigmoid Junction</b>	<b>4,391</b>	<b>13.5</b>	<b>13.1-13.9</b>	<b>1,085</b>	<b>3.4</b>	<b>3.2-3.6</b>	<b>0.25</b>
Rectosigmoid Junction	1,352	4.1	3.9-4.4	~	~	~--	~
<b>Rectum</b>	<b>3,039</b>	<b>9.3</b>	<b>9.0-9.7</b>	<b>~</b>	<b>~</b>	<b>~--</b>	<b>~</b>
Anus, Anal Canal and Anorectum	559	1.7	1.6-1.9	86	0.3	0.2-0.3	0.18
<b>Liver and Intrahepatic Bile Duct</b>	<b>1,654</b>	<b>5.0</b>	<b>4.8-5.2</b>	<b>1,619</b>	<b>5.0</b>	<b>4.7-5.2</b>	<b>1.00</b>
Liver	1,529	4.6	4.4-4.9	1,314	4.0	3.8-4.2	0.87
<b>Intrahepatic Bile Duct</b>	<b>125</b>	<b>0.4</b>	<b>0.3-0.5</b>	<b>305</b>	<b>0.9</b>	<b>0.8-1.1</b>	<b>2.25</b>
Gallbladder	268	0.8	0.7-0.9	157	0.5	0.4-0.6	0.63
<b>Other Biliary</b>	<b>434</b>	<b>1.4</b>	<b>1.2-1.5</b>	<b>154</b>	<b>0.5</b>	<b>0.4-0.6</b>	<b>0.36</b>

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## Appendix I Continued

Primary Cancer Site	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
Pancreas	3,496	10.9	10.5-11.2	3,489	10.9	10.5-11.3	1.00
Retroperitoneum	105	0.3	0.3-0.4	29	0.1	0.1-0.1	0.33
Peritoneum, Omentum and Mesentery	141	0.4	0.4-0.5	76	0.2	0.2-0.3	0.50
Other Digestive Organs	84	0.3	0.2-0.3	106	0.3	0.3-0.4	1.00
<b>Respiratory System</b>	<b>28,381</b>	<b>87.0</b>	<b>85.9-88.0</b>	<b>22,139</b>	<b>68.5</b>	<b>67.6-69.4</b>	<b>0.79</b>
Nose, Nasal Cavity and Middle Ear	240	0.7	0.6-0.8	73	0.2	0.2-0.3	0.29
Larynx	1,672	5.0	4.8-5.2	492	1.5	1.4-1.6	0.30
Lung and Bronchus	26,405	81.0	80.0-82.0	21,493	66.5	65.6-67.4	0.82
Pleura	186	0.6	0.5-0.7	54	0.2	0.1-0.2	0.33
Trachea, Mediastinum and Other Respiratory Organs	59	0.2	0.1-0.2	27	0.1	0.1-0.1	0.50
<b>Bones and Joints</b>	<b>304</b>	<b>1.0</b>	<b>0.9-1.1</b>	<b>163</b>	<b>0.5</b>	<b>0.4-0.6</b>	<b>0.50</b>
<b>Soft Tissue including Heart</b>	<b>920</b>	<b>2.9</b>	<b>2.7-3.1</b>	<b>385</b>	<b>1.2</b>	<b>1.1-1.3</b>	<b>0.41</b>
<b>Skin excluding Basal and Squamous</b>	<b>6,694</b>	<b>20.9</b>	<b>20.4-21.4</b>	<b>1,333</b>	<b>4.2</b>	<b>4.0-4.4</b>	<b>0.20</b>
Melanoma of the Skin	6,299	19.6	19.2-20.1	946	3.0	2.8-3.2	0.15
Other Non-Epithelial Skin	395	1.3	1.1-1.4	387	1.2	1.1-1.3	0.92
<b>Breast (Males Only)</b>	<b>222</b>	<b>1.6</b>	<b>1.4-1.8</b>	<b>35</b>	<b>0.2</b>	<b>0.2-0.3</b>	<b>0.13</b>
<b>Breast (Females Only)</b>	<b>20,661</b>	<b>117.3</b>	<b>115.7-119.0</b>	<b>4,411</b>	<b>24.3</b>	<b>23.6-25.0</b>	<b>0.21</b>
<b>Female Genital System</b>	<b>7,580</b>	<b>43.3</b>	<b>42.3-44.3</b>	<b>2,884</b>	<b>16.0</b>	<b>15.4-16.6</b>	<b>0.37</b>
Cervix Uteri	1,389	8.6	8.1-9.1	485	2.8	2.6-3.1	0.33
Corpus and Uterus, NOS	3,447	19.2	18.6-19.9	683	3.7	3.4-4.0	0.19
Corpus Uteri	3,283	18.3	17.7-19.0	280	1.5	1.3-1.7	0.08
Uterus, NOS	164	0.9	0.8-1.1	403	2.2	2.0-2.4	2.44
Ovary	2,039	11.5	11.0-12.0	1,517	8.3	7.9-8.8	0.72
Vagina	153	0.8	0.7-1.0	59	0.3	0.2-0.4	0.38
Vulva	455	2.6	2.3-2.8	99	0.5	0.4-0.7	0.19
Other Female Genital Organs	97	0.6	0.4-0.7	41	0.2	0.2-0.3	0.33
<b>Male Genital System</b>	<b>21,701</b>	<b>148.4</b>	<b>146.4-150.4</b>	<b>3,045</b>	<b>26.7</b>	<b>25.7-27.7</b>	<b>0.18</b>
Prostate	20,843	142.5	140.6-144.5	2,979	26.2	25.3-27.2	0.18
Testis	725	4.9	4.6-5.3	35	0.2	0.2-0.3	0.04
Penis	109	0.8	0.6-0.9	26	0.2	0.1-0.3	0.25
Other Male Genital Organs	24	0.2	0.1-0.2	^	^	^,^	^
<b>Urinary System</b>	<b>11,524</b>	<b>35.7</b>	<b>35.0-36.3</b>	<b>2,762</b>	<b>8.7</b>	<b>8.4-9.0</b>	<b>0.24</b>
Urinary Bladder	6,129	19.1	18.7-19.6	1,296	4.2	3.9-4.4	0.22
Kidney and Renal Pelvis	5,116	15.6	15.2-16.1	1,386	4.3	4.1-4.5	0.28
Ureter	200	0.6	0.5-0.7	42	0.1	0.1-0.2	0.17
Other Urinary Organs	79	0.2	0.2-0.3	38	0.1	0.1-0.2	0.50

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## Appendix I. Continued

Primary Cancer Site	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Eye and Orbit</b>	<b>314</b>	<b>1.0</b>	<b>0.9-1.1</b>	<b>30</b>	<b>0.1</b>	<b>0.1-0.1</b>	<b>0.10</b>
<b>Brain and Other Nervous System</b>	<b>2,141</b>	<b>6.8</b>	<b>6.5-7.0</b>	<b>1,619</b>	<b>5.0</b>	<b>4.8-5.3</b>	<b>0.74</b>
Brain	2,039	6.4	6.2-6.7	*	*	*-*	*
Cranial Nerves Other Nervous System	102	0.3	0.3-0.4	*	*	*-*	*
<b>Endocrine System</b>	<b>3,549</b>	<b>11.3</b>	<b>10.9-11.7</b>	<b>264</b>	<b>0.8</b>	<b>0.7-1.0</b>	<b>0.07</b>
Thyroid	3,326	10.6	10.2-10.9	163	0.5	0.4-0.6	0.05
Other Endocrine including Thymus	223	0.7	0.6-0.8	101	0.3	0.3-0.4	0.43
<b>Lymphoma</b>	<b>6,759</b>	<b>21.2</b>	<b>20.7-21.7</b>	<b>2,376</b>	<b>7.5</b>	<b>7.2-7.8</b>	<b>0.35</b>
Hodgkin Lymphoma	742	2.4	2.3-2.6	142	0.5	0.4-0.5	0.21
Hodgkin - Nodal	720	2.4	2.2-2.5	~	~	~--	~
Hodgkin - Extranodal	22	0.1	0.0-0.1	~	~	~--	~
Non-Hodgkin Lymphoma	6,017	18.8	18.3-19.3	2,234	7.1	6.8-7.4	0.38
NHL - Nodal	4,266	13.3	12.9-13.7	~	~	~--	~
NHL - Extranodal	1,751	5.5	5.2-5.8	~	~	~--	~
<b>Myeloma</b>	<b>1,802</b>	<b>5.6</b>	<b>5.3-5.8</b>	<b>1,267</b>	<b>4.0</b>	<b>3.8-4.2</b>	<b>0.71</b>
<b>Leukemia</b>	<b>3,624</b>	<b>11.5</b>	<b>11.1-11.9</b>	<b>2,369</b>	<b>7.6</b>	<b>7.3-7.9</b>	<b>0.66</b>
Lymphocytic Leukemia	1,736	5.5	5.3-5.8	713	2.3	2.1-2.5	0.42
Acute Lymphocytic Leukemia	452	1.5	1.4-1.7	141	0.5	0.4-0.5	0.33
Chronic Lymphocytic Leukemia	1,171	3.7	3.5-3.9	530	1.7	1.6-1.9	0.46
Other Lymphocytic Leukemia	113	0.4	0.3-0.4	42	0.1	0.1-0.2	0.25
Myeloid and Monocytic Leukemia	1,659	5.2	5.0-5.5	1,117	3.5	3.3-3.8	0.67
Acute Myeloid Leukemia	1,151	3.6	3.4-3.9	917	2.9	2.7-3.1	0.81
Acute Monocytic Leukemia	72	0.2	0.2-0.3	17	0.1	0.0-0.1	0.50
Chronic Myeloid Leukemia	372	1.2	1.0-1.3	114	0.4	0.3-0.4	0.33
Other Myeloid/Monocytic Leukemia	64	0.2	0.2-0.3	69	0.2	0.2-0.3	1.00
Other Leukemia	229	0.7	0.6-0.8	539	1.7	1.6-1.9	2.43
Other Acute Leukemia	98	0.3	0.3-0.4	234	0.7	0.7-0.9	2.33
Aleukemic, Subleukemic and NOS	131	0.4	0.3-0.5	305	1.0	0.9-1.1	2.50
<b>Mesothelioma</b>	<b>258</b>	<b>0.8</b>	<b>0.7-0.9</b>	~	~	~--	~
<b>Kaposi Sarcoma</b>	<b>69</b>	<b>0.2</b>	<b>0.2-0.3</b>	~	~	~--	~
<b>Miscellaneous</b>	<b>5,012</b>	<b>15.7</b>	<b>15.3-16.1</b>	<b>4,577</b>	<b>14.3</b>	<b>13.9-14.7</b>	<b>0.91</b>

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

\*\*181 incident cases of pleura cancer were also reported as mesothelioma. Mesotheliomas are not included in any other primary site listing.

†Mortality incidence ratio. See Technical Notes for details.

^Cell suppressed where there were 1-9 cases.

~Corresponding disease categories not available in mortality data.

**II. Age-adjusted Rate for Top Five Leading Causes of Cancer Incidence by Resident County, Tennessee, 2004-2008**

Prostate	Lung and Bronchus	Colon and Rectum	Urinary Bladder	Melanoma of the Skin	Non Hodgkin Lymphoma	Kidney and Renal Pelvis and Pharynx	Oral Cavity	Leukemia	Larynx
142.5	108.8	57.5	34.5	25.3	22.2	21.1	17.1	15.1	8.8
152.8	117.9	55.8	36.7	32.8	23.3	22.4	16.8	15.5	9.3
159.4	101.7	66.1	47.1	26.1	27.3	22.2	16.4	14.0	7.5
133.6	110.2	48.9	40.4	31.6	28.0	20.5	14.7	17.0	8.2
147.8	167.3	61.2	34.2	23.6	18.1	20.9	19.2	17.8	14.6
132.4	164.2	57.4	36.6	30.7	20.3	20.2	19.1	15.1	12.6
122.4	107.7	48.0	27.4	30.3	23.8	19.3	14.6	15.3	15.6
148.3	136.7	56.9	37.0	45.9	20.4	25.3	21.9	^	^
130.0	122.6	53.3	43.7	40.6	17.5	16.6	18.5	23.6	11.7
141.7	129.3	52.7	35.9	43.0	29.6	24.0	19.7	15.6	7.6
171.1	113.1	53.6	34.3	35.6	23.8	24.4	17.2	15.3	8.2
179.8	98.6	50.7	40.2	40.3	27.6	21.0	18.0	18.6	9.4
141.7	127.0	55.0	26.7	20.3	17.9	24.7	10.5	17.3	11.5
146.4	193.5	72.7	40.7	^	22.1	30.5	22.7	^	17.5
139.4	112.9	50.9	31.8	29.6	17.4	24.3	13.0	9.7	9.1
106.1	133.8	93.3	^	21.4	^	^	^	^	^
153.5	102.0	57.7	44.3	33.3	24.3	21.9	18.6	16.0	9.8
135.7	109.6	75.0	^	^	^	^	^	^	^

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Legend for Ranking



**Appendix II Continued**

Region	Prostate	Lung and Bronchus	Colon and Rectum	Urinary Bladder	Melanoma of the Skin	Non Hodgkin Lymphoma	Kidney and Renal Pelvis	Oral Cavity and Pharynx	Leukemia	Larynx
<b>Mid-Cumberland Region</b>	<b>141.2</b>	<b>103.4</b>	<b>55.7</b>	<b>33.1</b>	<b>23.1</b>	<b>21.8</b>	<b>21.1</b>	<b>17.3</b>	<b>15.2</b>	<b>7.6</b>
Cheatham	122.3	133.9	52.8	58.0	17.7	24.6	20.4	20.6	14.5	12.0
Davidson	149.5	105.5	55.7	32.1	22.5	21.2	19.9	18.8	15.1	9.0
Dickson	112.6	126.8	68.6	39.4	21.1	31.9	32.6	26.0	17.5	8.7
Houston	130.5	125.4	86.4	^	^	^	^	^	^	^
Humphreys	101.3	125.3	63.2	44.3	^	24.4	27.3	28.8	^	^
Montgomery	127.4	110.7	57.9	29.6	16.8	18.6	19.0	13.3	13.9	5.1
Robertson	134.1	102.1	56.7	29.6	30.2	19.5	26.6	17.4	12.6	6.8
Rutherford	148.1	94.1	45.7	32.3	18.5	17.6	22.6	14.8	14.3	8.7
Stewart	132.2	127.7	87.3	38.1	^	25.9	^	^	^	^
Sumner	148.8	109.1	62.4	32.8	27.4	25.3	24.5	17.2	19.4	6.2
Trousdale	108.5	101.3	66.4	^	^	^	^	^	^	^
Williamson	153.7	79.7	45.5	37.7	33.8	21.9	18.6	16.0	16.4	5.9
Wilson	110.5	95.8	59.4	27.6	23.7	25.5	18.0	14.3	13.3	5.5
<b>Northeast Region</b>	<b>113.3</b>	<b>114.0</b>	<b>49.7</b>	<b>32.3</b>	<b>29.5</b>	<b>25.1</b>	<b>20.0</b>	<b>15.3</b>	<b>15.8</b>	<b>8.8</b>
Carter	71.2	99.8	39.1	18.9	22.1	15.6	18.3	12.1	13.9	12.2
Greene	104.5	126.6	51.3	34.5	28.8	25.9	18.8	22.0	13.3	7.9
Hancock	144.7	99.5	^	^	^	^	^	^	^	^
Hawkins	121.1	118.2	53.2	31.5	29.4	22.5	17.1	7.7	12.7	8.8
Johnson	67.6	93.5	45.8	42.6	19.5	^	22.5	^	^	^
Sullivan	139.4	115.8	50.4	36.6	37.4	29.7	18.1	18.6	14.9	7.9
Unicoi	76.9	117.6	40.6	32.8	21.5	33.7	^	20.9	20.3	^
Washington	113.2	113.6	55.4	31.2	26.6	24.8	27.3	12.5	19.7	8.2

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**Appendix II Continued**

Region	Prostate	Lung and Bronchus	Colon and Rectum	Urinary Bladder	Melanoma of the Skin	Non Hodgkin Lymphoma	Kidney and Renal Pelvis	Oral Cavity and Pharynx	Leukemia	Larynx
<b>Northwest Region</b>	<b>123.1</b>	<b>131.8</b>	<b>63.3</b>	<b>34.8</b>	<b>16.4</b>	<b>18.6</b>	<b>23.1</b>	<b>17.7</b>	<b>13.3</b>	<b>11.0</b>
Benton	137.8	139.5	44.4	49.2	20.1	25.7	23.2	^	^	^
Carroll	113.7	149.8	79.7	45.1	25.3	21.8	36.6	20.0	19.1	15.4
Crockett	88.2	134.2	45.5	36.3	^	^	^	^	^	^
Dyer	88.1	124.0	55.3	33.0	13.8	^	18.3	19.5	12.9	^
Gibson	129.8	144.5	69.9	28.1	9.2	17.4	26.1	18.3	11.3	13.7
Henry	148.4	126.4	58.6	30.0	21.3	22.8	20.7	15.2	16.1	15.1
Lake	111.4	140.8	53.5	^	^	0.0	^	^	0.0	^
Obion	127.0	128.0	78.2	44.0	19.2	26.0	15.6	15.1	12.1	^
Weakley	135.7	105.7	57.0	24.7	^	18.7	25.6	15.7	17.9	^
<b>South Central Region</b>	<b>129.4</b>	<b>111.7</b>	<b>64.1</b>	<b>33.6</b>	<b>22.0</b>	<b>22.5</b>	<b>21.6</b>	<b>18.0</b>	<b>16.7</b>	<b>9.8</b>
Bedford	116.3	99.4	55.3	32.6	41.8	18.8	15.6	13.2	11.5	^
Coffee	162.2	101.7	65.1	49.1	22.6	25.5	23.0	18.5	18.2	11.3
Giles	113.2	103.1	67.4	28.5	13.0	21.2	16.7	19.7	14.1	10.7
Hickman	111.7	151.0	46.4	31.5	^	20.3	29.5	^	17.0	^
Lawrence	141.6	142.2	68.3	43.0	18.1	28.9	22.4	19.0	24.5	^
Lewis	108.0	123.1	63.1	^	^	^	^	^	^	^
Lincoln	97.8	100.0	78.5	16.9	20.1	25.0	23.2	19.4	18.7	^
Marshall	137.3	111.5	72.8	40.7	30.4	24.2	16.0	21.3	^	^
Mauzy	140.6	112.9	60.1	33.7	22.4	21.3	25.6	22.2	18.5	14.1
Moore	112.8	66.5	^	^	^	^	^	^	^	^
Perry	147.5	87.6	68.7	^	^	^	^	^	^	^
Wayne	94.7	104.3	72.7	31.6	^	^	^	^	^	^

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Legend for Ranking



**Appendix II Continued**

Region	Prostate	Lung and Bronchus	Colon and Rectum	Urinary Bladder	Melanoma of the Skin	Non Hodgkin Lymphoma	Kidney and Renal Pelvis	Oral Cavity and Pharynx	Leukemia	Larynx
<b>Southeast Region</b>	<b>138.6</b>	<b>105.2</b>	<b>54.9</b>	<b>37.3</b>	<b>28.8</b>	<b>24.1</b>	<b>18.4</b>	<b>17.0</b>	<b>13.9</b>	<b>7.9</b>
Bledsoe	106.4	103.7	38.6	^	^	^	^	^	^	^
Bradley	90.1	84.5	59.4	38.9	20.4	26.9	15.5	15.7	11.8	4.0
Franklin	136.8	89.7	69.8	53.3	17.9	17.6	16.3	17.4	11.4	8.9
Grundy	129.7	132.1	47.9	27.5	^	^	^	^	^	^
Hamilton	164.3	104.0	51.2	36.6	34.1	23.8	17.1	17.0	14.8	6.4
McMinn	108.4	98.3	63.2	34.1	26.1	22.6	31.6	14.7	11.4	14.2
Marion	120.8	125.6	45.9	29.6	23.5	25.7	17.1	24.5	17.8	^
Meigs	139.4	122.9	63.4	46.6	^	^	41.8	^	^	^
Polk	92.1	131.6	53.6	41.8	24.1	26.1	^	^	^	^
Rhea	133.4	153.7	66.2	30.0	32.4	36.4	19.5	27.1	18.4	15.6
Sequatchie	115.8	96.0	43.2	^	38.9	29.2	^	^	^	^
<b>Southwest Region</b>	<b>155.9</b>	<b>93.2</b>	<b>62.9</b>	<b>31.3</b>	<b>16.8</b>	<b>17.6</b>	<b>22.4</b>	<b>17.0</b>	<b>14.8</b>	<b>7.8</b>
Chester	89.0	54.4	46.5	^	^	^	31.2	^	^	^
Decatur	87.4	121.8	55.4	36.0	^	^	^	^	^	0.0
Fayette	105.0	38.9	37.8	20.5	^	12.9	10.9	^	12.8	^
Hardeman	138.2	105.4	61.2	34.8	^	19.8	37.4	19.8	15.9	^
Hardin	82.9	115.5	48.4	27.3	15.3	20.0	12.4	21.0	^	^
Haywood	153.0	104.7	68.5	24.7	^	^	30.7	21.6	^	^
Henderson	115.3	123.3	65.7	37.6	17.1	^	24.0	21.5	23.2	^
Lauderdale	138.6	107.2	62.4	28.0	^	17.6	17.5	^	24.2	^
McNairy	99.4	126.8	81.7	31.9	15.0	23.1	22.6	12.7	^	^
Madison	132.8	112.6	66.4	37.1	17.7	24.0	24.9	15.4	14.2	9.0
Shelby	173.7	87.5	64.9	31.4	18.4	16.6	22.7	17.1	15.2	8.4
Tipton	167.8	112.0	52.8	35.9	14.3	21.6	19.7	25.5	11.4	^

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Legend for Ranking



**Appendix II Continued**

Region	Prostate	Lung and Bronchus	Colon and Rectum	Urinary Bladder	Melanoma of the Skin	Non Hodgkin Lymphoma	Kidney and Renal Pelvis	Oral Cavity and Pharynx	Leukemia	Larynx
Upper-Cumberland Region	147.1	121.3	59.2	38.6	23.7	25.0	17.2	17.5	14.4	12.6
Cannon	120.9	87.5	52.2	42.3	24.4	39.8	^	^	^	^
Clay	104.4	70.1	60.9	^	^	^	^	^	^	^
Cumberland	168.3	92.1	47.6	47.7	31.1	33.5	19.4	18.9	12.6	9.6
DeKalb	100.3	143.5	61.8	44.0	^	^	19.2	^	^	^
Fentress	171.6	169.5	82.6	51.0	26.4	^	^	27.2	^	^
Jackson	97.9	129.0	78.5	^	^	^	^	^	^	^
Macon	133.2	145.1	71.4	27.0	19.9	22.9	^	21.4	^	22.9
Overton	97.9	129.1	44.5	46.4	20.4	21.0	^	^	21.7	^
Pickett	139.3	145.8	^	^	^	^	^	^	^	^
Putnam	178.1	139.2	59.3	35.1	21.3	26.0	24.3	21.4	15.0	11.3
Smith	112.1	111.7	67.0	23.4	20.9	30.4	^	^	^	^
Van Buren	96.2	106.7	^	^	^	^	0.0	^	^	^
Warren	134.2	115.8	69.0	27.0	23.4	25.8	13.4	18.7	10.8	11.6
White	178.9	145.1	63.3	47.0	26.9	19.2	22.6	15.9	20.8	16.9

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

^Cell suppressed where there were 1-9 cases.

Legend for Ranking



**Appendix III. Age-adjusted Rate for Top Five Leading Causes of Cancer Incidence by Resident County, Female, Tennessee, 2004-2008**

Region	Breast	Lung and Bronchus	Colon and Rectum	Corpus and Uterus NOS	Non-Hodgkin Lymphoma	Melanoma of the Skin	Thyroid	Ovary and Renal Pelvis	Pancreas	Leukemia	Cervix Uteri	Urinary Bladder
Tennessee	117.3	60.8	42.2	19.2	16.1	15.8	15.3	11.5	11.2	9.4	8.9	8.3
East Region	118.6	66.8	39.7	19.8	16.7	21.7	15.8	11.3	12.0	8.4	9.1	9.2
Anderson	115.9	69.6	46.0	16.9	15.7	18.9	13.7	9.1	12.2	10.0	9.0	7.8
Blount	122.9	56.5	38.1	18.3	14.8	21.4	18.2	10.9	8.4	7.3	8.4	9.4
Campbell	111.8	90.6	41.6	18.9	16.5	11.4	21.2	8.9	10.9	11.8	13.3	8.8
Cialborne	121.0	71.6	51.7	16.1	18.9	20.1	20.4	14.0	11.0	^	15.5	10.3
Cocke	97.4	64.6	45.5	18.0	11.7	23.1	21.6	7.9	11.5	9.7	12.6	9.6
Grainger	119.0	74.3	45.2	25.6	23.9	25.6	^	^	23.3	^	^	^
Hamblen	96.6	69.8	37.4	23.9	12.4	27.3	10.5	11.3	12.1	10.8	9.1	8.2
Jefferson	123.9	63.1	42.6	24.9	17.8	32.0	18.1	19.6	13.3	9.5	10.3	8.9
Knox	129.1	65.8	36.7	18.3	17.5	22.2	13.8	11.5	11.3	8.5	9.0	7.1
Loudon	118.9	69.1	33.6	24.5	19.8	24.6	24.0	11.7	10.4	8.4	12.1	8.0
Monroe	95.5	59.2	40.1	19.2	20.6	17.0	16.9	9.2	12.5	^	7.5	7.6
Morgan	155.3	96.0	59.2	20.3	18.9	^	29.4	18.1	^	18.6	^	23.6
Roane	105.1	60.6	38.2	19.1	14.8	18.7	14.4	9.3	17.3	5.7	^	10.1
Scott	98.7	70.6	35.1	16.5	18.3	21.0	18.9	19.4	^	^	^	15.3
Sevier	117.6	71.5	41.3	23.7	17.0	24.3	16.1	8.6	14.8	6.3	5.7	7.7
Union	80.5	56.7	38.5	26.7	^	^	^	^	^	^	^	^

Legend for Ranking



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**Appendix III Continued**

Region	Breast	Lung and Bronchus	Colon and Rectum	Corpus and Uterus NOS	Non-Hodgkin Lymphoma	Melanoma of the Skin	Thyroid	Ovary	Kidney and Renal Pelvis	Pancreas	Leukemia	Cervix Uteri	Urinary Bladder
<b>Mid-Cumberland Region</b>	<b>117.6</b>	<b>62.5</b>	<b>40.9</b>	<b>18.3</b>	<b>17.1</b>	<b>13.2</b>	<b>19.6</b>	<b>11.3</b>	<b>11.3</b>	<b>10.2</b>	<b>8.9</b>	<b>7.4</b>	<b>8.3</b>
Cheatham	110.0	56.8	40.0	13.2	13.1	12.6	13.5	10.9	14.3	10.9	14.1	^	^
Davidson	120.4	64.7	40.6	19.6	15.8	10.8	17.6	12.5	11.9	11.2	9.6	7.1	8.9
Dickson	125.1	77.4	58.5	19.2	20.5	11.2	18.1	8.0	13.7	8.2	7.3	9.2	11.2
Houston	120.8	48.6	48.9	^	^	^	^	^	^	^	^	^	^
Humphreys	152.4	68.3	37.2	21.7	22.8	^	22.0	^	18.1	^	^	^	^
Montgomery	108.6	64.9	38.2	16.1	18.1	15.1	25.3	9.6	10.4	7.9	7.5	9.2	7.0
Robertson	110.0	59.5	47.6	18.8	14.6	17.6	19.7	12.0	7.8	10.2	6.8	11.4	8.6
Rutherford	111.2	65.7	40.6	17.8	20.6	13.9	19.2	10.7	12.8	9.9	8.3	7.8	9.7
Stewart	106.5	47.9	42.2	^	^	^	42.6	^	^	^	^	^	^
Sumner	112.3	61.6	37.9	16.0	18.7	17.3	21.9	8.4	10.1	13.0	10.7	5.8	6.5
Trousdale	93.4	58.0	^	^	^	0.0	^	^	^	^	^	0.0	^
Williamson	132.6	52.0	45.0	16.7	17.8	17.1	21.8	13.6	7.9	8.0	7.7	4.9	7.0
Wilson	107.3	56.4	37.1	19.7	18.5	12.6	20.1	9.2	12.1	8.4	6.0	7.3	9.0
<b>Northeast Region</b>	<b>114.7</b>	<b>63.1</b>	<b>37.8</b>	<b>20.2</b>	<b>17.3</b>	<b>18.6</b>	<b>14.0</b>	<b>13.6</b>	<b>9.8</b>	<b>11.0</b>	<b>10.5</b>	<b>6.7</b>	<b>8.4</b>
Carter	85.8	61.4	32.9	16.6	12.9	12.8	14.8	15.9	7.1	8.6	8.6	^	7.8
Greene	120.7	75.6	39.9	19.9	15.0	14.6	11.0	9.9	9.3	13.7	14.0	11.8	7.0
Hancock	107.7	49.2	^	^	^	^	^	^	^	^	^	0.0	^
Hawkins	106.7	63.4	34.8	17.1	18.0	28.5	16.2	9.5	8.4	11.6	9.1	7.6	8.8
Johnson	89.0	52.9	38.7	22.0	^	^	^	^	^	^	^	^	^
Sullivan	121.7	66.7	39.8	21.2	18.9	20.4	14.3	15.6	11.7	12.1	9.4	5.7	8.2
Unicoi	123.4	51.1	33.5	20.7	16.4	24.0	^	^	13.3	^	^	0.0	^
Washington	123.6	55.5	39.1	22.6	18.9	17.4	15.1	14.9	8.1	10.0	13.2	7.8	10.3

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**Appendix III Continued**

Region	Breast	Lung and Bronchus	Colon and Rectum	Corpus and Uterus NOS	Non-Hodgkin Lymphoma	Melanoma of the Skin	Thyroid	Ovary	Kidney and Renal Pelvis	Pancreas	Leukemia	Cervix Uteri	Urinary Bladder
<b>Northwest Region</b>	<b>109.2</b>	<b>61.8</b>	<b>43.7</b>	<b>18.2</b>	<b>14.4</b>	<b>10.8</b>	<b>9.8</b>	<b>10.9</b>	<b>10.7</b>	<b>9.8</b>	<b>8.5</b>	<b>8.8</b>	<b>8.6</b>
Benton	107.2	76.5	43.3	^	19.9	^	^	^	^	^	^	^	^
Carroll	122.2	79.1	44.3	25.4	24.6	18.4	16.2	12.6	14.3	^	^	14.2	^
Crockett	139.5	66.5	48.5	23.2	^	^	^	^	^	^	^	^	^
Dyer	93.4	51.0	45.3	12.1	12.3	^	^	^	11.0	11.5	^	^	13.8
Gibson	116.0	59.5	42.7	22.3	15.7	8.1	9.0	11.7	10.9	8.2	12.5	12.9	8.5
Henry	107.3	57.4	40.3	15.3	11.5	11.6	^	8.9	16.8	11.0	^	^	^
Lake	111.3	74.6	^	^	^	^	^	^	^	^	^	0.0	^
Obion	101.9	51.3	48.5	16.4	20.6	15.3	^	12.0	11.4	^	^	^	12.3
Weakley	101.7	62.7	41.8	20.2	^	^	^	10.8	^	13.1	^	^	^
<b>South Central Region</b>	<b>116.4</b>	<b>66.4</b>	<b>44.4</b>	<b>17.3</b>	<b>16.4</b>	<b>11.3</b>	<b>21.0</b>	<b>11.5</b>	<b>10.5</b>	<b>9.8</b>	<b>8.5</b>	<b>9.8</b>	<b>7.6</b>
Bedford	118.0	64.2	41.0	13.8	11.2	^	16.6	18.6	9.9	^	9.9	11.5	^
Coffee	104.0	76.3	47.4	25.2	21.3	16.1	17.8	12.8	7.9	10.3	9.5	11.2	5.5
Giles	98.3	57.2	51.7	14.6	15.0	^	23.1	^	11.7	^	^	^	^
Hickman	127.8	73.2	54.4	^	^	^	^	16.4	^	17.7	^	^	^
Lawrence	126.5	70.5	39.2	19.8	18.7	12.2	26.8	13.9	15.7	^	9.0	12.3	^
Lewis	80.0	42.2	50.9	^	^	^	^	^	^	^	^	^	^
Lincoln	115.5	54.1	40.3	18.6	16.2	11.5	19.8	11.2	8.9	^	^	11.1	^
Marshall	131.4	64.3	55.7	20.6	13.8	15.9	22.7	^	12.4	^	^	^	20.8
Maury	131.0	70.1	40.4	17.4	18.3	9.7	24.8	7.8	12.2	12.3	8.1	8.1	8.5
Moore	^	^	^	^	^	^	^	^	0.0	^	^	0.0	0.0
Perry	103.8	105.1	62.7	^	^	^	^	^	^	^	^	^	^
Wayne	107.6	74.5	39.7	^	^	^	^	^	^	^	^	^	^

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**Appendix III Continued**

Region	Breast	Lung and Bronchus	Colon and Rectum	Corpus and Uterus NOS	Non-Hodgkin Lymphoma	Melanoma of the Skin	Thyroid	Ovary and Renal Pelvis	Kidney and Renal Pelvis	Pancreas	Leukemia	Cervix Uteri	Urinary Bladder
<b>Southeast Region</b>	<b>117.1</b>	<b>58.0</b>	<b>40.4</b>	<b>20.6</b>	<b>16.4</b>	<b>21.2</b>	<b>14.1</b>	<b>11.1</b>	<b>9.8</b>	<b>8.7</b>	<b>8.1</b>	<b>9.4</b>	<b>7.9</b>
Bledsoe	100.1	50.0	34.6	^	^	^	^	^	^	^	^	^	^
Bradley	109.4	42.7	32.8	17.5	18.1	12.4	13.7	14.1	7.2	7.9	6.3	11.6	6.6
Franklin	100.5	65.9	51.7	12.0	11.7	14.2	11.5	8.5	10.4	7.6	9.6	8.5	10.1
Grundy	132.9	57.9	60.4	^	^	26.6	^	^	^	^	^	^	^
Hamilton	117.6	60.2	40.9	21.5	16.9	24.7	13.9	10.7	10.5	8.6	8.7	8.0	7.3
McMinn	98.2	41.3	30.8	24.3	11.1	14.3	11.5	13.4	9.2	10.6	8.6	9.2	7.5
Marion	123.1	66.5	41.4	17.6	13.9	21.5	^	^	10.9	^	^	^	^
Meigs	134.5	83.9	40.4	33.9	^	^	^	^	^	^	^	^	^
Polk	100.5	64.7	41.7	^	25.4	^	^	21.4	^	^	^	^	^
Rhea	198.5	82.0	53.1	26.7	18.8	24.9	20.3	20.2	12.4	^	^	15.7	15.4
Sequatchie	92.0	47.2	36.6	35.7	^	^	^	^	^	^	^	^	^
<b>Southwest Region</b>	<b>117.6</b>	<b>52.2</b>	<b>48.1</b>	<b>19.5</b>	<b>13.8</b>	<b>9.7</b>	<b>10.7</b>	<b>11.2</b>	<b>12.3</b>	<b>9.7</b>	<b>8.5</b>	<b>9.6</b>	<b>7.4</b>
Chester	125.0	39.0	26.1	^	^	^	^	^	^	^	^	^	^
Decatur	90.0	80.1	51.3	^	^	0.0	^	^	^	^	^	^	^
Fayette	77.6	29.0	31.9	15.4	^	^	^	^	^	^	^	^	^
Hardeman	105.6	53.2	36.4	20.0	17.1	^	15.9	^	16.1	13.4	^	^	^
Hardin	92.4	61.6	35.7	16.4	15.3	14.5	17.9	^	^	^	^	^	11.7
Haywood	85.7	35.3	46.8	^	^	^	^	^	^	^	^	^	^
Henderson	130.9	49.1	59.7	11.1	16.7	^	^	^	^	^	^	^	^
Lauderdale	84.6	57.8	54.9	21.9	15.5	^	^	^	^	^	^	^	^
McNairy	143.0	45.6	55.8	43.1	21.9	^	^	15.4	^	^	^	^	^
Madison	108.1	51.6	42.4	21.8	17.5	8.2	6.6	12.1	12.8	10.9	10.0	8.7	7.1
Shelby	123.3	53.2	49.6	19.4	12.8	10.5	11.6	11.5	13.2	10.6	8.7	9.8	7.4
Tipton	107.5	58.6	56.3	19.2	19.8	8.2	^	13.7	13.2	10.1	^	9.9	^

Continued on Next Page



**Appendix III Continued**

Region	Breast	Lung and Bronchus	Colon and Rectum	Corpus and Uterus NOS	Non-Hodgkin Lymphoma	Melanoma of the Skin	Thyroid	Ovary	Kidney and Renal Pelvis	Pancreas	Leukemia	Cervix Uteri	Urinary Bladder
Upper-Cumberland Region	117.3	58.7	44.5	21.2	15.9	16.3	13.6	11.2	12.0	8.1	9.9	11.3	8.9
Cannon	82.4	46.5	51.0	^	^	^	^	^	^	^	^	^	^
Clay	71.7	60.5	^	^	^	^	^	0.0	^	^	^	^	^
Cumberland	119.9	53.3	39.4	25.5	17.6	20.3	11.1	7.3	8.3	7.6	7.9	8.7	12.4
DeKalb	119.8	54.6	51.7	21.9	^	19.9	^	^	^	^	^	^	^
Fentress	102.2	87.4	43.7	20.3	18.0	^	^	^	^	^	^	^	^
Jackson	90.7	45.7	^	^	^	^	^	^	^	^	^	^	0.0
Macon	140.7	56.5	49.0	^	16.9	^	^	^	^	^	^	17.6	^
Overton	79.7	53.0	44.1	15.0	14.1	^	^	14.6	14.9	^	^	^	^
Pickett	86.9	79.6	^	^	^	^	^	^	^	^	^	^	^
Putnam	150.0	61.5	47.5	23.5	19.3	19.5	15.2	14.5	12.5	9.5	13.3	12.1	11.0
Smith	97.6	62.4	49.8	^	18.4	^	^	^	^	^	^	^	^
Van Buren	113.0	^	^	0.0	^	^	^	^	^	^	^	0.0	^
Warren	117.2	56.9	50.8	30.2	13.0	12.9	18.5	19.1	14.7	^	12.2	^	12.8
White	125.0	69.2	49.1	21.5	13.9	16.8	18.4	^	^	^	^	14.9	^

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

^Cell suppressed where there were 1-9 cases.





**Appendix IV. Age-adjusted Rate for Top Five Leading Causes of Cancer Mortality by Resident County, Male, Tennessee, 2004-2008**

Region	Lung and Bronchus	Colon and Rectum	Prostate	Pancreas	Leukemia	Esophagus	Non Hodgkin Lymphoma	Urinary Bladder	Liver and Intrahepatic Bile Duct	Brain and Other Nervous System	Kidney and Renal Pelvis	Melanoma of the Skin
Tennessee	93.8	22.6	26.2	12.8	10.7	7.4	9.2	7.5	7.5	6.1	6.5	4.6
East Region	94.8	21.1	23.2	12.7	11.4	6.9	9.2	6.6	6.6	5.9	7.5	4.7
Anderson	85.5	25.9	25.6	13.8	11.4	8.0	10.3	8.4	7.6	7.0	8.3	^
Blount	91.8	20.6	26.2	12.1	12.0	3.9	8.6	7.1	6.6	4.6	5.5	5.1
Campbell	144.5	23.3	24.1	^	15.8	9.7	^	^	^	^	^	^
Claiborne	148.4	19.6	34.5	^	12.3	^	^	^	^	^	^	0.0
Cocke	96.9	20.3	30.8	12.8	12.6	^	^	^	^	^	^	^
Grainger	130.1	29.5	36.9	^	^	^	^	^	^	^	^	^
Hamblen	123.2	32.3	19.7	12.0	14.5	6.4	^	7.0	^	7.3	9.4	^
Jefferson	102.5	16.9	22.8	19.8	12.3	^	15.2	9.1	8.4	8.0	^	9.8
Knox	82.4	19.4	20.8	11.5	10.1	7.4	9.8	5.8	6.4	5.1	9.4	4.5
Loudon	76.7	16.1	22.0	12.9	14.7	6.6	10.8	^	^	11.5	^	^
Monroe	103.3	14.6	15.6	19.0	^	^	17.7	^	^	^	^	^
Morgan	106.8	34.7	27.7	^	^	^	^	^	^	^	^	^
Roane	106.8	19.4	23.7	11.4	7.8	6.6	6.2	8.6	6.4	^	^	^
Scott	137.2	26.4	21.0	^	^	^	0.0	^	^	^	^	^
Sevier	70.3	19.4	23.1	15.3	12.3	7.2	7.1	5.5	6.8	5.4	7.3	5.3
Union	100.4	26.5	^	^	^	^	^	^	^	^	^	0.0

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**Appendix IV Continued**

Region	Lung and Bronchus	Colon and Rectum	Prostate	Pancreas	Leukemia	Esophagus	Non Hodgkin Lymphoma	Urinary Bladder	Liver and Intrahepatic Bile Duct	Brain and Other Nervous System	Kidney and Renal Pelvis	Melanoma of the Skin
<b>Mid-Cumberland Region</b>	<b>87.6</b>	<b>21.2</b>	<b>25.3</b>	<b>11.9</b>	<b>9.9</b>	<b>7.4</b>	<b>9.3</b>	<b>7.8</b>	<b>8.0</b>	<b>6.6</b>	<b>5.2</b>	<b>4.6</b>
Cheatham	108.1	24.2	14.3	^	^	^	^	^	12.7	^	^	^
Davidson	87.3	22.5	26.9	13.2	9.9	6.4	8.7	7.4	10.0	6.6	4.4	4.7
Dickson	99.6	27.6	34.9	18.6	^	^	12.5	^	^	9.3	^	^
Houston	115.6	^	^	^	^	0.0	^	^	^	0.0	^	^
Humphreys	106.8	^	25.1	17.0	^	^	^	^	^	^	^	^
Montgomery	102.3	17.8	25.0	13.0	7.8	8.1	9.0	12.7	7.3	4.4	7.9	6.3
Robertson	97.6	26.7	25.6	8.0	8.9	8.8	11.5	11.9	8.2	7.5	^	^
Rutherford	82.0	21.7	19.2	9.0	7.4	8.9	9.4	5.5	6.5	5.1	5.4	3.4
Stewart	108.7	29.7	47.2	^	^	^	^	^	^	0.0	^	^
Sumner	83.6	21.9	23.9	11.7	13.1	7.9	12.2	9.0	4.7	5.4	7.4	5.2
Trousdale	126.6	^	^	^	^	^	^	^	^	^	0.0	^
Williamson	67.5	16.6	25.5	10.8	9.1	7.0	6.3	6.1	4.8	8.7	4.6	3.9
Wilson	86.9	16.1	22.7	12.6	13.5	9.1	11.0	7.9	6.6	8.7	6.5	4.0
<b>Northeast Region</b>	<b>97.2</b>	<b>21.8</b>	<b>22.1</b>	<b>12.6</b>	<b>9.6</b>	<b>8.8</b>	<b>10.4</b>	<b>7.5</b>	<b>7.2</b>	<b>5.7</b>	<b>6.3</b>	<b>4.5</b>
Carter	94.5	25.6	30.5	13.5	7.0	6.5	13.6	10.2	7.3	^	7.3	^
Greene	114.3	23.3	26.3	16.2	7.9	9.2	8.9	8.4	7.1	5.5	^	8.9
Hancock	111.6	^	^	^	0.0	^	^	0.0	^	0.0	0.0	0.0
Hawkins	97.0	20.7	20.0	12.5	10.5	10.8	11.1	^	^	6.1	7.5	^
Johnson	90.7	^	24.2	^	0.0	^	^	^	^	^	^	^
Sullivan	96.8	21.2	18.8	9.0	10.1	8.5	13.1	7.7	7.7	5.0	3.7	4.3
Unicoi	97.7	^	33.2	25.3	^	23.0	^	^	^	^	^	^
Washington	90.0	24.3	19.7	12.4	12.4	8.2	6.3	5.0	7.9	8.8	9.7	5.5

Legend for Ranking



Continued on Next Page

**Appendix IV Continued**

Region	Lung and Bronchus	Colon and Rectum	Prostate	Pancreas	Leukemia	Esophagus	Non Hodgkin Lymphoma	Urinary Bladder	Liver and Intrahepatic Bile Duct	Brain and Other Nervous System	Kidney and Renal Pelvis	Melanoma of the Skin
<b>Northwest Region</b>	<b>115.9</b>	<b>27.7</b>	<b>27.4</b>	<b>14.0</b>	<b>10.1</b>	<b>7.1</b>	<b>8.6</b>	<b>8.5</b>	<b>8.4</b>	<b>6.2</b>	<b>8.3</b>	<b>5.8</b>
Benton	104.9	23.0	23.2	^	^	^	^	^	^	^	^	^
Carroll	138.1	38.3	26.1	^	^	^	^	^	^	^	13.0	^
Crockett	89.1	28.6	^	^	^	^	^	^	^	^	^	0.0
Dyer	122.1	22.8	20.0	14.1	^	^	^	^	^	^	^	^
Gibson	131.1	29.9	29.0	16.3	^	^	9.8	8.8	^	9.2	12.7	^
Henry	95.4	16.1	28.4	11.3	16.1	^	10.7	^	^	^	^	^
Lake	127.1	^	^	^	0.0	^	0.0	^	0.0	^	^	0.0
Obion	108.6	25.4	35.3	^	^	^	^	14.4	^	^	^	^
Weakley	114.6	31.6	30.2	15.8	14.4	^	^	^	^	^	^	^
<b>South Central Region</b>	<b>104.6</b>	<b>24.9</b>	<b>25.2</b>	<b>12.5</b>	<b>12.6</b>	<b>10.2</b>	<b>8.4</b>	<b>7.8</b>	<b>5.9</b>	<b>6.7</b>	<b>6.0</b>	<b>5.6</b>
Bedford	95.8	27.9	29.2	11.5	^	13.2	^	^	^	^	^	^
Coffee	91.8	22.0	27.3	17.3	10.2	12.9	11.6	^	^	12.7	^	^
Giles	107.2	33.0	18.8	^	20.1	^	^	^	^	^	^	^
Hickman	154.2	22.5	^	^	^	^	^	^	^	^	^	^
Lawrence	115.8	20.8	30.7	^	17.8	^	^	14.6	^	^	^	^
Lewis	115.7	^	^	^	^	0.0	^	^	^	^	^	^
Lincoln	110.8	35.8	24.2	12.8	^	^	^	^	^	^	^	^
Marshall	100.3	20.8	22.9	20.7	^	^	^	^	^	^	^	^
Maury	97.0	21.3	20.8	10.8	12.8	11.4	7.5	9.0	^	7.2	7.9	6.0
Moore	68.3	^	^	^	0.0	0.0	^	0.0	0.0	0.0	0.0	^
Perry	99.7	^	^	^	^	^	^	0.0	^	^	^	0.0
Wayne	108.1	28.9	28.8	^	^	^	^	^	^	^	^	^

Legend for Ranking



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**Appendix IV Continued**

Region	Lung and Bronchus	Colon and Rectum	Prostate	Pancreas	Leukemia	Esophagus	Non Hodgkin Lymphoma	Urinary Bladder	Liver and Intrahepatic Bile Duct	Brain and Other Nervous System	Kidney and Renal Pelvis	Melanoma of the Skin
<b>Southwest Region</b>	<b>90.1</b>	<b>19.8</b>	<b>26.8</b>	<b>13.3</b>	<b>9.5</b>	<b>7.3</b>	<b>11.0</b>	<b>8.0</b>	<b>7.5</b>	<b>7.8</b>	<b>5.8</b>	<b>5.0</b>
Bledsoe	76.5	^	^	^	^	^	^	^	^	0.0	0.0	^
Bradley	88.4	18.6	19.4	12.3	11.7	8.1	14.3	6.4	4.0	10.7	^	7.0
Franklin	80.5	20.1	23.3	15.9	^	8.2	^	^	^	^	^	^
Grundy	84.3	^	^	^	^	^	^	^	^	^	^	^
Hamilton	82.7	18.4	31.7	12.7	8.7	6.2	10.4	7.8	9.2	6.7	6.9	3.6
McMinn	108.2	27.3	23.9	10.8	10.2	8.4	11.1	7.4	^	^	8.5	7.8
Marion	116.0	21.4	40.3	^	^	^	18.9	^	^	^	^	^
Meigs	61.7	^	^	^	^	^	^	0.0	^	^	^	^
Polk	125.3	25.8	^	^	^	^	^	^	^	^	^	^
Rhea	114.2	23.9	21.1	20.8	^	^	17.9	^	^	^	^	^
Sequatchie	114.1	^	^	^	^	^	0.0	^	^	^	^	^
<b>Southwest Region</b>	<b>89.9</b>	<b>25.9</b>	<b>34.9</b>	<b>13.5</b>	<b>11.5</b>	<b>6.6</b>	<b>7.1</b>	<b>7.4</b>	<b>8.1</b>	<b>4.7</b>	<b>7.0</b>	<b>3.1</b>
Chester	77.8	^	^	^	^	^	0.0	^	^	^	^	^
Decatur	100.4	27.9	^	^	^	^	^	^	^	^	^	^
Fayette	80.6	19.9	27.9	14.0	14.1	^	^	^	^	^	^	^
Hardeman	110.4	26.2	35.3	15.1	^	^	^	^	^	0.0	^	^
Hardin	122.8	24.5	19.3	20.9	^	^	^	^	^	^	^	^
Haywood	138.6	30.2	^	^	0.0	^	^	^	0.0	^	^	^
Henderson	129.5	24.6	^	^	^	^	^	^	^	^	^	^
Lauderdale	113.0	36.9	38.7	28.3	20.4	^	^	^	^	^	^	^
McNairy	87.9	23.5	35.0	^	^	^	^	^	^	^	^	^
Madison	89.0	24.4	24.2	12.5	9.6	^	8.4	^	9.1	5.5	10.8	4.9
Shelby	83.1	26.4	39.4	13.0	11.8	7.4	7.2	7.3	8.9	4.7	6.5	2.6
Tipton	112.1	25.7	23.6	17.0	12.4	^	14.4	^	6.7	^	9.7	^

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**Appendix IV Continued**

Region	Lung and Bronchus	Colon and Rectum	Prostate	Pancreas	Leukemia	Esophagus	Non Hodgkin Lymphoma	Urinary Bladder	Liver and Intrahepatic Bile Duct	Brain and Other Nervous System	Kidney and Renal Pelvis	Melanoma of the Skin
Upper-Cumberland Region	98.9	22.6	21.5	13.1	10.5	7.3	11.7	6.8	8.1	6.4	6.4	6.2
Cannon	63.3	^	^	^	^	^	^	^	^	^	^	^
Clay	65.8	^	^	^	^	^	^	0.0	^	^	0.0	^
Cumberland	74.8	15.9	18.3	13.6	9.5	5.8	16.2	7.7	7.2	6.0	5.8	^
DeKalb	119.8	^	^	^	^	^	^	^	^	^	^	^
Fentress	122.8	39.4	^	25.1	^	^	^	^	^	^	^	^
Jackson	84.0	32.1	^	^	^	^	^	^	^	0.0	^	^
Macon	134.7	^	40.2	21.4	^	^	^	^	^	^	^	^
Overton	110.8	20.6	33.2	^	^	^	^	^	^	^	^	^
Pickett	98.4	^	^	^	0.0	^	0.0	^	^	^	^	^
Putnam	112.7	15.7	17.6	8.3	13.2	5.6	6.5	6.3	7.1	^	7.9	7.1
Smith	113.3	36.7	^	^	^	^	^	^	^	^	^	^
Van Buren	78.6	^	0.0	^	0.0	^	^	^	^	0.0	0.0	0.0
Warren	101.5	25.4	21.0	12.6	^	^	17.6	^	^	9.8	^	14.8
White	104.7	26.7	35.2	^	^	12.2	^	^	^	^	^	^

\*Rankings were based on counts. Rates were adjusted to the 2000 U.S. standard population and reported as rate per 100,000.  
 ^Cell suppressed where there were 1-9 cases.

Legend for Ranking



**Appendix V. Age-adjusted Rate for Top Five Leading Causes of Cancer Mortality by Resident County, Female, Tennessee, 2004-2008**

Region	Lung and Bronchus	Breast	Colon and Rectum	Pancreas	Ovary	Leukemia	Non Hodgkin Lymphoma	Brain and Other Nervous System	Corpus and Uterus NOS
Tennessee	47.0	24.3	15.5	9.4	8.3	5.6	5.5	4.1	3.7
East Region	51.1	21.3	14.2	8.1	8.7	5.7	6.3	4.1	3.7
Anderson	62.4	19.4	16.6	8.8	8.9	5.6	6.8	5.4	3.6
Blount	39.8	22.0	11.1	8.3	8.2	3.0	6.4	4.3	^
Campbell	63.4	24.1	21.5	9.2	^	8.0	^	^	^
Claiborne	61.6	26.1	19.7	^	11.9	^	^	^	^
Cocke	55.1	17.4	13.3	9.9	11.1	^	^	^	^
Grainger	52.5	42.6	18.2	^	^	^	^	^	^
Hamblen	53.9	19.1	15.9	11.6	11.5	5.5	5.2	^	^
Jefferson	45.9	20.1	9.9	^	13.8	^	10.6	^	^
Knox	48.1	20.2	12.7	8.1	8.9	5.5	6.0	2.6	4.6
Loudon	48.7	20.4	14.2	7.8	8.1	^	7.9	6.2	^
Monroe	49.2	17.4	14.2	^	^	11.4	^	^	^
Morgan	59.2	38.9	^	^	^	^	^	0.0	^
Roane	56.5	22.8	18.9	8.5	10.1	7.9	^	5.8	^
Scott	63.2	23.9	16.1	^	^	^	^	^	^
Sevier	50.7	22.7	15.0	6.3	^	6.5	5.8	4.6	^
Union	54.0	^	^	^	^	^	^	^	0.0

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**Appendix V Continued**

Region	Lung and Bronchus	Breast	Colon and Rectum	Pancreas	Ovary	Leukemia	Non Hodgkin Lymphoma	Brain and Other Nervous System	Corpus and Uterus and NOS
Mid-Cumberland Region	47.7	23.1	14.7	9.6	7.8	5.1	5.2	4.4	3.1
Cheatham	50.5	26.9	^	^	^	^	^	^	^
Davidson	48.3	24.2	14.5	9.8	9.0	5.5	4.6	3.9	3.5
Dickson	55.1	20.7	19.5	10.3	^	^	^	9.3	^
Houston	36.5	34.9	^	^	^	^	^	^	0.0
Humphreys	61.3	^	15.7	^	^	^	^	^	^
Montgomery	48.9	21.7	17.8	6.9	6.2	5.5	5.5	3.4	3.7
Robertson	58.1	23.5	16.5	10.2	6.6	^	^	^	^
Rutherford	52.0	21.4	14.8	7.7	6.9	2.7	5.1	4.3	2.0
Stewart	60.1	^	^	^	^	^	^	^	^
Sumner	42.9	21.5	13.4	14.0	8.1	5.0	9.0	4.2	^
Trousdale	70.7	^	^	^	^	^	0.0	0.0	^
Williamson	34.7	22.2	13.9	8.5	8.4	6.0	6.3	5.3	3.3
Wilson	42.0	26.7	15.0	8.5	6.0	5.1	4.1	4.2	3.2
Northeast Region	47.9	22.6	14.5	10.5	8.9	5.5	5.5	5.2	3.2
Carter	47.4	18.9	16.7	11.1	8.4	8.4	^	^	^
Greene	64.0	26.9	15.4	14.4	7.4	9.3	7.2	6.8	^
Hancock	66.3	^	^	0.0	^	0.0	^	^	^
Hawkins	43.7	27.0	10.7	11.2	6.7	6.3	6.0	^	^
Johnson	59.8	16.4	18.6	^	^	^	^	^	0.0
Sullivan	49.1	21.6	12.9	10.8	10.9	2.7	4.2	5.4	3.3
Unicoi	42.4	21.6	20.7	^	^	^	^	^	^
Washington	37.1	22.6	15.2	8.3	7.3	5.5	6.9	4.1	3.4

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**Appendix V Continued**

Region	Lung and Bronchus	Breast	Colon and Rectum	Pancreas	Ovary	Leukemia	Non Hodgkin Lymphoma	Brain and Other Nervous System	Corpus and Uterus and NOS
<b>Northwest Region</b>	<b>50.6</b>	<b>25.3</b>	<b>17.9</b>	<b>10.1</b>	<b>6.9</b>	<b>7.0</b>	<b>4.6</b>	<b>3.1</b>	<b>2.9</b>
Benton	46.3	19.9	^	15.1	14.7	^	^	^	0.0
Carroll	54.6	24.1	16.1	^	^	^	^	^	^
Crockett	35.6	28.0	18.6	^	^	^	0.0	0.0	^
Dyer	42.5	20.3	19.0	10.4	9.5	^	^	^	^
Gibson	44.5	29.5	24.4	7.3	^	8.5	^	^	^
Henry	52.6	27.5	17.9	10.6	8.8	^	^	^	^
Lake	74.1	^	^	^	^	^	^	^	0.0
Obion	54.2	23.8	11.3	13.0	^	10.3	^	^	^
Weakley	63.9	24.2	20.5	10.0	^	7.2	^	^	^
<b>South Central Region</b>	<b>49.2</b>	<b>24.9</b>	<b>16.8</b>	<b>9.6</b>	<b>8.5</b>	<b>5.1</b>	<b>5.2</b>	<b>3.6</b>	<b>3.4</b>
Bedford	51.1	27.8	14.9	13.2	10.5	^	^	^	^
Coffee	48.0	26.0	19.5	9.7	11.3	8.6	8.8	^	^
Giles	47.0	22.5	17.1	9.5	^	^	^	^	^
Hickman	34.5	24.4	18.6	18.2	^	^	^	^	^
Lawrence	50.4	24.6	16.5	9.3	10.1	^	^	^	^
Lewis	52.5	^	^	^	^	^	^	0.0	0.0
Lincoln	40.5	25.0	18.4	^	8.6	^	^	^	^
Marshall	53.5	36.4	14.6	^	^	^	^	^	^
Maury	55.6	22.9	16.5	8.3	7.2	^	^	^	^
Moore	^	^	^	^	^	^	^	^	^
Perry	78.4	^	^	^	^	^	^	0.0	^
Wayne	39.9	21.3	^	^	^	^	^	^	^

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**Appendix V Continued**

Region	Lung and Bronchus	Breast	Colon and Rectum	Pancreas	Ovary	Leukemia	Non Hodgkin Lymphoma	Brain and Other Nervous System	Corpus and Uterus NOS
<b>Southeast Region</b>	<b>42.8</b>	<b>23.3</b>	<b>12.6</b>	<b>8.7</b>	<b>7.5</b>	<b>4.7</b>	<b>5.3</b>	<b>3.6</b>	<b>3.6</b>
Bledsoe	37.3	^	^	^	0.0	^	^	0.0	^
Bradley	37.7	30.3	12.3	7.4	6.7	5.0	5.7	4.5	^
Franklin	45.7	25.6	17.0	8.4	^	8.4	^	^	^
Grundy	35.3	32.5	19.1	^	^	^	^	^	^
Hamilton	43.8	22.2	10.9	8.1	7.9	4.8	5.4	3.2	3.5
McMinn	43.6	18.3	15.4	11.4	8.2	^	^	^	^
Marion	55.4	32.5	19.9	^	^	^	^	^	^
Meigs	39.3	^	^	^	^	0.0	^	^	0.0
Polk	51.2	^	^	^	18.0	^	^	^	^
Rhea	30.3	16.5	15.1	9.9	^	^	^	^	^
Sequatchie	32.8	^	^	^	^	^	^	0.0	^
<b>Southwest Region</b>	<b>44.1</b>	<b>30.4</b>	<b>18.9</b>	<b>10.4</b>	<b>8.9</b>	<b>6.1</b>	<b>5.1</b>	<b>3.8</b>	<b>5.2</b>
Chester	41.8	27.1	^	^	^	^	0.0	^	^
Decatur	45.5	^	^	^	^	^	^	0.0	^
Fayette	43.2	27.1	11.7	14.3	9.4	^	^	^	^
Hardeman	30.7	24.1	24.5	12.7	^	^	^	^	^
Hardin	64.9	19.9	10.6	^	14.3	^	^	^	^
Haywood	30.5	33.5	22.2	^	^	^	^	^	^
Henderson	43.7	36.1	14.1	^	^	^	^	^	^
Lauderdale	50.1	33.4	22.6	^	^	^	^	^	^
McNairy	39.7	24.8	25.3	13.4	^	^	12.5	^	^
Madison	38.1	23.3	13.1	10.5	7.8	7.9	4.6	^	6.9
Shelby	44.4	32.1	19.8	10.8	9.2	6.4	4.8	3.7	5.1
Tipton	53.2	31.4	21.0	10.1	13.0	^	7.8	^	9.5

Legend for Ranking



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**Appendix V Continued**

Region	Lung and Bronchus	Breast	Colon and Rectum	Pancreas	Ovary	Leukemia	Non Hodgkin Lymphoma	Brain and Other Nervous System	Corpus and Uterus NOS
Upper-Cumberland Region	44.6	21.8	15.7	8.9	8.8	6.4	6.9	5.2	3.2
Cannon	37.5	^	^	^	^	^	^	^	0.0
Clay	65.6	^	^	^	^	^	^	0.0	^
Cumberland	36.3	15.5	12.0	7.5	4.3	^	5.7	6.9	^
DeKalb	57.0	27.3	19.0	^	^	^	^	^	^
Fentress	56.2	19.2	19.3	^	^	^	^	^	^
Jackson	47.6	23.4	^	^	^	^	^	0.0	^
Macon	41.8	20.7	21.3	^	^	^	^	^	^
Overton	51.1	16.6	19.0	^	16.7	^	^	^	^
Pickett	^	^	^	^	^	0.0	0.0	0.0	0.0
Putnam	47.2	28.1	14.2	8.9	11.0	5.0	5.0	4.8	^
Smith	54.8	34.2	25.3	^	^	^	^	^	^
Van Buren	^	^	^	^	0.0	0.0	^	0.0	0.0
Warren	39.0	20.8	12.8	7.9	11.8	8.0	8.8	^	7.2
White	51.0	22.5	14.0	^	14.8	^	^	^	^

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

^Cell suppressed where there were 1-9 cases.



**Appendix VI. Cancer Incidence and Mortality, All Sites Combined, by Resident County, Tennessee, 2004-2008**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b><i>Total Population, Regardless of Gender and Race</i></b>							
Tennessee	151,749	467.8	465.4-470.1	64,754	202.2	200.6-203.8	0.43
<b>East Region</b>	<b>31,917</b>	<b>489.0</b>	<b>483.5-494.4</b>	<b>13,038</b>	<b>200.9</b>	<b>197.4-204.4</b>	<b>0.41</b>
Anderson	2,241	484.1	463.9-504.9	1,007	207.6	194.8-221.0	0.43
Blount	3,252	468.2	452.0-484.7	1,276	183.4	173.4-193.9	0.39
Campbell	1,310	515.2	487.3-544.5	592	232.3	213.7-252.1	0.45
Claiborne	956	514.4	481.8-548.8	445	242.0	219.7-266.0	0.47
Cocke	966	456.5	427.6-486.9	451	212.4	192.9-233.5	0.47
Grainger	699	531.9	492.4-573.9	298	239.1	212.1-268.8	0.45
Hamblen	1,626	464.4	441.8-487.8	753	216.7	201.4-233.0	0.47
Jefferson	1,544	537.2	510.2-565.3	607	216.1	198.9-234.4	0.40
Knox	10,890	493.0	483.8-502.5	4,157	189.4	183.7-195.3	0.38
Loudon	1,612	516.2	490.3-543.2	571	187.0	171.6-203.7	0.36
Monroe	1,194	461.8	435.4-489.4	528	212.7	194.7-232.0	0.46
Morgan	684	616.4	570.4-665.3	255	236.6	208.0-268.0	0.38
Roane	1,562	447.1	424.8-470.3	757	214.0	198.9-230.1	0.48
Scott	538	469.4	430.0-511.5	260	226.0	198.9-255.7	0.48
Sevier	2,421	497.3	477.3-517.9	881	183.8	171.6-196.6	0.37
Union	422	411.2	372.2-453.3	200	201.7	174.2-232.4	0.49
<b>Mid-Cumberland Region</b>	<b>34,303</b>	<b>465.4</b>	<b>460.4-470.4</b>	<b>13,700</b>	<b>194.7</b>	<b>191.4-198.1</b>	<b>0.42</b>
Cheatham	848	455.2	424.3-487.8	340	193.4	172.8-215.7	0.42
Davidson	13,600	472.4	464.4-480.4	5,509	194.7	189.6-200.0	0.41
Dickson	1,284	531.8	502.8-562.0	521	222.3	203.4-242.4	0.42
Houston	237	460.7	402.6-525.2	109	206.6	169.1-250.6	0.45
Humphreys	592	526.0	483.7-571.1	248	218.2	191.7-247.7	0.41
Montgomery	2,600	446.4	429.1-464.3	1,084	201.8	189.7-214.4	0.45
Robertson	1,401	463.3	439.1-488.5	632	219.2	202.3-237.2	0.47
Rutherford	4,096	455.3	441.1-469.9	1,556	186.9	177.5-196.6	0.41
Stewart	384	492.6	443.9-545.6	167	215.6	183.8-251.6	0.44
Sumner	3,565	470.3	454.8-486.3	1,433	197.9	187.7-208.6	0.42
Trousdale	168	384.8	328.1-448.8	94	209.3	168.7-257.2	0.54
Williamson	3,333	468.2	451.8-485.1	1,068	170.2	159.8-181.1	0.36
Wilson	2,195	430.3	412.0-449.2	939	196.1	183.4-209.4	0.46

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**Appendix VI Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Northeast Region</b>	<b>13,803</b>	<b>453.6</b>	<b>445.9-461.3</b>	<b>6,230</b>	<b>202.7</b>	<b>197.7-207.8</b>	<b>0.45</b>
Carter	1,273	360.6	340.8-381.3	726	204.9	190.1-220.6	0.57
Greene	1,886	465.3	444.3-487.2	932	230.7	215.9-246.2	0.50
Hancock	159	394.0	334.1-462.1	82	199.2	158.0-248.5	0.51
Hawkins	1,523	446.4	423.9-469.9	663	196.1	181.3-211.9	0.44
Johnson	443	379.4	344.3-417.5	233	201.2	175.9-229.5	0.53
Sullivan	4,902	491.3	477.5-505.5	2,023	198.1	189.5-207.1	0.40
Unicoi	536	438.5	401.5-478.3	286	223.3	198.0-251.4	0.51
Washington	3,081	463.4	447.1-480.2	1,285	191.4	181.0-202.2	0.41
<b>Northwest Region</b>	<b>6,984</b>	<b>453.4</b>	<b>442.7-464.3</b>	<b>3,493</b>	<b>218.4</b>	<b>211.2-225.9</b>	<b>0.48</b>
Benton	552	481.6	441.0-525.3	264	219.5	193.3-248.7	0.46
Carroll	973	529.8	496.4-565.0	449	231.0	209.8-253.9	0.44
Crockett	379	445.9	401.6-493.9	173	193.3	165.2-225.0	0.43
Dyer	827	391.3	364.8-419.2	439	208.4	189.2-229.0	0.53
Gibson	1,418	469.4	445.0-494.9	733	230.7	214.1-248.3	0.49
Henry	965	442.6	414.6-472.2	457	202.1	183.8-221.9	0.46
Lake	166	427.7	364.7-498.8	103	256.7	209.2-312.1	0.60
Obion	917	467.3	437.1-499.1	440	215.9	196.0-237.4	0.46
Weakley	787	416.4	387.4-447.0	435	218.9	198.6-240.9	0.53
<b>South Central Region</b>	<b>9,736</b>	<b>468.7</b>	<b>459.4-478.2</b>	<b>4,355</b>	<b>209.4</b>	<b>203.2-215.8</b>	<b>0.45</b>
Bedford	950	440.7	412.9-469.9	475	223.6	203.8-244.8	0.51
Coffee	1,508	498.5	473.5-524.6	668	218.5	202.1-235.8	0.44
Giles	742	419.6	389.5-451.5	351	197.5	177.1-219.7	0.47
Hickman	609	474.2	436.9-513.8	275	216.5	191.4-243.9	0.46
Lawrence	1,231	516.3	487.5-546.3	513	211.0	193.0-230.2	0.41
Lewis	279	424.1	375.1-478.0	155	236.6	200.4-277.8	0.56
Lincoln	869	432.8	404.2-463.0	414	202.4	183.3-223.1	0.47
Marshall	800	522.2	486.3-560.1	324	214.9	191.9-239.8	0.41
Maury	1,989	484.9	463.7-506.9	799	197.8	184.2-212.1	0.41
Moore	93	248.1	199.4-305.8	54	139.8	104.7-183.9	0.56
Perry	259	516.2	453.3-586.0	118	235.7	194.2-284.0	0.46
Wayne	407	418.5	378.6-461.8	209	216.5	188.0-248.4	0.52

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**Appendix VI Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Southeast Region</b>	<b>17,140</b>	<b>465.1</b>	<b>458.1-472.1</b>	<b>7,130</b>	<b>193.2</b>	<b>188.7-197.8</b>	<b>0.42</b>
Bledsoe	253	348.3	305.5-395.7	109	159.9	130.3-194.2	0.46
Bradley	2,072	406.4	388.9-424.5	929	187.7	175.6-200.3	0.46
Franklin	1,111	446.9	420.7-474.4	473	187.7	171.0-205.6	0.42
Grundy	410	483.1	436.7-533.3	183	210.1	180.4-243.5	0.43
Hamilton	9,017	478.6	468.7-488.7	3,542	186.1	180.0-192.3	0.39
McMinn	1,281	416.5	393.8-440.3	629	202.4	186.7-219.1	0.49
Marion	761	464.8	431.6-499.9	393	246.5	222.1-272.8	0.53
Meigs	376	555.1	498.9-616.1	112	163.7	133.9-198.3	0.29
Polk	470	471.3	428.8-517.1	224	226.2	197.2-258.5	0.48
Rhea	1,065	609.6	572.9-648.0	377	212.5	191.3-235.4	0.35
Sequatchie	324	436.2	389.3-487.4	159	220.1	186.8-257.8	0.50
<b>Southwest Region</b>	<b>27,626</b>	<b>448.6</b>	<b>443.2-453.9</b>	<b>12,653</b>	<b>211.4</b>	<b>207.7-215.2</b>	<b>0.47</b>
Chester	285	323.3	286.6-363.6	156	175.5	148.9-205.6	0.54
Decatur	334	412.9	368.6-461.5	170	209.5	178.6-244.8	0.51
Fayette	516	259.2	237.0-283.1	378	196.6	176.9-217.9	0.76
Hardeman	662	440.4	407.2-475.5	298	198.2	176.2-222.2	0.45
Hardin	668	391.1	361.5-422.7	371	214.7	193.1-238.2	0.55
Haywood	407	388.1	351.0-428.0	235	221.1	193.6-251.5	0.57
Henderson	666	435.9	403.2-470.7	308	201.8	179.8-225.9	0.46
Lauderdale	603	441.6	406.7-478.6	322	237.6	212.1-265.3	0.54
McNairy	762	474.3	440.6-510.1	347	209.7	187.9-233.4	0.44
Madison	2,200	449.3	430.6-468.6	957	195.9	183.6-208.8	0.44
Shelby	19,296	465.2	458.5-471.9	8,515	213.5	208.9-218.1	0.46
Tipton	1,227	457.9	432.2-484.8	596	234.7	215.8-254.7	0.51
<b>Upper-Cumberland Region</b>	<b>9,741</b>	<b>486.2</b>	<b>476.4-496.1</b>	<b>4,155</b>	<b>205.8</b>	<b>199.5-212.2</b>	<b>0.42</b>
Cannon	340	434.0	388.7-483.5	140	177.4	149.0-209.8	0.41
Clay	189	356.5	306.2-413.5	103	202.2	164.4-246.7	0.57
Cumberland	2,047	486.4	464.2-509.6	748	174.5	161.6-188.3	0.36
DeKalb	480	447.1	407.6-489.6	231	212.3	185.5-241.9	0.47
Fentress	577	541.8	497.5-589.1	248	237.0	207.9-269.3	0.44
Jackson	273	383.6	338.5-433.5	143	194.2	163.3-229.9	0.51
Macon	554	488.6	448.3-531.6	281	248.7	220.2-280.0	0.51
Overton	547	417.7	382.8-455.2	301	229.8	204.2-257.8	0.55
Pickett	185	522.8	446.8-609.5	67	183.2	140.9-235.9	0.35
Putnam	2,064	555.6	531.7-580.4	773	205.6	191.2-220.7	0.37
Smith	439	433.1	393.2-476.1	239	239.4	209.8-272.1	0.55
Van Buren	106	319.0	259.4-388.9	60	184.2	139.6-239.3	0.58
Warren	1,106	488.5	459.9-518.4	497	217.9	199.1-238.1	0.45
White	834	549.2	511.9-588.5	324	213.6	190.8-238.6	0.39

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**Appendix VI Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Blacks, Regardless of Gender</b>							
Tennessee	18,535	468.1	461.2-475.0	9,193	249.8	244.6-255.1	0.53
East Region	1,047	450.9	423.6-479.4	475	215.8	196.6-236.2	0.48
Anderson	70	538.2	417.2-681.8	33	251.5	171.7-354.0	0.47
Blount	79	479.1	377.3-599.1	31	190.2	128.0-270.9	0.40
Campbell	^	^	^_^	^	^	^_^	^
Claiborne	10	875.4	406.2-1603.9	^	^	^_^	^
Cocke	14	410.6	223.3-685.9	^	^	^_^	^
Grainger	^	^	^_^	^	^	^_^	^
Hamblen	57	441.1	332.1-574.0	24	197.6	124.9-295.9	0.45
Jefferson	21	369.4	226.8-567.0	10	172.0	80.4-320.1	0.47
Knox	688	441.2	408.2-476.0	328	227.4	203.1-253.7	0.52
Loudon	17	626.6	356.8-1012.4	^	^	^_^	^
Monroe	20	379.9	229.8-591.6	14	234.3	126.8-400.8	0.62
Morgan	^	^	^_^	0	0.0	0.0-1005.6	^
Roane	34	383.4	264.0-539.6	13	152.5	80.7-263.2	0.40
Scott	^	^	^_^	0	0.0	0.0-4157.8	^
Sevier	14	513.7	264.9-880.8	^	^	^_^	^
Union	^	^	^_^	0	0.0	0.0-3699.9	^
Mid-Cumberland Region	4,393	472.9	458.5-487.5	1,995	236.3	225.8-247.2	0.50
Cheatham	12	334.6	169.1-583.7	^	^	^_^	^
Davidson	2,923	479.4	461.6-497.7	1,295	233.5	220.5-247.0	0.49
Dickson	45	515.3	373.0-691.2	25	282.9	181.5-418.0	0.55
Houston	^	^	^_^	^	^	^_^	^
Humphreys	11	408.3	200.9-732.7	^	^	^_^	^
Montgomery	387	434.6	389.7-482.8	177	241.7	205.6-281.7	0.56
Robertson	126	544.4	452.8-648.5	71	312.0	243.2-393.6	0.57
Rutherford	389	503.0	451.7-558.2	149	221.3	185.9-260.8	0.44
Stewart	^	^	^_^	^	^	^_^	^
Sumner	180	476.8	408.1-553.2	79	221.0	173.9-276.2	0.46
Trousdale	19	345.0	200.8-561.5	13	210.0	110.2-378.9	0.61
Williamson	169	457.6	389.7-533.6	91	262.5	210.2-323.4	0.57
Wilson	122	401.2	331.5-480.7	82	286.3	226.5-356.4	0.71

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**Appendix VI Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Northeast Region</b>	<b>182</b>	<b>345.6</b>	<b>296.5-400.4</b>	<b>96</b>	<b>191.4</b>	<b>154.5-234.0</b>	<b>0.55</b>
Carter	^	^	^_^	^	^	^_^	^
Greene	37	587.0	406.9-815.3	14	201.4	109.1-339.0	0.34
Hancock	0	0.0	0.0-4433.5	0	0.0	0.0-4433.5	~
Hawkins	11	234.1	114.6-423.2	10	219.5	103.3-406.4	0.94
Johnson	^	^	^_^	^	^	^_^	^
Sullivan	64	389.8	299.1-499.3	32	204.6	138.7-290.1	0.52
Unicoi	^	^	^_^	0	0.0	0.0-1492.3	^
Washington	57	291.1	218.6-378.9	34	193.5	132.7-270.8	0.66
<b>Northwest Region</b>	<b>651</b>	<b>459.1</b>	<b>424.3-496.0</b>	<b>398</b>	<b>283.5</b>	<b>256.1-312.9</b>	<b>0.62</b>
Benton	11	599.2	294.0-1080.7	^	^	^_^	^
Carroll	84	497.2	396.2-616.6	56	330.1	249.0-429.5	0.66
Crockett	52	496.2	368.9-653.8	34	320.2	221.1-449.5	0.65
Dyer	84	427.5	335.7-535.2	56	302.7	224.8-396.9	0.71
Gibson	206	441.9	383.3-506.9	130	276.3	230.6-328.4	0.63
Henry	72	484.7	378.7-611.7	44	297.3	215.6-400.2	0.61
Lake	28	415.6	270.3-606.3	20	319.9	191.0-496.3	0.77
Obion	73	509.2	398.3-640.7	36	260.3	181.6-360.5	0.51
Weakley	41	477.6	339.2-651.0	20	237.8	143.0-368.5	0.50
<b>South Central Region</b>	<b>589</b>	<b>456.2</b>	<b>419.8-494.8</b>	<b>288</b>	<b>230.4</b>	<b>204.4-258.7</b>	<b>0.51</b>
Bedford	66	387.3	298.9-493.3	37	222.6	156.3-307.1	0.57
Coffee	40	494.1	350.6-674.0	18	240.7	141.1-379.1	0.49
Giles	75	388.4	304.4-489.3	39	206.9	146.1-285.3	0.53
Hickman	21	516.8	314.1-797.9	^	^	^_^	^
Lawrence	16	502.8	282.5-819.6	^	^	^_^	^
Lewis	^	^	^_^	0	0.0	0.0-421.3	^
Lincoln	58	475.4	360.1-615.7	41	343.2	245.5-466.5	0.72
Marshall	46	450.3	328.1-602.0	20	205.0	124.1-316.9	0.46
Maury	254	512.3	450.7-580.0	115	243.7	200.8-292.8	0.48
Moore	^	^	^_^	^	^	^_^	^
Perry	^	^	^_^	^	^	^_^	^
Wayne	^	^	^_^	^	^	^_^	^

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**Appendix VI Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Southeast Region</b>	<b>1,599</b>	<b>447.5</b>	<b>425.6-470.2</b>	<b>749</b>	<b>215.3</b>	<b>200.0-231.4</b>	<b>0.48</b>
Bledsoe	^	^	^_^	0	0.0	0.0-282.6	^
Bradley	46	281.6	203.3-378.8	18	113.6	64.9-182.4	0.40
Franklin	48	401.1	294.8-533.5	32	286.3	195.2-404.6	0.71
Grundy	0	0.0	0.0-6966.4	^	^	^_^	~
Hamilton	1,399	456.8	433.0-481.7	636	212.8	196.4-230.1	0.47
McMinn	39	376.8	266.6-516.1	34	338.2	232.8-473.1	0.90
Marion	32	487.5	332.6-691.5	18	264.4	156.2-421.8	0.54
Meigs	^	^	^_^	^	^	^_^	^
Polk	^	^	^_^	0	0.0	0.0-2691.8	^
Rhea	28	924.5	612.4-1333.6	^	^	^_^	^
Sequatchie	0	0.0	0.0-3227.3	0	0.0	0.0-3227.3	~
<b>Southwest Region</b>	<b>9,932</b>	<b>475.4</b>	<b>465.8-485.2</b>	<b>5,140</b>	<b>267.1</b>	<b>259.6-274.7</b>	<b>0.56</b>
Chester	23	332.9	210.1-499.1	14	211.9	115.5-353.3	0.64
Decatur	^	^	^_^	^	^	^_^	^
Fayette	183	358.6	307.8-415.2	131	264.0	220.3-313.9	0.74
Hardeman	208	483.8	418.3-556.3	103	251.5	203.9-306.2	0.52
Hardin	23	439.6	275.7-665.0	^	^	^_^	^
Haywood	183	409.8	351.7-474.5	99	226.8	183.8-276.6	0.55
Henderson	33	337.0	228.9-477.0	29	315.1	208.8-454.3	0.94
Lauderdale	138	416.8	348.8-493.4	89	267.2	213.6-329.4	0.64
McNairy	38	559.8	394.3-768.5	19	293.4	175.6-456.1	0.52
Madison	580	467.8	429.6-508.4	289	241.1	213.6-271.1	0.52
Shelby	8,304	484.4	473.7-495.4	4,238	271.8	263.3-280.4	0.56
Tipton	212	481.9	418.6-551.8	118	277.8	229.6-332.7	0.58
<b>Upper-Cumberland Region</b>	<b>132</b>	<b>589.0</b>	<b>492.4-698.4</b>	<b>52</b>	<b>232.0</b>	<b>173.1-303.8</b>	<b>0.39</b>
Cannon	11	752.3	366.9-1377.9	^	^	^_^	^
Clay	^	^	^_^	^	^	^_^	^
Cumberland	^	^	^_^	0	0.0	0.0-395.8	^
DeKalb	^	^	^_^	^	^	^_^	^
Fentress	12	‡	‡-‡	0	0.0	0.0-8064.9	~
Jackson	0	0.0	0.0-3572.4	0	0.0	0.0-3572.4	~
Macon	^	^	^_^	0	0.0	0.0-929.7	^
Overton	^	^	^_^	^	^	^_^	^
Pickett	^	^	^_^	0	0.0	0.0-3826.4	^
Putnam	22	487.9	301.2-739.5	^	^	^_^	^
Smith	^	^	^_^	^	^	^_^	^
Van Buren	0	0.0	0.0-5598.4	^	^	^_^	~
Warren	34	514.7	353.6-723.2	17	261.2	150.1-421.1	0.51
White	21	873.2	531.2-1351.1	^	^	^_^	^

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**Appendix VI Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Whites, Regardless of Gender</b>							
Tennessee	131,203	466.6	464.1-469.2	55,249	196.9	195.3-198.6	0.42
East Region	30,553	489.7	484.2-495.3	12,511	201.2	197.7-204.8	0.41
Anderson	2,140	482.9	462.4-504.2	964	206.4	193.5-220.1	0.43
Blount	3,146	467.6	451.2-484.5	1,243	184.1	174.0-194.8	0.39
Campbell	1,296	514.4	486.4-543.8	587	232.1	213.5-252.0	0.45
Claiborne	943	514.3	481.5-549.0	441	242.9	220.5-267.2	0.47
Cocke	948	458.6	429.3-489.5	443	213.6	193.7-235.0	0.47
Grainger	689	528.7	489.1-570.8	295	239.8	212.5-269.8	0.45
Hamblen	1,554	464.2	441.1-488.2	728	218.9	203.2-235.6	0.47
Jefferson	1,511	538.1	510.7-566.6	595	216.9	199.5-235.5	0.40
Knox	10,061	497.1	487.4-507.0	3,805	188.1	182.1-194.2	0.38
Loudon	1,577	510.6	484.7-537.7	567	188.1	172.5-204.9	0.37
Monroe	1,170	464.8	438.0-492.9	514	213.4	195.1-233.0	0.46
Morgan	668	608.4	562.5-657.3	255	238.9	210.1-270.7	0.39
Roane	1,513	446.6	423.9-470.2	740	215.8	200.4-232.2	0.48
Scott	531	466.0	426.6-508.0	259	226.8	199.6-256.7	0.49
Sevier	2,387	496.4	476.3-517.1	875	184.6	172.4-197.5	0.37
Union	419	410.7	371.6-453.0	200	202.8	175.1-233.6	0.49
Mid-Cumberland Region	29,442	466.8	461.4-472.2	11,590	190.5	187.0-194.0	0.41
Cheatham	829	457.9	426.4-491.1	333	194.9	173.9-217.7	0.43
Davidson	10,460	475.4	466.2-484.6	4,165	187.8	182.1-193.7	0.40
Dickson	1,235	533.9	504.3-564.9	496	221.0	201.8-241.6	0.41
Houston	229	462.7	403.4-528.7	106	208.8	170.4-254.0	0.45
Humphreys	580	532.8	489.5-579.0	242	220.3	193.1-250.4	0.41
Montgomery	2,131	448.4	429.3-468.1	891	199.1	186.0-212.7	0.44
Robertson	1,263	454.9	429.8-481.0	560	212.6	195.1-231.2	0.47
Rutherford	3,637	453.2	438.2-468.5	1,386	184.9	175.1-195.1	0.41
Stewart	378	501.7	451.6-556.1	163	216.6	184.3-253.3	0.43
Sumner	3,364	472.3	456.2-488.9	1,348	197.5	186.9-208.5	0.42
Trousdale	149	393.1	331.4-463.1	81	207.8	164.3-259.7	0.53
Williamson	3,129	470.1	453.1-487.7	966	165.2	154.5-176.3	0.35
Wilson	2,058	433.0	414.0-452.7	853	191.1	178.1-204.7	0.44

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**Appendix VI Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Northeast Region</b>	<b>13,564</b>	<b>456.1</b>	<b>448.4-464.0</b>	<b>6,126</b>	<b>203.5</b>	<b>198.4-208.7</b>	<b>0.45</b>
Carter	1,263	362.8	342.8-383.7	720	205.6	190.7-221.4	0.57
Greene	1,839	463.3	442.0-485.4	918	231.7	216.8-247.4	0.50
Hancock	156	390.9	330.9-459.1	81	198.5	157.2-248.0	0.51
Hawkins	1,504	449.8	427.0-473.6	649	195.6	180.6-211.5	0.43
Johnson	438	382.2	346.5-420.9	232	202.9	177.3-231.5	0.53
Sullivan	4,822	494.2	480.1-508.6	1,990	198.8	190.1-207.8	0.40
Unicoi	534	439.0	401.8-479.0	285	223.2	197.9-251.4	0.51
Washington	3,008	469.4	452.7-486.7	1,251	192.6	182.1-203.7	0.41
<b>Northwest Region</b>	<b>6,277</b>	<b>450.8</b>	<b>439.5-462.3</b>	<b>3,088</b>	<b>212.3</b>	<b>204.8-220.0</b>	<b>0.47</b>
Benton	540	481.1	440.1-525.4	262	222.6	195.9-252.4	0.46
Carroll	877	528.5	493.3-565.7	391	221.8	200.0-245.6	0.42
Crockett	324	431.9	385.6-482.5	139	177.2	148.6-210.1	0.41
Dyer	734	386.1	358.3-415.5	383	199.3	179.7-220.6	0.52
Gibson	1,208	473.4	446.6-501.6	602	222.1	204.4-240.9	0.47
Henry	883	436.4	407.4-467.1	411	194.8	176.2-215.1	0.45
Lake	136	439.8	367.5-523.1	83	255.6	202.9-319.1	0.58
Obion	836	461.5	430.2-494.7	402	212.5	192.1-234.8	0.46
Weakley	739	413.6	383.9-445.2	415	220.2	199.3-242.9	0.53
<b>South Central Region</b>	<b>9,084</b>	<b>469.3</b>	<b>459.6-479.1</b>	<b>4,058</b>	<b>208.8</b>	<b>202.3-215.3</b>	<b>0.44</b>
Bedford	872	442.5	413.4-473.2	436	224.8	204.0-247.1	0.51
Coffee	1,456	499.6	474.1-526.3	648	219.4	202.7-237.1	0.44
Giles	663	422.8	390.7-457.0	310	195.5	174.0-219.0	0.46
Hickman	586	474.4	436.4-514.9	266	217.1	191.6-245.2	0.46
Lawrence	1,214	519.3	490.2-549.8	507	212.7	194.5-232.3	0.41
Lewis	274	424.2	374.7-478.6	155	240.5	203.6-282.4	0.57
Lincoln	803	429.4	399.8-460.6	372	194.6	175.3-215.7	0.45
Marshall	751	528.3	490.8-567.9	304	217.0	193.1-243.1	0.41
Maury	1,718	479.1	456.6-502.5	682	191.8	177.6-206.9	0.40
Moore	91	252.1	202.1-311.4	53	142.8	106.7-188.4	0.57
Perry	253	512.1	448.9-582.4	117	238.4	196.3-287.6	0.47
Wayne	403	427.8	386.6-472.5	208	220.6	191.4-253.3	0.52

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**Appendix VI Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Southeast Region</b>	<b>15,402</b>	<b>468.2</b>	<b>460.8-475.8</b>	<b>6,355</b>	<b>191.9</b>	<b>187.1-196.7</b>	<b>0.41</b>
Bledsoe	248	349.8	306.3-397.9	108	162.6	132.4-197.7	0.46
Bradley	2,009	409.5	391.6-428.1	910	190.5	178.2-203.4	0.47
Franklin	1,049	445.6	418.7-473.9	441	184.1	167.2-202.4	0.41
Grundy	407	484.3	437.6-534.8	182	211.0	181.1-244.6	0.44
Hamilton	7,541	485.6	474.6-496.8	2,889	182.1	175.5-188.9	0.38
McMinn	1,232	418.6	395.2-443.0	591	197.8	182.1-214.7	0.47
Marion	729	468.6	434.4-504.9	375	247.0	222.0-274.1	0.53
Meigs	370	557.9	500.9-619.9	111	165.6	135.3-200.9	0.30
Polk	465	469.1	426.6-515.0	224	227.3	198.1-259.8	0.48
Rhea	1,030	604.0	567.0-642.8	367	211.8	190.4-235.0	0.35
Sequatchie	322	436.9	389.8-488.3	157	219.4	186.0-257.3	0.50
<b>Southwest Region</b>	<b>17,165</b>	<b>430.9</b>	<b>424.4-437.4</b>	<b>7,431</b>	<b>186.0</b>	<b>181.8-190.4</b>	<b>0.43</b>
Chester	259	321.6	283.2-363.9	141	171.7	144.4-202.9	0.53
Decatur	325	417.5	372.0-467.6	167	213.1	181.3-249.3	0.51
Fayette	328	225.0	200.8-251.6	246	173.6	152.0-197.5	0.77
Hardeman	446	419.9	381.3-461.7	195	177.8	153.5-205.3	0.42
Hardin	643	390.5	360.3-422.8	362	216.8	194.7-240.9	0.56
Haywood	216	364.5	316.8-417.6	136	219.0	183.5-259.9	0.60
Henderson	631	442.2	408.1-478.5	279	194.8	172.5-219.3	0.44
Lauderdale	450	448.4	407.3-492.7	233	229.1	200.2-261.2	0.51
McNairy	720	470.3	435.8-507.0	328	207.8	185.6-232.2	0.44
Madison	1,602	440.9	419.3-463.2	666	180.2	166.6-194.5	0.41
Shelby	10,545	446.7	438.1-455.4	4,201	177.2	171.8-182.7	0.40
Tipton	1,000	452.0	423.8-481.6	477	228.0	207.5-250.0	0.50
<b>Upper-Cumberland Region</b>	<b>9,548</b>	<b>484.6</b>	<b>474.8-494.6</b>	<b>4,090</b>	<b>205.9</b>	<b>199.5-212.3</b>	<b>0.42</b>
Cannon	327	426.7	381.3-476.3	135	175.1	146.7-207.8	0.41
Clay	185	355.6	304.7-413.3	101	202.8	164.5-248.1	0.57
Cumberland	2,031	485.6	463.3-508.9	746	175.2	162.3-189.1	0.36
DeKalb	469	445.3	405.5-488.1	228	213.1	186.1-243.1	0.48
Fentress	562	531.2	487.3-578.3	248	238.2	208.9-270.7	0.45
Jackson	271	382.8	337.6-432.8	141	192.3	161.5-227.9	0.50
Macon	549	489.0	448.5-532.2	280	250.0	221.3-281.5	0.51
Overton	543	417.8	382.7-455.4	298	229.2	203.6-257.3	0.55
Pickett	179	505.2	430.6-590.4	66	181.5	139.4-234.3	0.36
Putnam	2,026	556.9	532.7-582.0	762	206.8	192.3-222.2	0.37
Smith	429	437.5	396.7-481.4	233	241.2	210.9-274.6	0.55
Van Buren	106	321.1	261.1-391.6	59	182.0	137.6-237.1	0.57
Warren	1,063	486.8	457.7-517.2	478	216.4	197.4-236.9	0.44
White	808	543.9	506.4-583.5	315	212.5	189.4-237.7	0.39

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**Appendix VI Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b><i>Females, Regardless of Race</i></b>							
Tennessee	71,738	405.3	402.3-408.3	29,829	163.3	161.5-165.2	0.40
East Region	14,711	418.4	411.6-425.4	5,962	162.6	158.4-166.8	0.39
Anderson	1,033	411.1	385.6-437.8	474	171.5	156.1-188.3	0.42
Blount	1,524	406.1	385.7-427.4	547	138.9	127.3-151.2	0.34
Campbell	595	439.2	403.7-477.1	256	177.9	156.4-201.8	0.41
Claiborne	444	446.8	405.4-491.4	199	191.1	165.1-220.2	0.43
Cocke	458	410.3	372.9-450.6	196	168.2	145.2-194.1	0.41
Grainger	305	445.3	395.9-499.5	129	184.8	154.0-220.4	0.42
Hamblen	749	396.7	368.3-426.9	333	166.8	149.2-186.1	0.42
Jefferson	712	472.6	437.8-509.5	260	168.4	148.2-190.8	0.36
Knox	5,076	417.5	406.0-429.3	2,002	158.2	151.3-165.4	0.38
Loudon	709	442.8	409.1-478.8	260	151.5	133.0-172.2	0.34
Monroe	529	385.4	352.6-420.6	231	165.9	144.9-189.3	0.43
Morgan	318	559.3	498.5-625.8	112	191.0	156.9-230.7	0.34
Roane	719	390.6	361.9-421.3	354	182.3	163.5-202.9	0.47
Scott	263	427.0	376.3-482.8	120	187.2	154.8-224.5	0.44
Sevier	1,097	424.2	399.0-450.6	403	153.0	138.2-169.0	0.36
Union	180	332.4	285.0-385.6	86	157.4	125.6-195.0	0.47
Mid-Cumberland Region	16,628	410.1	403.9-416.4	6,418	159.4	155.5-163.4	0.39
Cheatham	371	372.6	335.1-413.3	146	152.1	128.1-179.3	0.41
Davidson	6,789	417.8	407.8-427.9	2,672	159.3	153.3-165.5	0.38
Dickson	605	465.1	428.6-504.1	231	174.5	152.6-198.8	0.38
Houston	110	406.5	331.7-494.2	45	155.2	112.4-210.6	0.38
Humphreys	300	508.7	451.4-571.6	116	182.2	150.1-219.8	0.36
Montgomery	1,303	402.1	380.3-424.7	495	161.3	147.3-176.3	0.40
Robertson	665	409.0	378.4-441.5	303	187.3	166.8-209.8	0.46
Rutherford	1,982	406.9	388.9-425.5	724	157.1	145.7-169.1	0.39
Stewart	171	425.7	363.2-496.4	75	178.2	139.9-224.7	0.42
Sumner	1,627	396.4	377.1-416.3	653	160.2	148.0-173.2	0.40
Trousdale	78	341.4	268.9-428.5	42	165.8	118.9-226.6	0.49
Williamson	1,590	414.4	393.7-436.0	496	141.4	129.0-154.7	0.34
Wilson	1,037	380.8	357.7-405.2	420	159.8	144.7-176.1	0.42

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**Appendix VI Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Northeast Region</b>	<b>6,589</b>	<b>403.5</b>	<b>393.6-413.6</b>	<b>2,837</b>	<b>163.4</b>	<b>157.4-169.7</b>	<b>0.40</b>
Carter	627	336.0	309.6-364.1	330	166.8	149.0-186.3	0.50
Greene	934	423.5	396.3-452.3	451	197.6	179.5-217.1	0.47
Hancock	72	336.4	261.4-427.4	46	202.4	147.4-273.0	0.60
Hawkins	713	391.1	362.4-421.6	294	154.9	137.4-174.0	0.40
Johnson	203	345.5	298.0-399.2	109	176.7	144.4-215.1	0.51
Sullivan	2,307	428.3	410.5-446.7	923	158.7	148.5-169.6	0.37
Unicoi	252	384.7	336.9-438.1	119	158.8	131.0-191.8	0.41
Washington	1,481	412.6	391.6-434.6	565	148.5	136.3-161.5	0.36
<b>Northwest Region</b>	<b>3,200</b>	<b>383.4</b>	<b>369.9-397.4</b>	<b>1,559</b>	<b>168.7</b>	<b>160.2-177.6</b>	<b>0.44</b>
Benton	235	384.7	335.2-440.2	110	164.8	134.8-200.6	0.43
Carroll	455	463.6	420.3-510.3	193	171.2	147.0-198.6	0.37
Crockett	182	398.6	341.4-463.1	72	138.5	107.4-176.4	0.35
Dyer	411	347.5	314.1-383.6	209	171.3	148.4-196.8	0.49
Gibson	667	401.1	370.1-434.0	322	171.0	152.1-191.8	0.43
Henry	406	349.6	315.3-386.9	209	163.7	141.8-188.5	0.47
Lake	73	362.3	279.8-463.5	50	229.9	168.5-309.4	0.63
Obion	403	381.4	344.1-421.9	197	167.3	144.2-193.3	0.44
Weakley	368	357.9	321.1-397.9	197	170.4	146.8-197.2	0.48
<b>South Central Region</b>	<b>4,596</b>	<b>411.0</b>	<b>399.0-423.2</b>	<b>1,926</b>	<b>162.4</b>	<b>155.1-169.9</b>	<b>0.40</b>
Bedford	449	389.3	353.8-427.5	210	174.3	151.3-199.9	0.45
Coffee	689	423.6	392.0-457.1	299	171.5	152.4-192.5	0.40
Giles	356	372.5	334.0-414.5	151	147.4	124.3-173.8	0.40
Hickman	282	422.8	374.2-476.2	102	147.1	119.6-179.4	0.35
Lawrence	564	433.2	397.4-471.6	225	159.1	138.6-181.9	0.37
Lewis	119	337.3	278.4-405.6	65	176.2	135.5-226.1	0.52
Lincoln	417	379.7	343.3-419.0	181	151.8	130.2-176.5	0.40
Marshall	388	465.2	419.6-514.6	152	176.3	149.1-207.2	0.38
Maury	970	431.5	404.5-459.8	367	157.5	141.7-174.6	0.37
Moore	37	191.6	133.5-268.3	29	140.4	93.3-205.4	0.73
Perry	134	510.2	423.6-610.6	58	202.6	152.3-266.2	0.40
Wayne	191	383.6	329.9-444.2	87	170.3	135.7-211.8	0.44

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**Appendix VI Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Southeast Region</b>	<b>8,021</b>	<b>401.1</b>	<b>392.2-410.1</b>	<b>3,155</b>	<b>150.9</b>	<b>145.6-156.3</b>	<b>0.38</b>
Bledsoe	105	283.1	230.5-344.8	48	132.2	96.9-176.9	0.47
Bradley	966	350.8	328.8-373.9	400	143.6	129.8-158.5	0.41
Franklin	495	380.8	347.2-416.9	221	161.9	141.0-185.3	0.43
Grundy	194	438.6	377.2-507.4	83	175.8	139.3-219.6	0.40
Hamilton	4,270	409.0	396.6-421.7	1,626	147.6	140.5-155.1	0.36
McMinn	562	342.7	314.5-373.0	268	154.5	136.3-174.6	0.45
Marion	364	416.1	373.7-462.2	172	192.9	164.8-224.7	0.46
Meigs	168	490.4	417.4-572.9	48	137.9	101.2-184.3	0.28
Polk	216	411.8	357.5-472.6	93	172.3	138.7-212.4	0.42
Rhea	532	577.0	527.7-629.7	146	144.7	121.7-171.0	0.25
Sequatchie	149	383.4	323.4-451.6	50	127.2	94.1-168.7	0.33
<b>Southwest Region</b>	<b>13,412</b>	<b>387.7</b>	<b>381.1-394.3</b>	<b>6,160</b>	<b>176.7</b>	<b>172.3-181.2</b>	<b>0.46</b>
Chester	150	319.5	269.6-376.2	82	160.8	127.5-200.7	0.50
Decatur	156	372.3	313.0-440.5	70	162.0	124.5-208.4	0.44
Fayette	241	225.3	197.4-256.2	171	160.1	136.7-186.5	0.71
Hardeman	287	367.5	325.3-413.8	122	147.5	122.1-177.0	0.40
Hardin	319	354.8	315.9-397.4	165	174.1	148.1-203.9	0.49
Haywood	181	299.2	256.5-347.2	106	165.4	134.8-201.2	0.55
Henderson	317	380.4	339.1-425.5	132	152.6	127.4-181.6	0.40
Lauderdale	270	369.4	326.0-417.2	136	177.8	148.6-211.3	0.48
McNairy	377	447.3	401.8-496.8	163	176.4	149.7-206.8	0.39
Madison	1,027	374.4	351.7-398.3	457	160.7	146.1-176.4	0.43
Shelby	9,532	402.6	394.5-410.8	4,276	182.0	176.5-187.5	0.45
Tipton	555	377.4	346.5-410.4	280	193.0	170.9-217.1	0.51
<b>Upper-Cumberland Region</b>	<b>4,348</b>	<b>412.3</b>	<b>399.9-425.1</b>	<b>1,812</b>	<b>162.5</b>	<b>155.0-170.3</b>	<b>0.39</b>
Cannon	151	362.1	305.9-426.2	59	129.1	98.1-167.7	0.36
Clay	84	306.0	242.1-382.9	52	194.6	144.6-257.7	0.64
Cumberland	835	392.1	363.9-422.2	291	128.3	113.3-145.1	0.33
DeKalb	225	392.1	341.7-448.2	107	179.9	147.0-218.4	0.46
Fentress	246	434.9	381.1-494.7	107	183.3	149.7-222.9	0.42
Jackson	113	313.4	256.6-380.0	63	156.0	119.2-201.9	0.50
Macon	257	419.8	369.4-475.4	123	195.7	162.2-234.4	0.47
Overton	241	343.5	300.5-391.4	125	172.4	143.0-206.6	0.50
Pickett	70	410.1	313.3-529.7	23	123.0	76.2-192.3	0.30
Putnam	955	478.4	447.9-510.5	355	166.3	149.2-184.9	0.35
Smith	207	376.7	326.6-432.5	116	203.6	167.9-245.0	0.54
Van Buren	51	312.1	230.2-415.2	27	161.1	105.3-238.1	0.52
Warren	541	441.3	404.3-480.8	217	168.1	146.2-192.5	0.38
White	372	465.1	417.9-516.4	147	175.6	147.9-207.3	0.38

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**Appendix VI Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Males, Regardless of Race</b>							
Tennessee	80,011	559.1	555.2-563.1	34,925	260.5	257.7-263.3	0.47
East Region	17,206	589.3	580.3-598.4	7,076	257.6	251.4-263.8	0.44
Anderson	1,208	595.8	562.3-630.8	533	265.1	242.8-288.9	0.44
Blount	1,728	556.6	530.1-584.1	729	248.8	230.6-268.1	0.45
Campbell	715	627.6	580.9-677.1	336	311.8	278.0-348.6	0.50
Claiborne	512	609.1	555.4-666.7	246	323.2	281.7-369.1	0.53
Cocke	508	528.2	481.2-578.7	255	274.7	240.3-312.7	0.52
Grainger	394	650.7	584.7-722.2	169	327.7	276.1-385.8	0.50
Hamblen	877	575.5	536.7-616.3	420	292.8	264.4-323.4	0.51
Jefferson	832	622.1	578.7-668.0	347	283.7	253.0-317.0	0.46
Knox	5,814	602.2	586.5-618.2	2,155	237.8	227.6-248.3	0.39
Loudon	903	612.3	571.1-656.0	311	237.5	210.5-267.1	0.39
Monroe	665	563.4	519.7-609.9	297	277.4	245.5-312.3	0.49
Morgan	366	707.9	634.2-787.9	143	301.8	251.9-358.5	0.43
Roane	843	526.1	490.4-563.8	403	259.8	234.5-287.2	0.49
Scott	275	537.9	473.8-608.0	140	276.4	230.7-328.2	0.51
Sevier	1,324	589.6	557.2-623.3	478	223.5	203.2-245.3	0.38
Union	242	515.0	449.0-587.8	114	257.1	209.6-311.8	0.50
Mid-Cumberland Region	17,675	547.0	538.6-555.4	7,282	247.6	241.7-253.6	0.45
Cheatham	477	556.0	504.8-611.0	194	241.2	206.6-279.7	0.43
Davidson	6,811	561.8	548.2-575.6	2,837	252.4	243.0-262.1	0.45
Dickson	679	626.5	578.6-677.2	290	290.5	256.5-327.6	0.46
Houston	127	536.8	445.9-641.6	64	275.1	211.0-353.5	0.51
Humphreys	292	547.9	485.4-616.6	132	264.3	220.2-315.0	0.48
Montgomery	1,297	516.7	487.4-547.2	589	263.1	240.9-286.6	0.51
Robertson	736	534.4	495.2-575.8	329	263.9	235.0-295.2	0.49
Rutherford	2,114	520.8	497.5-544.8	832	230.5	214.0-247.7	0.44
Stewart	213	587.3	508.7-674.9	92	267.5	213.7-330.9	0.46
Sumner	1,938	573.3	546.9-600.7	780	250.1	232.0-269.2	0.44
Trousdale	90	432.4	346.1-534.3	52	257.9	191.3-340.5	0.60
Williamson	1,743	538.4	511.3-566.5	572	212.9	194.5-232.5	0.40
Wilson	1,158	501.2	470.8-533.0	519	247.8	225.3-271.9	0.49

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**Appendix VI Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Northeast Region</b>	<b>7,214</b>	<b>528.4</b>	<b>516.1-541.1</b>	<b>3,393</b>	<b>260.2</b>	<b>251.3-269.3</b>	<b>0.49</b>
Carter	646	403.5	372.4-436.7	396	261.4	235.7-289.2	0.65
Greene	952	534.0	499.5-570.4	481	283.7	258.0-311.3	0.53
Hancock	87	474.0	376.6-589.4	36	202.3	140.1-283.2	0.43
Hawkins	810	529.5	492.3-568.7	369	255.9	229.4-284.5	0.48
Johnson	240	426.4	372.9-485.9	124	230.5	190.8-276.3	0.54
Sullivan	2,595	581.2	558.6-604.5	1,100	254.7	239.6-270.6	0.44
Unicoi	284	524.0	463.8-590.2	167	317.1	270.3-370.3	0.61
Washington	1,600	540.3	513.7-568.0	720	255.4	236.7-275.1	0.47
<b>Northwest Region</b>	<b>3,784</b>	<b>555.3</b>	<b>537.5-573.5</b>	<b>1,934</b>	<b>291.9</b>	<b>278.8-305.4</b>	<b>0.53</b>
Benton	317	606.7	539.8-680.3	154	292.8	247.3-345.0	0.48
Carroll	518	634.5	580.4-692.5	256	319.7	281.3-362.0	0.50
Crockett	197	523.5	452.1-603.1	101	269.6	219.1-328.4	0.51
Dyer	416	453.1	409.4-500.2	230	262.6	228.8-300.0	0.58
Gibson	751	578.8	537.9-622.1	411	322.3	291.6-355.3	0.56
Henry	559	572.7	525.0-623.9	248	259.8	227.6-295.5	0.45
Lake	93	542.9	436.0-667.4	53	320.4	238.5-420.7	0.59
Obion	514	586.8	536.2-641.0	243	287.2	251.6-326.6	0.49
Weakley	419	496.2	449.3-546.9	238	291.6	255.3-331.7	0.59
<b>South Central Region</b>	<b>5,140</b>	<b>557.3</b>	<b>541.8-573.1</b>	<b>2,429</b>	<b>278.8</b>	<b>267.5-290.4</b>	<b>0.50</b>
Bedford	501	522.5	476.5-571.5	265	293.5	258.1-332.1	0.56
Coffee	819	609.3	567.6-653.4	369	282.9	254.2-313.9	0.46
Giles	386	488.0	438.9-541.4	200	263.8	227.1-304.8	0.54
Hickman	327	548.4	488.6-613.4	173	316.7	269.1-370.0	0.58
Lawrence	667	642.2	593.4-693.9	288	292.3	258.7-329.1	0.46
Lewis	160	539.4	456.2-633.6	90	312.7	249.0-387.6	0.58
Lincoln	452	508.4	461.7-558.6	233	271.9	237.4-310.1	0.53
Marshall	412	614.0	554.3-678.3	172	281.8	239.8-328.7	0.46
Maury	1,019	577.2	541.2-615.0	432	265.3	240.0-292.4	0.46
Moore	56	308.0	230.9-404.2	25	136.8	87.8-205.3	0.44
Perry	125	547.0	451.2-657.9	60	285.9	215.4-372.5	0.52
Wayne	216	472.4	410.3-541.2	122	283.8	234.8-340.0	0.60

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**Appendix VI Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Southeast Region</b>	<b>9,119</b>	<b>557.4</b>	<b>545.7-569.2</b>	<b>3,975</b>	<b>255.9</b>	<b>247.8-264.2</b>	<b>0.46</b>
Bledsoe	148	447.2	372.6-532.2	61	213.3	158.9-279.1	0.48
Bradley	1,106	483.9	454.8-514.3	529	252.0	230.1-275.4	0.52
Franklin	616	537.7	495.3-582.9	252	226.3	198.7-256.8	0.42
Grundy	216	546.7	474.8-626.6	100	251.3	203.6-307.0	0.46
Hamilton	4,747	581.7	565.0-598.8	1,916	246.6	235.5-258.1	0.42
McMinn	719	519.7	481.5-560.2	361	274.2	245.9-305.0	0.53
Marion	397	540.5	485.7-599.8	221	325.5	280.9-375.1	0.60
Meigs	208	636.2	547.6-735.6	64	196.5	147.3-257.1	0.31
Polk	254	550.9	482.5-626.5	131	292.8	243.0-350.2	0.53
Rhea	533	660.1	603.7-720.5	231	300.9	262.1-344.0	0.46
Sequatchie	175	515.9	439.7-601.6	109	334.1	272.6-405.3	0.65
<b>Southwest Region</b>	<b>14,214</b>	<b>541.7</b>	<b>532.5-551.0</b>	<b>6,493</b>	<b>267.7</b>	<b>261.0-274.5</b>	<b>0.49</b>
Chester	135	340.2	284.1-404.2	74	204.5	159.8-257.6	0.60
Decatur	178	481.3	411.9-559.9	100	275.6	223.6-337.0	0.57
Fayette	275	304.6	268.3-344.5	207	248.6	214.3-286.6	0.82
Hardeman	375	547.8	492.7-607.3	176	270.3	231.1-314.2	0.49
Hardin	349	444.2	397.5-495.1	206	274.5	237.2-316.2	0.62
Haywood	226	518.4	452.0-591.7	129	312.6	260.2-372.1	0.60
Henderson	349	524.4	469.5-583.9	176	272.8	233.0-317.4	0.52
Lauderdale	333	554.5	494.9-619.1	186	332.6	285.3-385.3	0.60
McNairy	385	519.5	467.9-575.6	184	256.9	220.4-297.9	0.49
Madison	1,173	556.6	524.6-590.0	500	248.4	226.7-271.5	0.45
Shelby	9,764	563.7	552.1-575.4	4,239	267.1	258.8-275.7	0.47
Tipton	672	574.1	528.8-622.2	316	301.9	267.1-339.6	0.53
<b>Upper-Cumberland Region</b>	<b>5,393</b>	<b>585.8</b>	<b>570.0-602.1</b>	<b>2,343</b>	<b>265.3</b>	<b>254.4-276.5</b>	<b>0.45</b>
Cannon	189	541.5	464.4-627.9	81	262.5	205.6-329.7	0.48
Clay	105	416.9	338.5-509.5	51	212.6	156.4-283.7	0.51
Cumberland	1,212	596.9	561.8-633.9	457	229.1	207.5-252.6	0.38
DeKalb	255	532.2	467.2-603.6	124	263.7	217.9-316.2	0.50
Fentress	331	693.0	617.3-775.7	141	312.4	260.9-371.1	0.45
Jackson	160	479.1	404.8-563.9	80	240.9	189.0-303.6	0.50
Macon	297	593.9	526.3-667.5	158	328.7	277.7-386.0	0.55
Overton	306	514.1	456.8-576.8	176	303.3	259.2-353.0	0.59
Pickett	115	664.9	545.2-806.3	44	263.3	189.4-359.9	0.40
Putnam	1,109	659.6	620.8-700.1	418	263.0	238.0-289.9	0.40
Smith	232	530.8	462.5-606.3	123	293.8	242.5-352.4	0.55
Van Buren	55	322.3	239.8-425.9	33	204.2	138.3-292.1	0.63
Warren	565	560.3	514.3-609.4	280	288.9	255.4-325.6	0.52
White	462	668.9	607.6-735.0	177	278.9	237.9-325.0	0.42

\*Rate per 100,000. Rates were adjusted to the 2000 U.S. standard population except for those by age groups.

†Mortality incidence ratio. See Technical Notes for details.

‡At least one rate for a specific age group could not be calculated due to a non-zero count with a zero population.

^Cell suppressed where there were 1-9 cases.

-M:I ratio could not be calculated due to a zero incidence rate or other invalid values.

**Appendix VII. Lung and Bronchus Cancer Incidence and Mortality by Resident County, Tennessee, 2004-2008**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Tennessee</b>	<b>26,405</b>	<b>81.0</b>	<b>80.0-82.0</b>	<b>21,493</b>	<b>66.5</b>	<b>65.6-67.4</b>	<b>0.82</b>
<b>East Region</b>	<b>5,910</b>	<b>88.6</b>	<b>86.4-90.9</b>	<b>4,599</b>	<b>69.5</b>	<b>67.5-71.6</b>	<b>0.78</b>
Anderson	397	82.4	74.4-91.0	349	71.7	64.4-79.8	0.87
Blount	561	79.1	72.6-86.0	435	61.5	55.8-67.7	0.78
Campbell	321	123.4	110.1-138.0	251	97.0	85.3-110.1	0.79
Claiborne	217	112.1	97.5-128.5	185	97.4	83.7-112.9	0.87
Cocke	188	83.3	71.6-96.5	162	73.2	62.2-85.8	0.88
Grainger	138	100.1	83.8-118.9	109	83.7	68.3-101.6	0.84
Hamblen	326	91.1	81.4-101.7	289	81.9	72.6-92.0	0.90
Jefferson	277	92.7	81.9-104.6	209	70.3	60.9-80.8	0.76
Knox	1,899	85.9	82.0-89.8	1,372	62.3	59.0-65.7	0.73
Loudon	259	81.9	71.9-93.0	187	61.0	52.3-70.8	0.74
Monroe	236	88.6	77.5-101.0	187	72.4	62.3-83.9	0.82
Morgan	157	138.8	117.7-162.8	89	79.0	63.2-97.6	0.57
Roane	299	82.5	73.4-92.7	282	77.8	68.9-87.6	0.94
Scott	116	98.6	81.2-118.6	111	94.9	77.8-114.7	0.96
Sevier	432	84.8	76.8-93.3	303	59.9	53.2-67.2	0.71
Union	87	81.1	64.7-100.6	79	75.3	59.4-94.3	0.93
<b>Mid-Cumberland Region</b>	<b>5,672</b>	<b>79.5</b>	<b>77.4-81.6</b>	<b>4,504</b>	<b>64.2</b>	<b>62.3-66.1</b>	<b>0.81</b>
Cheatham	165	91.8	77.9-107.4	132	76.3	63.5-90.9	0.83
Davidson	2,271	80.9	77.6-84.3	1,786	63.9	60.9-66.9	0.79
Dickson	240	98.5	86.3-111.9	175	73.9	63.2-85.8	0.75
Houston	46	84.0	61.4-113.1	39	72.5	51.4-100.1	0.86
Humphreys	110	94.4	77.4-114.2	95	81.0	65.4-99.4	0.86
Montgomery	460	83.4	75.9-91.5	383	70.7	63.7-78.3	0.85
Robertson	238	78.4	68.7-89.1	219	74.5	64.8-85.1	0.95
Rutherford	655	77.6	71.6-83.9	531	64.2	58.7-70.0	0.83
Stewart	67	83.2	64.3-106.4	66	81.6	62.9-104.5	0.98
Sumner	613	81.7	75.2-88.5	443	60.6	55.0-66.6	0.74
Trousdale	36	77.9	54.3-108.8	44	96.3	69.6-130.3	1.24
Williamson	409	63.5	57.3-70.2	292	48.6	43.0-54.6	0.77
Wilson	362	73.4	65.8-81.6	299	61.1	54.1-68.6	0.83

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**Appendix VII Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Northeast Region</b>	<b>2,650</b>	<b>84.7</b>	<b>81.5-88.0</b>	<b>2,144</b>	<b>69.0</b>	<b>66.1-72.1</b>	<b>0.81</b>
Carter	281	77.9	69.0-87.8	242	68.2	59.8-77.6	0.88
Greene	406	97.4	88.0-107.5	352	85.1	76.3-94.6	0.87
Hancock	29	69.6	46.3-101.2	35	82.7	57.4-116.3	1.19
Hawkins	296	85.5	75.9-96.1	226	66.5	58.0-75.9	0.78
Johnson	87	72.1	57.6-89.6	85	73.7	58.7-91.7	1.02
Sullivan	908	87.4	81.8-93.4	718	69.3	64.3-74.6	0.79
Unicoi	101	78.7	64.0-96.2	84	66.0	52.5-82.3	0.84
Washington	542	80.6	73.9-87.8	402	59.9	54.2-66.1	0.74
<b>Northwest Region</b>	<b>1,440</b>	<b>91.3</b>	<b>86.6-96.2</b>	<b>1,241</b>	<b>77.8</b>	<b>73.5-82.3</b>	<b>0.85</b>
Benton	125	105.1	87.1-126.3	89	71.9	57.5-89.2	0.68
Carroll	203	108.2	93.6-124.6	171	88.9	75.9-103.6	0.82
Crockett	83	94.6	75.2-117.7	53	58.6	43.8-77.0	0.62
Dyer	173	81.1	69.4-94.4	158	74.9	63.6-87.8	0.92
Gibson	293	94.3	83.8-106.0	250	80.8	71.0-91.6	0.86
Henry	196	86.7	74.9-100.1	160	69.6	59.2-81.6	0.80
Lake	40	104.2	74.3-142.4	38	96.5	68.2-133.0	0.93
Obion	174	85.3	73.0-99.3	158	77.9	66.1-91.3	0.91
Weakley	153	80.0	67.7-94.0	164	84.3	71.8-98.4	1.05
<b>South Central Region</b>	<b>1,805</b>	<b>85.3</b>	<b>81.4-89.4</b>	<b>1,518</b>	<b>72.2</b>	<b>68.6-75.9</b>	<b>0.85</b>
Bedford	171	79.3	67.7-92.2	150	70.7	59.8-83.0	0.89
Coffee	266	85.3	75.3-96.2	209	67.1	58.3-77.0	0.79
Giles	143	78.4	65.9-92.7	133	72.3	60.4-86.0	0.92
Hickman	136	106.3	89.0-126.0	108	84.2	68.9-101.9	0.79
Lawrence	246	100.3	88.1-113.9	187	76.4	65.8-88.3	0.76
Lewis	53	78.1	58.3-102.7	55	80.8	60.6-105.9	1.03
Lincoln	153	74.4	63.0-87.4	147	70.9	59.8-83.5	0.95
Marshall	132	85.1	71.1-101.2	109	71.9	59.0-86.9	0.84
Maury	352	86.5	77.6-96.1	286	70.9	62.9-79.7	0.82
Moore	14	35.7	19.5-61.6	21	54.9	33.8-85.4	1.54
Perry	51	96.3	71.3-128.2	44	87.5	63.1-118.9	0.91
Wayne	88	87.4	70.0-108.1	69	70.2	54.5-89.2	0.80

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**Appendix VII Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Southeast Region</b>	<b>2,931</b>	<b>78.1</b>	<b>75.3-81.1</b>	<b>2,336</b>	<b>62.5</b>	<b>60.0-65.1</b>	<b>0.80</b>
Bledsoe	52	72.1	53.3-95.6	37	53.2	37.0-74.3	0.74
Bradley	317	60.8	54.2-68.0	301	58.9	52.4-66.0	0.97
Franklin	194	76.1	65.7-87.7	155	60.3	51.2-70.8	0.79
Grundy	81	91.4	72.4-114.1	51	56.8	42.1-75.3	0.62
Hamilton	1,486	78.3	74.3-82.4	1,138	59.7	56.2-63.3	0.76
McMinn	209	65.7	57.0-75.4	222	69.9	60.9-79.8	1.06
Marion	160	92.4	78.4-108.4	136	80.9	67.6-96.1	0.88
Meigs	73	104.0	80.9-132.0	37	50.7	35.4-70.9	0.49
Polk	101	97.1	78.8-118.6	87	86.6	69.1-107.4	0.89
Rhea	205	113.6	98.4-130.7	121	66.9	55.4-80.2	0.59
Sequatchie	53	68.3	51.0-89.9	51	68.2	50.5-90.2	1.00
<b>Southwest Region</b>	<b>4,172</b>	<b>69.0</b>	<b>66.9-71.1</b>	<b>3,744</b>	<b>62.7</b>	<b>60.7-64.7</b>	<b>0.91</b>
Chester	41	45.9	32.9-62.5	50	56.7	42.0-74.9	1.24
Decatur	79	96.7	76.2-121.7	60	70.1	53.4-91.1	0.72
Fayette	71	34.0	26.4-43.1	117	59.8	49.2-71.9	1.76
Hardeman	117	77.1	63.6-92.5	101	66.6	54.2-81.1	0.86
Hardin	148	84.2	71.1-99.4	156	88.7	75.1-104.1	1.05
Haywood	67	64.0	49.6-81.5	79	74.3	58.8-92.8	1.16
Henderson	125	80.3	66.8-95.8	123	80.1	66.5-95.7	1.00
Lauderdale	109	79.2	64.9-95.8	104	76.2	62.1-92.5	0.96
McNairy	139	81.3	68.3-96.4	104	60.9	49.6-74.1	0.75
Madison	368	76.7	69.0-85.0	284	59.0	52.3-66.3	0.77
Shelby	2,690	67.0	64.4-69.6	2,363	59.6	57.2-62.1	0.89
Tipton	218	81.1	70.5-92.9	203	77.6	67.1-89.2	0.96

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**Appendix VII Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
Upper-Cumberland Region	1,793	86.1	82.1-90.3	1,407	67.9	64.4-71.6	0.79
Cannon	52	63.8	47.5-84.1	38	46.9	33.1-64.9	0.74
Clay	36	63.1	43.8-89.1	36	65.9	45.8-92.8	1.04
Cumberland	323	71.2	63.4-80.0	238	54.0	47.1-61.9	0.76
DeKalb	100	91.8	74.5-112.0	91	82.5	66.3-101.7	0.90
Fentress	135	120.4	100.6-143.3	93	83.5	67.0-103.0	0.69
Jackson	61	81.6	62.2-105.8	46	62.7	45.7-84.5	0.77
Macon	110	94.6	77.5-114.4	93	79.8	64.2-98.1	0.84
Overton	118	87.9	72.6-105.8	105	78.0	63.6-94.8	0.89
Pickett	41	108.6	76.8-151.2	25	66.4	42.4-101.3	0.61
Putnam	364	95.1	85.6-105.5	285	74.6	66.2-83.9	0.78
Smith	83	82.0	65.2-102.0	80	79.5	62.9-99.2	0.97
Van Buren	24	70.8	44.8-107.4	15	40.2	22.1-68.9	0.57
Warren	189	82.1	70.8-94.8	149	65.6	55.4-77.1	0.80
White	157	100.9	85.5-118.3	113	72.5	59.7-87.5	0.72

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

<sup>†</sup>Mortality incidence ratio. See Technical Notes for details.

**Appendix VIII. Prostate Cancer Incidence and Mortality by Resident County, Tennessee, 2004-2008**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Tennessee</b>	<b>20,843</b>	<b>142.5</b>	<b>140.6-144.5</b>	<b>2,979</b>	<b>26.2</b>	<b>25.3-27.2</b>	<b>0.18</b>
<b>East Region</b>	<b>4,617</b>	<b>152.8</b>	<b>148.3-157.3</b>	<b>537</b>	<b>23.2</b>	<b>21.2-25.3</b>	<b>0.15</b>
Anderson	330	159.4	142.5-177.8	48	25.6	18.8-34.1	0.16
Blount	427	133.6	120.9-147.3	65	26.2	20.1-33.5	0.20
Campbell	172	147.8	125.8-172.6	21	24.1	14.6-37.1	0.16
Claiborne	114	132.4	108.3-160.4	20	34.5	20.2-54.1	0.26
Cocke	123	122.4	100.7-147.6	24	30.8	19.0-46.9	0.25
Grainger	96	148.3	118.8-183.2	15	36.9	19.8-61.4	0.25
Hamblen	205	130.0	112.2-149.7	22	19.7	12.1-29.9	0.15
Jefferson	206	141.7	122.2-163.6	21	22.8	13.7-35.0	0.16
Knox	1,684	171.1	162.8-179.6	163	20.8	17.6-24.3	0.12
Loudon	291	179.8	159.0-203.0	23	22.0	13.7-33.5	0.12
Monroe	176	141.7	120.7-165.4	15	15.6	8.5-25.9	0.11
Morgan	82	146.4	115.7-183.1	10	27.7	12.9-50.5	0.19
Roane	231	139.4	121.7-159.2	32	23.7	16.0-33.7	0.17
Scott	53	106.1	78.4-140.3	10	21.0	9.3-39.9	0.20
Sevier	362	153.5	137.7-170.8	40	23.1	16.3-31.7	0.15
Union	65	135.7	103.4-174.8	^	^	^_^	^
<b>Mid-Cumberland Region</b>	<b>4,591</b>	<b>141.2</b>	<b>137.0-145.5</b>	<b>611</b>	<b>25.3</b>	<b>23.2-27.4</b>	<b>0.18</b>
Cheatham	108	122.3	99.4-148.9	10	14.3	6.6-26.5	0.12
Davidson	1,800	149.5	142.5-156.7	262	26.9	23.7-30.4	0.18
Dickson	121	112.6	92.7-135.3	29	34.9	23.0-50.4	0.31
Houston	32	130.5	88.9-186.2	^	^	^_^	^
Humphreys	57	101.3	76.4-132.4	10	25.1	11.9-46.1	0.25
Montgomery	316	127.4	113.3-142.7	44	25.0	17.8-33.8	0.20
Robertson	189	134.1	115.1-155.2	27	25.6	16.6-37.3	0.19
Rutherford	595	148.1	135.9-161.0	58	19.2	14.3-25.0	0.13
Stewart	47	132.2	95.8-178.2	13	47.2	24.6-81.1	0.36
Sumner	513	148.8	135.6-162.9	60	23.9	18.1-30.9	0.16
Trousdale	22	108.5	67.4-166.0	^	^	^_^	^
Williamson	532	153.7	140.1-168.3	51	25.5	18.8-33.6	0.17
Wilson	259	110.5	96.6-125.8	34	22.7	15.4-31.9	0.21

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**Appendix VIII Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Northeast Region</b>	<b>1,630</b>	<b>113.3</b>	<b>107.8-119.1</b>	<b>243</b>	<b>22.1</b>	<b>19.3-25.1</b>	<b>0.20</b>
Carter	118	71.2	58.7-85.8	39	30.5	21.5-41.7	0.43
Greene	190	104.5	89.7-121.2	33	26.3	17.9-37.2	0.25
Hancock	28	144.7	94.8-212.7	^	^	^_^	^
Hawkins	201	121.1	104.4-139.8	23	20.0	12.5-30.2	0.17
Johnson	41	67.6	48.1-92.9	11	24.2	12.0-43.5	0.36
Sullivan	660	139.4	128.8-150.7	69	18.8	14.5-23.9	0.13
Unicoi	45	76.9	55.8-104.1	16	33.2	18.8-54.6	0.43
Washington	347	113.2	101.4-126.0	48	19.7	14.4-26.2	0.17
<b>Northwest Region</b>	<b>857</b>	<b>123.1</b>	<b>114.9-131.7</b>	<b>164</b>	<b>27.4</b>	<b>23.3-32.0</b>	<b>0.22</b>
Benton	73	137.8	107.6-174.9	12	23.2	11.8-41.9	0.17
Carroll	96	113.7	91.9-139.4	20	26.1	15.9-40.6	0.23
Crockett	34	88.2	60.8-124.1	^	^	^_^	^
Dyer	84	88.1	69.7-109.8	15	20.0	11.0-33.1	0.23
Gibson	172	129.8	111.0-150.9	34	29.0	20.0-40.6	0.22
Henry	146	148.4	124.8-175.6	24	28.4	17.9-42.9	0.19
Lake	19	111.4	66.1-175.1	^	^	^_^	^
Obion	117	127.0	104.6-152.9	27	35.3	23.1-51.6	0.28
Weakley	116	135.7	111.8-163.2	22	30.2	18.8-45.7	0.22
<b>South Central Region</b>	<b>1,214</b>	<b>129.4</b>	<b>122.1-137.1</b>	<b>189</b>	<b>25.2</b>	<b>21.7-29.2</b>	<b>0.19</b>
Bedford	115	116.3	95.6-140.1	24	29.2	18.5-43.4	0.25
Coffee	224	162.2	141.4-185.3	32	27.3	18.5-38.9	0.17
Giles	87	113.2	89.7-140.9	11	18.8	9.3-33.5	0.17
Hickman	70	111.7	86.6-142.0	^	^	^_^	^
Lawrence	151	141.6	119.5-166.7	27	30.7	19.9-45.0	0.22
Lewis	33	108.0	73.3-153.9	^	^	^_^	^
Lincoln	90	97.8	78.3-120.9	17	24.2	13.9-38.8	0.25
Marshall	95	137.3	110.1-169.1	12	22.9	11.4-40.0	0.17
Maury	254	140.6	123.3-159.6	30	20.8	13.8-29.7	0.15
Moore	20	112.8	68.4-177.1	^	^	^_^	^
Perry	32	147.5	98.4-212.8	^	^	^_^	^
Wayne	43	94.7	68.1-128.5	11	28.8	14.1-51.6	0.30

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**Appendix VIII Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Southeast Region</b>	<b>2,341</b>	<b>138.6</b>	<b>132.9-144.5</b>	<b>365</b>	<b>26.8</b>	<b>24.1-29.8</b>	<b>0.19</b>
Bledsoe	40	106.4	74.8-147.5	^	^	^_^	^
Bradley	219	90.1	78.3-103.3	32	19.4	13.1-27.5	0.22
Franklin	160	136.8	116.1-160.4	24	23.3	14.8-34.9	0.17
Grundy	52	129.7	96.3-171.3	^	^	^_^	^
Hamilton	1,383	164.3	155.6-173.4	225	31.7	27.6-36.2	0.19
McMinn	154	108.4	91.6-127.6	28	23.9	15.7-34.8	0.22
Marion	87	120.8	95.6-150.8	20	40.3	23.5-63.3	0.33
Meigs	47	139.4	101.3-188.1	^	^	^_^	^
Polk	47	92.1	66.6-124.8	^	^	^_^	^
Rhea	110	133.4	109.0-161.9	14	21.1	11.1-35.9	0.16
Sequatchie	42	115.8	82.1-158.9	^	^	^_^	^
<b>Southwest Region</b>	<b>4,117</b>	<b>155.9</b>	<b>151.0-160.8</b>	<b>706</b>	<b>34.9</b>	<b>32.3-37.6</b>	<b>0.22</b>
Chester	35	89.0	61.4-124.8	^	^	^_^	^
Decatur	35	87.4	60.6-123.7	^	^	^_^	^
Fayette	92	105.0	83.9-129.8	19	27.9	16.3-44.0	0.27
Hardeman	93	138.2	111.0-170.0	19	35.3	21.1-54.7	0.26
Hardin	70	82.9	64.2-105.8	13	19.3	10.1-33.5	0.23
Haywood	66	153.0	117.9-195.3	^	^	^_^	^
Henderson	78	115.3	90.6-144.8	^	^	^_^	^
Lauderdale	82	138.6	109.4-172.9	18	38.7	22.7-60.6	0.28
McNairy	78	99.4	78.2-125.0	22	35.0	21.7-53.4	0.35
Madison	292	132.8	117.7-149.2	43	24.2	17.4-32.6	0.18
Shelby	3,000	173.7	167.3-180.3	517	39.4	36.0-43.0	0.23
Tipton	196	167.8	143.6-194.6	21	23.6	14.1-36.4	0.14

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**Appendix VIII Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
Upper-Cumberland Region	1,414	147.1	139.4-155.2	164	21.5	18.2-25.1	0.15
Cannon	41	120.9	85.7-166.0	^	^	^_^	^
Clay	28	104.4	68.5-154.5	^	^	^_^	^
Cumberland	378	168.3	151.2-187.1	34	18.3	12.5-26.3	0.11
DeKalb	51	100.3	74.3-132.7	^	^	^_^	^
Fentress	88	171.6	136.3-213.8	^	^	^_^	^
Jackson	35	97.9	67.6-138.6	^	^	^_^	^
Macon	65	133.2	101.9-170.8	16	40.2	22.6-65.1	0.30
Overton	61	97.9	74.4-126.9	16	33.2	18.8-54.0	0.34
Pickett	25	139.3	89.0-212.1	^	^	^_^	^
Putnam	310	178.1	158.7-199.4	24	17.6	11.2-26.2	0.10
Smith	50	112.1	82.4-148.9	^	^	^_^	^
Van Buren	17	96.2	54.7-159.5	0	0.0	0.0-29.2	0.00
Warren	137	134.2	112.3-159.2	19	21.0	12.5-32.9	0.16
White	128	178.9	148.4-214.0	19	35.2	20.7-55.5	0.20

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

<sup>†</sup>Mortality incidence ratio. See Technical Notes for details.

^Cell suppressed where there were 1-9 cases.

**Appendix IX. Female Breast Cancer Incidence and Mortality by Resident County, Tennessee, 2004-2008**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Tennessee</b>	<b>20,661</b>	<b>117.3</b>	<b>115.7-119.0</b>	<b>4,411</b>	<b>24.3</b>	<b>23.6-25.0</b>	<b>0.21</b>
<b>East Region</b>	<b>4,153</b>	<b>118.6</b>	<b>115.0-122.4</b>	<b>775</b>	<b>21.3</b>	<b>19.8-22.9</b>	<b>0.18</b>
Anderson	287	115.9	102.7-130.6	52	19.4	14.4-25.9	0.17
Blount	466	122.9	111.8-134.8	85	22.0	17.5-27.4	0.18
Campbell	150	111.8	94.3-131.9	35	24.1	16.7-34.1	0.22
Claiborne	119	121.0	99.9-145.5	27	26.1	17.1-38.5	0.22
Cocke	109	97.4	79.7-118.1	20	17.4	10.5-27.4	0.18
Grainger	79	119.0	93.9-149.2	29	42.6	28.4-62.0	0.36
Hamblen	181	96.6	82.8-112.2	38	19.1	13.4-26.5	0.20
Jefferson	188	123.9	106.5-143.6	30	20.1	13.4-29.1	0.16
Knox	1,558	129.1	122.7-135.8	254	20.2	17.7-22.8	0.16
Loudon	195	118.9	102.1-138.0	31	20.4	13.6-29.7	0.17
Monroe	131	95.5	79.6-113.9	23	17.4	10.9-26.3	0.18
Morgan	88	155.3	124.1-192.3	23	38.9	24.5-59.2	0.25
Roane	193	105.1	90.5-121.7	46	22.8	16.6-30.8	0.22
Scott	62	98.7	75.3-127.2	15	23.9	13.2-40.0	0.24
Sevier	304	117.6	104.6-131.9	61	22.7	17.3-29.4	0.19
Union	43	80.5	58.0-109.1	^	^	^_^	^
<b>Mid-Cumberland Region</b>	<b>4,820</b>	<b>117.6</b>	<b>114.3-121.0</b>	<b>950</b>	<b>23.1</b>	<b>21.7-24.7</b>	<b>0.20</b>
Cheatham	113	110.0	90.4-132.8	27	26.9	17.6-39.4	0.24
Davidson	1,940	120.4	115.1-125.9	407	24.2	21.9-26.7	0.20
Dickson	163	125.1	106.5-146.1	27	20.7	13.6-30.3	0.17
Houston	31	120.8	80.9-174.5	10	34.9	16.3-67.5	0.29
Humphreys	87	152.4	121.4-189.4	^	^	^_^	^
Montgomery	355	108.6	97.5-120.5	69	21.7	16.9-27.5	0.20
Robertson	180	110.0	94.5-127.4	38	23.5	16.6-32.4	0.21
Rutherford	558	111.2	102.0-120.9	104	21.4	17.5-26.0	0.19
Stewart	44	106.5	77.0-144.4	^	^	^_^	^
Sumner	469	112.3	102.2-123.0	87	21.5	17.2-26.6	0.19
Trousdale	20	93.4	56.6-145.9	^	^	^_^	^
Williamson	556	132.6	121.5-144.5	86	22.2	17.6-27.6	0.17
Wilson	304	107.3	95.4-120.2	75	26.7	21.0-33.7	0.25

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**Appendix IX Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Northeast Region</b>	<b>1,845</b>	<b>114.7</b>	<b>109.4-120.2</b>	<b>386</b>	<b>22.6</b>	<b>20.4-25.1</b>	<b>0.20</b>
Carter	156	85.8	72.5-100.9	37	18.9	13.2-26.5	0.22
Greene	263	120.7	106.3-136.7	60	26.9	20.4-34.9	0.22
Hancock	22	107.7	66.3-166.5	^	^	^_^	^
Hawkins	196	106.7	92.0-123.2	50	27.0	19.9-35.9	0.25
Johnson	52	89.0	65.6-119.0	10	16.4	7.8-32.0	0.18
Sullivan	642	121.7	112.2-131.8	120	21.6	17.8-26.0	0.18
Unicoi	78	123.4	96.7-155.9	17	21.6	12.5-36.5	0.18
Washington	436	123.6	112.1-136.0	86	22.6	18.0-28.0	0.18
<b>Northwest Region</b>	<b>888</b>	<b>109.2</b>	<b>102.0-116.9</b>	<b>225</b>	<b>25.3</b>	<b>22.0-29.0</b>	<b>0.23</b>
Benton	63	107.2	81.5-139.3	14	19.9	10.8-35.5	0.19
Carroll	115	122.2	100.1-148.1	26	24.1	15.4-36.5	0.20
Crockett	62	139.5	106.4-180.0	13	28.0	14.5-49.4	0.20
Dyer	110	93.4	76.5-113.1	24	20.3	12.9-30.6	0.22
Gibson	190	116.0	99.6-134.5	54	29.5	21.8-39.3	0.25
Henry	123	107.3	88.7-129.0	34	27.5	18.8-39.3	0.26
Lake	21	111.3	66.5-176.7	^	^	^_^	^
Obion	103	101.9	82.8-124.4	26	23.8	15.4-35.6	0.23
Weakley	101	101.7	82.4-124.3	28	24.2	15.7-35.9	0.24
<b>South Central Region</b>	<b>1,286</b>	<b>116.4</b>	<b>110.0-123.0</b>	<b>290</b>	<b>24.9</b>	<b>22.1-28.0</b>	<b>0.21</b>
Bedford	134	118.0	98.7-140.0	33	27.8	19.0-39.2	0.24
Coffee	166	104.0	88.5-121.6	45	26.0	18.9-35.1	0.25
Giles	93	98.3	79.0-121.3	23	22.5	14.1-34.6	0.23
Hickman	84	127.8	101.6-158.9	17	24.4	14.1-39.8	0.19
Lawrence	162	126.5	107.3-148.2	33	24.6	16.8-35.0	0.19
Lewis	29	80.0	53.2-116.3	^	^	^_^	^
Lincoln	126	115.5	95.8-138.3	30	25.0	16.7-36.4	0.22
Marshall	110	131.4	107.7-158.8	31	36.4	24.6-52.1	0.28
Maury	293	131.0	116.3-147.0	53	22.9	17.1-30.0	0.17
Moore	^	^	^_^	^	^	^_^	^
Perry	27	103.8	67.3-154.6	^	^	^_^	^
Wayne	53	107.6	80.1-142.2	11	21.3	10.5-39.5	0.20

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**Appendix IX Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Southeast Region</b>	<b>2,325</b>	<b>117.1</b>	<b>112.3-122.0</b>	<b>480</b>	<b>23.3</b>	<b>21.2-25.5</b>	<b>0.20</b>
Bledsoe	37	100.1	70.0-139.6	^	^	^_^	^
Bradley	302	109.4	97.3-122.6	84	30.3	24.1-37.6	0.28
Franklin	126	100.5	83.4-120.3	34	25.6	17.6-36.3	0.25
Grundy	58	132.9	100.1-173.5	15	32.5	17.9-54.8	0.24
Hamilton	1,214	117.6	111.0-124.5	242	22.2	19.4-25.2	0.19
McMinn	164	98.2	83.5-114.8	32	18.3	12.4-26.2	0.19
Marion	107	123.1	100.4-149.6	28	32.5	21.5-47.4	0.26
Meigs	45	134.5	97.3-181.6	^	^	^_^	^
Polk	54	100.5	75.0-132.6	^	^	^_^	^
Rhea	180	198.5	169.8-230.8	16	16.5	9.2-27.5	0.08
Sequatchie	38	92.0	64.8-127.5	^	^	^_^	^
<b>Southwest Region</b>	<b>4,078</b>	<b>117.6</b>	<b>114.0-121.3</b>	<b>1,065</b>	<b>30.4</b>	<b>28.5-32.2</b>	<b>0.26</b>
Chester	58	125.0	94.4-162.5	14	27.1	14.6-46.6	0.22
Decatur	36	90.0	61.3-128.4	^	^	^_^	^
Fayette	84	77.6	61.7-96.6	30	27.1	18.2-39.1	0.35
Hardeman	81	105.6	83.4-132.0	19	24.1	14.3-38.4	0.23
Hardin	83	92.4	73.1-115.6	19	19.9	11.9-31.9	0.22
Haywood	51	85.7	63.4-113.5	21	33.5	20.5-52.0	0.39
Henderson	109	130.9	107.2-158.5	30	36.1	24.2-52.1	0.28
Lauderdale	63	84.6	64.7-108.8	25	33.4	21.4-50.0	0.39
McNairy	116	143.0	117.4-172.8	21	24.8	15.0-38.9	0.17
Madison	293	108.1	96.0-121.4	67	23.3	18.0-29.7	0.22
Shelby	2,943	123.3	118.8-127.9	765	32.1	29.9-34.5	0.26
Tipton	161	107.5	91.4-125.6	45	31.4	22.8-42.0	0.29

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**Appendix IX Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
Upper-Cumberland Region	1,215	117.3	110.6-124.3	240	21.8	19.1-24.8	0.19
Cannon	34	82.4	56.8-116.1	^	^	^_^	^
Clay	18	71.7	41.3-116.8	^	^	^_^	^
Cumberland	242	119.9	103.9-137.8	35	15.5	10.6-22.5	0.13
DeKalb	68	119.8	92.6-152.8	16	27.3	15.5-45.2	0.23
Fentress	57	102.2	76.8-133.9	11	19.2	9.4-35.6	0.19
Jackson	33	90.7	61.4-130.2	10	23.4	11.1-45.8	0.26
Macon	84	140.7	111.9-174.8	13	20.7	10.9-35.9	0.15
Overton	58	79.7	60.1-104.2	13	16.6	8.8-29.5	0.21
Pickett	14	86.9	45.5-153.1	^	^	^_^	^
Putnam	290	150.0	132.9-168.8	59	28.1	21.3-36.5	0.19
Smith	53	97.6	72.8-128.3	20	34.2	20.7-53.6	0.35
Van Buren	19	113.0	66.8-180.8	^	^	^_^	^
Warren	143	117.2	98.5-138.5	26	20.8	13.5-30.9	0.18
White	102	125.0	101.4-152.6	18	22.5	13.2-36.3	0.18

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

†Mortality incidence ratio. See Technical Notes for details.

^Cell suppressed where there were 1-9 cases.

**Appendix X. Colorectal Cancer Incidence and Mortality by Resident County, Tennessee, 2004-2008**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Tennessee</b>	<b>15,776</b>	<b>48.8</b>	<b>48.1-49.6</b>	<b>5,885</b>	<b>18.5</b>	<b>18.0-19.0</b>	<b>0.38</b>
<b>East Region</b>	<b>3,031</b>	<b>46.6</b>	<b>44.9-48.3</b>	<b>1,093</b>	<b>17.2</b>	<b>16.2-18.2</b>	<b>0.37</b>
Anderson	253	53.9	47.4-61.1	98	20.0	16.2-24.5	0.37
Blount	300	43.0	38.2-48.2	104	15.2	12.4-18.4	0.35
Campbell	128	50.3	41.8-60.0	55	22.4	16.8-29.3	0.45
Claiborne	100	54.3	44.1-66.4	34	19.2	13.2-27.0	0.35
Cocke	99	46.6	37.7-57.1	35	16.8	11.6-23.6	0.36
Grainger	66	50.5	38.8-64.7	28	22.9	15.1-33.4	0.45
Hamblen	151	43.4	36.7-51.0	78	22.7	17.9-28.4	0.52
Jefferson	135	47.1	39.3-56.0	38	13.0	9.1-18.1	0.28
Knox	964	43.8	41.0-46.7	338	15.6	13.9-17.3	0.36
Loudon	132	41.4	34.5-49.5	44	15.5	11.1-21.0	0.37
Monroe	117	46.9	38.7-56.5	35	14.5	10.0-20.3	0.31
Morgan	73	65.1	50.8-82.3	24	22.5	14.3-33.7	0.35
Roane	155	43.9	37.2-51.6	63	18.9	14.4-24.3	0.43
Scott	68	59.9	46.3-76.2	24	21.1	13.4-31.7	0.35
Sevier	238	48.8	42.7-55.6	77	16.7	13.1-20.9	0.34
Union	52	52.8	39.2-69.6	18	18.6	10.9-29.7	0.35
<b>Mid-Cumberland Region</b>	<b>3,429</b>	<b>47.5</b>	<b>45.9-49.2</b>	<b>1,224</b>	<b>17.5</b>	<b>16.5-18.5</b>	<b>0.37</b>
Cheatham	82	45.8	36.2-57.1	25	14.8	9.5-22.0	0.32
Davidson	1,337	46.9	44.4-49.5	505	17.7	16.2-19.3	0.38
Dickson	149	63.9	53.9-75.1	54	23.6	17.6-30.8	0.37
Houston	34	66.9	45.8-94.8	^	^	^_^	^
Humphreys	58	49.4	37.4-64.5	19	17.8	10.6-28.2	0.36
Montgomery	263	46.6	41.0-52.7	98	18.1	14.7-22.1	0.39
Robertson	153	52.2	44.2-61.3	60	21.6	16.4-27.8	0.41
Rutherford	370	43.0	38.6-47.7	138	17.6	14.7-20.8	0.41
Stewart	51	63.3	46.9-83.9	18	25.0	14.7-39.8	0.39
Sumner	359	49.0	44.0-54.4	122	17.3	14.3-20.6	0.35
Trousdale	23	53.6	33.7-81.4	^	^	^_^	^
Williamson	315	46.0	40.9-51.6	97	15.1	12.1-18.5	0.33
Wilson	235	47.2	41.2-53.8	76	16.3	12.8-20.5	0.35

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**Appendix X Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Northeast Region</b>	<b>1,313</b>	<b>43.0</b>	<b>40.7-45.4</b>	<b>544</b>	<b>17.7</b>	<b>16.3-19.3</b>	<b>0.41</b>
Carter	128	36.4	30.3-43.4	73	20.7	16.2-26.1	0.57
Greene	180	44.6	38.2-51.7	75	18.8	14.7-23.7	0.42
Hancock	^	^	^_^	^	^	^_^	^
Hawkins	144	42.7	35.9-50.4	50	15.0	11.1-19.9	0.35
Johnson	50	42.0	31.0-56.1	19	15.5	9.3-24.9	0.37
Sullivan	447	44.6	40.5-49.0	172	16.6	14.2-19.4	0.37
Unicoi	47	36.4	26.7-49.0	24	18.1	11.6-27.5	0.50
Washington	308	45.8	40.8-51.2	126	18.9	15.7-22.5	0.41
<b>Northwest Region</b>	<b>816</b>	<b>52.1</b>	<b>48.5-55.9</b>	<b>359</b>	<b>22.1</b>	<b>19.8-24.5</b>	<b>0.42</b>
Benton	51	43.7	32.3-58.2	20	15.9	9.7-25.4	0.36
Carroll	111	58.6	48.1-71.0	52	25.8	19.2-34.2	0.44
Crockett	42	47.6	34.1-64.9	22	23.1	14.4-35.5	0.49
Dyer	108	50.3	41.2-60.9	46	21.3	15.5-28.5	0.42
Gibson	164	53.7	45.7-62.8	87	26.5	21.2-32.9	0.49
Henry	106	48.1	39.3-58.6	40	18.0	12.8-24.8	0.37
Lake	19	46.7	28.0-73.7	^	^	^_^	^
Obion	119	61.0	50.5-73.3	36	17.7	12.3-24.7	0.29
Weakley	96	49.2	39.8-60.3	49	24.2	17.8-32.2	0.49
<b>South Central Region</b>	<b>1,104</b>	<b>52.9</b>	<b>49.8-56.1</b>	<b>419</b>	<b>20.3</b>	<b>18.3-22.3</b>	<b>0.38</b>
Bedford	103	47.5	38.7-57.6	46	21.1	15.4-28.2	0.44
Coffee	166	54.8	46.7-63.9	60	19.9	15.2-25.7	0.36
Giles	102	57.4	46.7-70.1	43	23.7	17.1-32.2	0.41
Hickman	64	51.1	39.3-65.5	24	19.5	12.4-29.2	0.38
Lawrence	126	51.8	43.1-61.8	45	19.1	13.8-25.7	0.37
Lewis	37	56.3	39.4-78.2	17	27.1	15.7-43.7	0.48
Lincoln	117	57.3	47.3-68.9	52	25.5	19.0-33.6	0.45
Marshall	93	61.6	49.6-75.6	24	16.0	10.2-23.9	0.26
Maury	197	48.1	41.6-55.4	76	18.6	14.7-23.4	0.39
Moore	12	30.4	15.6-54.9	^	^	^_^	^
Perry	35	67.5	46.7-95.3	^	^	^_^	^
Wayne	52	55.1	41.1-72.6	17	18.5	10.7-29.9	0.34

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**Appendix X Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Southeast Region</b>	<b>1,726</b>	<b>46.8</b>	<b>44.6-49.1</b>	<b>573</b>	<b>15.6</b>	<b>14.3-16.9</b>	<b>0.33</b>
Bledsoe	27	36.8	23.9-54.5	^	^	^_^	^
Bradley	226	44.4	38.7-50.6	73	15.2	11.9-19.2	0.34
Franklin	149	60.1	50.7-70.8	47	18.5	13.6-24.7	0.31
Grundy	45	54.8	39.7-73.8	18	20.6	12.1-32.9	0.38
Hamilton	860	45.3	42.3-48.5	262	13.8	12.2-15.6	0.30
McMinn	138	44.7	37.4-52.9	62	20.2	15.5-26.1	0.45
Marion	69	43.7	33.7-55.7	31	19.9	13.4-28.7	0.46
Meigs	35	50.6	34.8-71.5	^	^	^_^	^
Polk	46	46.7	34.0-62.9	18	19.4	11.4-31.1	0.42
Rhea	104	59.2	48.2-72.1	35	19.4	13.4-27.2	0.33
Sequatchie	27	39.0	25.6-57.0	10	14.5	6.9-27.0	0.37
<b>Southwest Region</b>	<b>3,308</b>	<b>54.2</b>	<b>52.4-56.1</b>	<b>1,299</b>	<b>21.7</b>	<b>20.5-22.9</b>	<b>0.40</b>
Chester	30	33.5	22.5-48.0	16	18.2	10.4-29.7	0.54
Decatur	43	52.0	37.4-71.1	16	19.8	11.2-33.0	0.38
Fayette	69	34.6	26.8-44.0	29	15.0	9.9-21.7	0.43
Hardeman	73	49.0	38.4-61.8	39	25.5	18.1-35.0	0.52
Hardin	71	40.5	31.5-51.5	28	15.9	10.5-23.4	0.39
Haywood	60	56.7	43.2-73.3	27	25.4	16.7-37.1	0.45
Henderson	94	60.8	49.1-74.6	29	18.6	12.4-26.9	0.31
Lauderdale	82	59.8	47.4-74.4	39	29.0	20.6-39.8	0.48
McNairy	103	66.5	54.0-81.1	38	24.0	16.9-33.2	0.36
Madison	254	52.2	45.9-59.1	91	18.3	14.7-22.5	0.35
Shelby	2,287	55.8	53.5-58.1	892	22.4	21.0-24.0	0.40
Tipton	142	55.2	46.3-65.2	55	22.5	16.8-29.4	0.41

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**Appendix X Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
Upper-Cumberland Region	1,026	51.1	48.0-54.4	374	18.8	16.9-20.8	0.37
Cannon	41	52.7	37.7-71.9	16	20.9	11.9-34.3	0.40
Clay	21	38.0	23.3-59.7	12	23.7	12.1-42.6	0.62
Cumberland	186	43.6	37.3-50.8	61	14.0	10.6-18.4	0.32
DeKalb	60	55.5	42.3-71.7	20	18.1	11.0-28.3	0.33
Fentress	63	60.7	46.4-78.3	28	27.9	18.4-40.8	0.46
Jackson	31	45.7	30.9-65.7	17	23.3	13.5-38.3	0.51
Macon	66	59.8	46.1-76.2	22	20.2	12.6-30.8	0.34
Overton	59	44.7	33.8-58.1	25	19.9	12.8-29.7	0.45
Pickett	17	44.9	25.9-75.1	10	27.9	13.2-54.4	0.62
Putnam	200	53.7	46.5-61.8	56	15.0	11.3-19.5	0.28
Smith	55	54.1	40.6-70.7	29	29.2	19.5-42.2	0.54
Van Buren	11	32.1	15.6-59.8	^	^	^_^	^
Warren	133	58.4	48.9-69.4	43	18.3	13.2-24.8	0.31
White	83	54.8	43.5-68.2	28	19.0	12.5-27.7	0.35

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

†Mortality incidence ratio. See Technical Notes for details.

^Cell suppressed where there were 1-9 cases.

**Appendix XI. Melanoma of the Skin Incidence and Mortality by Resident County, Tennessee, 2004-2008**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Tennessee</b>	<b>6,299</b>	<b>19.6</b>	<b>19.2-20.1</b>	<b>946</b>	<b>3.0</b>	<b>2.8-3.2</b>	<b>0.15</b>
<b>East Region</b>	<b>1,663</b>	<b>26.3</b>	<b>25.1-27.6</b>	<b>205</b>	<b>3.2</b>	<b>2.8-3.7</b>	<b>0.12</b>
Anderson	97	21.6	17.4-26.4	11	2.4	1.2-4.5	0.11
Blount	172	25.6	21.8-29.8	20	2.8	1.7-4.4	0.11
Campbell	41	16.5	11.7-22.6	^	^	^_^	^
Claiborne	44	25.1	18.1-34.0	^	^	^_^	^
Cocke	53	26.0	19.4-34.3	^	^	^_^	^
Grainger	42	34.1	24.4-46.4	^	^	^_^	^
Hamblen	108	31.5	25.7-38.2	11	3.1	1.5-5.7	0.10
Jefferson	100	36.4	29.4-44.4	17	6.8	3.9-10.9	0.19
Knox	607	27.9	25.7-30.2	67	3.1	2.4-3.9	0.11
Loudon	95	31.2	24.9-38.6	^	^	^_^	^
Monroe	47	18.4	13.4-24.7	12	4.7	2.4-8.3	0.26
Morgan	14	12.9	7.0-21.8	^	^	^_^	^
Roane	76	23.3	18.3-29.4	^	^	^_^	^
Scott	23	20.7	13.1-31.3	^	^	^_^	^
Sevier	132	27.9	23.3-33.2	19	4.0	2.4-6.3	0.14
Union	12	12.3	6.3-21.7	^	^	^_^	^
<b>Mid-Cumberland Region</b>	<b>1,314</b>	<b>17.3</b>	<b>16.3-18.2</b>	<b>205</b>	<b>2.9</b>	<b>2.5-3.3</b>	<b>0.17</b>
Cheatham	29	14.4	9.6-21.0	^	^	^_^	^
Davidson	455	15.3	13.9-16.8	74	2.7	2.1-3.3	0.18
Dickson	37	15.3	10.7-21.2	^	^	^_^	^
Houston	^	^	^_^	^	^	^_^	^
Humphreys	15	14.9	8.2-24.9	^	^	^_^	^
Montgomery	104	15.9	12.9-19.3	20	3.5	2.1-5.4	0.22
Robertson	67	22.7	17.6-28.9	10	3.5	1.6-6.4	0.15
Rutherford	153	16.1	13.6-18.9	19	2.3	1.4-3.6	0.14
Stewart	16	21.8	12.4-35.9	^	^	^_^	^
Sumner	165	21.6	18.4-25.2	25	3.5	2.3-5.2	0.16
Trousdale	^	^	^_^	^	^	^_^	^
Williamson	178	24.3	20.7-28.3	20	2.9	1.8-4.6	0.12
Wilson	85	16.6	13.2-20.6	18	3.4	2.0-5.4	0.20

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**Appendix XI Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Northeast Region</b>	<b>668</b>	<b>23.1</b>	<b>21.4-25.0</b>	<b>95</b>	<b>3.1</b>	<b>2.5-3.8</b>	<b>0.13</b>
Carter	56	16.5	12.4-21.6	^	^	^_^	^
Greene	79	20.3	16.0-25.5	17	4.5	2.6-7.2	0.22
Hancock	^	^	^_^	^	^	^_^	^
Hawkins	89	28.0	22.4-34.7	^	^	^_^	^
Johnson	16	14.0	8.0-23.4	^	^	^_^	^
Sullivan	262	27.8	24.4-31.4	28	2.9	1.9-4.3	0.10
Unicoi	25	22.2	14.2-33.5	^	^	^_^	^
Washington	137	21.2	17.8-25.2	25	3.7	2.4-5.5	0.17
<b>Northwest Region</b>	<b>189</b>	<b>13.0</b>	<b>11.2-15.1</b>	<b>60</b>	<b>4.0</b>	<b>3.0-5.2</b>	<b>0.31</b>
Benton	15	16.1	8.7-27.4	^	^	^_^	^
Carroll	36	21.0	14.5-29.5	^	^	^_^	^
Crockett	^	^	^_^	0	0.0	0.0-5.0	^
Dyer	21	10.3	6.3-15.8	^	^	^_^	^
Gibson	24	8.2	5.2-12.3	11	3.7	1.8-6.8	0.45
Henry	33	16.0	10.9-22.9	10	4.6	2.2-8.8	0.29
Lake	^	^	^_^	0	0.0	0.0-10.8	^
Obion	30	16.2	10.8-23.3	11	5.6	2.7-10.2	0.35
Weakley	15	8.7	4.8-14.5	^	^	^_^	^
<b>South Central Region</b>	<b>324</b>	<b>15.9</b>	<b>14.2-17.7</b>	<b>68</b>	<b>3.4</b>	<b>2.6-4.3</b>	<b>0.21</b>
Bedford	48	22.6	16.6-30.0	^	^	^_^	^
Coffee	53	18.6	13.9-24.5	12	4.2	2.2-7.5	0.23
Giles	19	10.5	6.3-16.8	^	^	^_^	^
Hickman	14	11.1	6.1-18.8	^	^	^_^	^
Lawrence	34	14.8	10.2-20.7	^	^	^_^	^
Lewis	^	^	^_^	^	^	^_^	^
Lincoln	30	14.7	9.9-21.2	^	^	^_^	^
Marshall	35	22.4	15.6-31.4	^	^	^_^	^
Maury	61	15.0	11.4-19.3	15	3.8	2.1-6.3	0.25
Moore	^	^	^_^	^	^	^_^	^
Perry	11	22.0	10.6-41.2	^	^	^_^	^
Wayne	^	^	^_^	^	^	^_^	^

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**Appendix XI Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Southeast Region</b>	<b>860</b>	<b>24.2</b>	<b>22.6-25.9</b>	<b>115</b>	<b>3.1</b>	<b>2.5-3.7</b>	<b>0.13</b>
Bledsoe	15	17.6	9.7-30.1	^	^	^_^	^
Bradley	79	15.8	12.5-19.7	16	3.3	1.9-5.4	0.21
Franklin	38	16.0	11.2-22.1	11	4.3	2.1-7.8	0.27
Grundy	19	24.3	14.4-38.3	^	^	^_^	^
Hamilton	511	28.2	25.8-30.8	43	2.2	1.6-3.0	0.08
McMinn	57	19.0	14.3-24.7	13	4.0	2.1-7.0	0.21
Marion	33	22.0	15.0-31.1	^	^	^_^	^
Meigs	17	22.8	13.1-37.5	^	^	^_^	^
Polk	21	20.9	12.6-32.9	^	^	^_^	^
Rhea	49	29.0	21.3-38.6	^	^	^_^	^
Sequatchie	21	32.3	19.9-49.6	^	^	^_^	^
<b>Southwest Region</b>	<b>774</b>	<b>12.4</b>	<b>11.6-13.4</b>	<b>116</b>	<b>1.9</b>	<b>1.6-2.3</b>	<b>0.15</b>
Chester	^	^	^_^	^	^	^_^	^
Decatur	^	^	^_^	^	^	^_^	^
Fayette	12	6.7	3.4-11.7	^	^	^_^	^
Hardeman	^	^	^_^	^	^	^_^	^
Hardin	25	15.2	9.6-22.8	^	^	^_^	^
Haywood	^	^	^_^	^	^	^_^	^
Henderson	15	10.2	5.7-17.0	^	^	^_^	^
Lauderdale	11	8.5	4.2-15.1	^	^	^_^	^
McNairy	19	11.5	6.8-18.4	^	^	^_^	^
Madison	60	12.4	9.4-15.9	13	2.7	1.4-4.7	0.22
Shelby	570	13.4	12.3-14.6	64	1.6	1.2-2.0	0.12
Tipton	30	10.7	7.2-15.4	^	^	^_^	^

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**Appendix XI Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
Upper-Cumberland Region	364	19.4	17.4-21.5	82	4.4	3.5-5.4	0.23
Cannon	17	20.7	12.0-33.8	^	^	^_^	^
Clay	^	^	^_^	^	^	^_^	^
Cumberland	94	25.2	19.9-31.5	^	^	^_^	^
DeKalb	19	18.3	11.0-28.9	^	^	^_^	^
Fentress	19	18.9	11.2-30.1	^	^	^_^	^
Jackson	11	17.0	8.3-31.2	^	^	^_^	^
Macon	18	15.9	9.4-25.3	^	^	^_^	^
Overton	21	17.1	10.4-26.5	^	^	^_^	^
Pickett	^	^	^_^	^	^	^_^	^
Putnam	68	19.6	15.2-25.0	18	5.0	3.0-8.0	0.26
Smith	18	17.4	10.3-27.9	^	^	^_^	^
Van Buren	^	^	^_^	^	^	^_^	^
Warren	37	17.3	12.1-23.9	14	7.0	3.8-11.7	0.40
White	31	21.6	14.5-31.0	^	^	^_^	^

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

†Mortality incidence ratio. See Technical Notes for details.

^Cell suppressed where there were 1-9 cases.

**Appendix XII. Pancreas Cancer Incidence and Mortality by Resident County, Tennessee, 2004-2008**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Tennessee</b>	<b>3,496</b>	<b>10.9</b>	<b>10.5-11.2</b>	<b>3,489</b>	<b>10.9</b>	<b>10.5-11.3</b>	<b>1.00</b>
<b>East Region</b>	<b>680</b>	<b>10.4</b>	<b>9.6-11.2</b>	<b>661</b>	<b>10.2</b>	<b>9.4-11.0</b>	<b>0.98</b>
Anderson	52	10.7	8.0-14.2	53	10.9	8.2-14.4	1.02
Blount	67	9.7	7.5-12.4	68	10.0	7.7-12.7	1.03
Campbell	25	10.0	6.4-14.9	23	8.8	5.6-13.5	0.88
Claiborne	14	7.5	4.1-12.8	13	6.9	3.7-12.1	0.92
Cocke	21	9.8	6.0-15.3	25	11.4	7.3-17.0	1.16
Grainger	16	10.6	6.0-17.7	14	9.9	5.4-17.1	0.93
Hamblen	38	11.2	7.9-15.5	41	12.2	8.7-16.6	1.09
Jefferson	34	12.2	8.4-17.2	35	12.6	8.7-17.6	1.03
Knox	226	10.2	8.9-11.6	215	9.7	8.4-11.1	0.95
Loudon	39	12.0	8.4-16.8	33	10.2	6.9-14.7	0.85
Monroe	28	10.5	6.9-15.4	28	11.2	7.4-16.3	1.07
Morgan	19	18.5	11.1-29.0	14	13.5	7.3-22.9	0.73
Roane	26	6.9	4.5-10.3	36	9.7	6.8-13.6	1.41
Scott	13	11.9	6.3-20.5	^	^	^_^	^
Sevier	53	10.3	7.6-13.5	51	10.4	7.7-13.8	1.01
Union	^	^	^_^	^	^	^_^	^
<b>Mid-Cumberland Region</b>	<b>815</b>	<b>11.4</b>	<b>10.7-12.3</b>	<b>747</b>	<b>10.6</b>	<b>9.9-11.4</b>	<b>0.93</b>
Cheatham	19	10.0	5.9-15.8	15	8.5	4.6-14.1	0.85
Davidson	349	12.5	11.2-13.9	312	11.2	10.0-12.6	0.90
Dickson	30	12.7	8.5-18.2	32	13.4	9.1-18.9	1.06
Houston	^	^	^_^	^	^	^_^	^
Humphreys	14	11.2	6.1-19.3	16	13.1	7.5-21.8	1.17
Montgomery	50	9.2	6.8-12.2	50	9.3	6.9-12.3	1.01
Robertson	32	10.9	7.4-15.4	27	9.3	6.1-13.6	0.85
Rutherford	91	10.6	8.5-13.0	72	8.5	6.6-10.8	0.80
Stewart	11	13.6	6.7-25.1	^	^	^_^	^
Sumner	92	12.3	9.9-15.1	95	13.1	10.5-16.0	1.07
Trousdale	^	^	^_^	^	^	^_^	^
Williamson	71	10.7	8.3-13.6	63	9.6	7.3-12.4	0.90
Wilson	51	10.0	7.4-13.2	51	10.3	7.6-13.7	1.03

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**Appendix XII Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Northeast Region</b>	<b>364</b>	<b>11.8</b>	<b>10.6-13.1</b>	<b>356</b>	<b>11.5</b>	<b>10.3-12.8</b>	<b>0.97</b>
Carter	38	10.4	7.3-14.4	46	12.5	9.1-16.8	1.20
Greene	56	13.9	10.4-18.1	61	15.1	11.5-19.5	1.09
Hancock	^	^	^_^	^	^	^_^	^
Hawkins	41	11.3	8.1-15.5	43	12.2	8.8-16.5	1.08
Johnson	11	10.6	5.3-19.3	13	12.2	6.5-21.3	1.15
Sullivan	122	12.1	10.1-14.6	104	10.2	8.4-12.5	0.84
Unicoi	17	13.6	7.9-22.3	20	16.1	9.8-25.6	1.18
Washington	78	11.5	9.1-14.4	67	9.8	7.6-12.5	0.85
<b>Northwest Region</b>	<b>182</b>	<b>11.4</b>	<b>9.8-13.2</b>	<b>191</b>	<b>11.8</b>	<b>10.2-13.6</b>	<b>1.04</b>
Benton	17	15.3	8.7-25.3	19	15.9	9.6-25.7	1.04
Carroll	18	9.5	5.6-15.3	16	7.9	4.5-13.2	0.83
Crockett	14	15.7	8.5-26.8	11	12.2	6.0-22.4	0.78
Dyer	27	12.4	8.1-18.1	27	12.6	8.3-18.5	1.02
Gibson	35	10.7	7.4-15.1	37	10.9	7.7-15.3	1.02
Henry	24	10.8	6.9-16.4	24	10.9	7.0-16.5	1.01
Lake	^	^	^_^	^	^	^_^	^
Obion	17	8.3	4.8-13.5	24	11.6	7.4-17.5	1.40
Weakley	24	12.5	7.9-18.8	25	13.0	8.3-19.3	1.04
<b>South Central Region</b>	<b>218</b>	<b>10.5</b>	<b>9.2-12.0</b>	<b>230</b>	<b>11.0</b>	<b>9.6-12.5</b>	<b>1.05</b>
Bedford	25	11.2	7.2-16.6	27	12.9	8.5-18.7	1.15
Coffee	38	12.2	8.6-16.8	42	13.2	9.5-17.9	1.08
Giles	14	7.8	4.2-13.4	18	10.7	6.3-17.1	1.37
Hickman	14	11.1	6.0-18.7	20	15.6	9.5-24.3	1.41
Lawrence	16	6.6	3.7-10.8	22	8.8	5.5-13.4	1.33
Lewis	^	^	^_^	^	^	^_^	^
Lincoln	22	10.6	6.6-16.2	18	8.6	5.1-13.8	0.81
Marshall	15	10.3	5.8-17.1	19	13.4	8.0-20.9	1.30
Maury	45	11.3	8.2-15.2	38	9.3	6.6-12.8	0.82
Moore	^	^	^_^	^	^	^_^	^
Perry	^	^	^_^	^	^	^_^	^
Wayne	16	16.2	9.2-26.7	10	9.7	4.6-18.3	0.60

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**Appendix XII Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Southeast Region</b>	<b>376</b>	<b>10.1</b>	<b>9.1-11.2</b>	<b>398</b>	<b>10.8</b>	<b>9.7-11.9</b>	<b>1.07</b>
Bledsoe	^	^	^_^	^	^	^_^	^
Bradley	45	8.7	6.4-11.8	47	9.5	6.9-12.6	1.09
Franklin	30	11.6	7.8-16.8	31	12.4	8.4-17.7	1.07
Grundy	11	12.6	6.2-23.0	12	13.7	7.0-24.5	1.09
Hamilton	185	9.7	8.3-11.2	189	10.0	8.6-11.5	1.03
McMinn	36	11.8	8.2-16.4	35	11.3	7.8-15.9	0.96
Marion	19	12.3	7.3-19.4	17	11.0	6.3-17.9	0.89
Meigs	^	^	^_^	10	14.2	6.6-27.2	^
Polk	10	10.2	4.8-19.4	14	14.2	7.7-24.3	1.39
Rhea	21	11.5	7.1-17.9	27	14.8	9.7-21.7	1.29
Sequatchie	^	^	^_^	11	16.3	8.1-29.4	^
<b>Southwest Region</b>	<b>657</b>	<b>11.0</b>	<b>10.2-11.9</b>	<b>691</b>	<b>11.7</b>	<b>10.8-12.6</b>	<b>1.06</b>
Chester	^	^	^_^	^	^	^_^	^
Decatur	^	^	^_^	^	^	^_^	^
Fayette	^	^	^_^	25	14.0	9.0-20.7	^
Hardeman	21	13.7	8.5-21.2	20	13.5	8.2-20.9	0.99
Hardin	12	6.6	3.4-12.0	23	12.9	8.1-19.7	1.95
Haywood	^	^	^_^	10	9.5	4.5-17.6	^
Henderson	12	7.7	3.9-13.6	15	9.6	5.4-16.0	1.25
Lauderdale	18	13.3	7.8-21.1	22	16.2	10.1-24.6	1.22
McNairy	13	8.5	4.5-14.8	17	11.0	6.3-17.9	1.29
Madison	64	13.3	10.2-17.0	56	11.5	8.7-15.0	0.86
Shelby	458	11.6	10.5-12.7	456	11.7	10.6-12.8	1.01
Tipton	25	9.9	6.3-14.7	33	13.1	8.9-18.6	1.32

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**Appendix XII Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
Upper-Cumberland Region	201	9.9	8.6-11.4	215	10.5	9.2-12.1	1.06
Cannon	^	^	^_^	^	^	^_^	^
Clay	10	19.9	9.4-37.9	11	22.0	10.8-40.6	1.11
Cumberland	45	9.9	7.1-13.7	48	10.1	7.4-13.8	1.02
DeKalb	12	11.9	6.1-20.9	13	12.5	6.6-21.7	1.05
Fentress	13	12.8	6.7-22.3	14	13.7	7.4-23.4	1.07
Jackson	^	^	^_^	^	^	^_^	^
Macon	11	10.0	5.0-18.0	15	13.5	7.5-22.4	1.35
Overton	^	^	^_^	13	9.9	5.3-17.4	^
Pickett	^	^	^_^	^	^	^_^	^
Putnam	38	10.2	7.2-14.1	31	8.3	5.6-11.8	0.81
Smith	12	12.4	6.4-21.8	11	11.9	5.9-21.3	0.96
Van Buren	^	^	^_^	^	^	^_^	^
Warren	21	8.7	5.4-13.5	23	9.8	6.2-14.8	1.13
White	15	10.3	5.7-17.3	13	8.5	4.5-14.8	0.83

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

†Mortality incidence ratio. See Technical Notes for details.

^Cell suppressed where there were 1-9 cases.

**Appendix XIII. Childhood Cancer Incidence and Mortality by Resident County, All Sites Combined, Tennessee, 2004-2008**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Tennessee</b>	<b>1,364</b>	<b>166.9</b>	<b>158.1-176.0</b>	<b>204</b>	<b>25.1</b>	<b>21.8-28.8</b>	<b>0.15</b>
<b>East Region</b>	<b>250</b>	<b>175.4</b>	<b>154.3-198.6</b>	<b>32</b>	<b>22.8</b>	<b>15.6-32.2</b>	<b>0.13</b>
Anderson	19	209.9	126.3-327.8	^	^	^_^	^
Blount	29	199.7	133.7-286.9	^	^	^_^	^
Campbell	^	^	^_^	0	0.0	0.0-74.1	^
Claiborne	^	^	^_^	^	^	^_^	^
Cocke	^	^	^_^	^	^	^_^	^
Grainger	^	^	^_^	0	0.0	0.0-134.6	^
Hamblen	11	144.2	71.9-257.0	^	^	^_^	^
Jefferson	11	177.6	88.5-318.4	^	^	^_^	^
Knox	87	162.4	130.0-200.4	12	23.2	12.0-40.4	0.14
Loudon	18	349.6	207.2-552.4	0	0.0	0.0-71.3	0.00
Monroe	^	^	^_^	^	^	^_^	^
Morgan	^	^	^_^	0	0.0	0.0-151.9	^
Roane	^	^	^_^	^	^	^_^	^
Scott	10	337.2	161.5-619.1	^	^	^_^	^
Sevier	19	185.5	111.6-289.8	^	^	^_^	^
Union	^	^	^_^	0	0.0	0.0-146.8	^
<b>Mid-Cumberland Region</b>	<b>365</b>	<b>164.3</b>	<b>147.9-182.1</b>	<b>63</b>	<b>29.1</b>	<b>22.4-37.3</b>	<b>0.18</b>
Cheatham	12	222.5	114.9-389.0	0	0.0	0.0-68.7	0.00
Davidson	128	161.3	134.4-192.0	24	33.0	21.1-49.0	0.20
Dickson	14	212.8	116.3-357.0	^	^	^_^	^
Houston	^	^	^_^	0	0.0	0.0-343.1	^
Humphreys	^	^	^_^	^	^	^_^	^
Montgomery	24	103.2	66.0-153.7	^	^	^_^	^
Robertson	^	^	^_^	0	0.0	0.0-40.5	^
Rutherford	62	183.6	140.7-235.5	10	30.0	14.4-55.1	0.16
Stewart	^	^	^_^	0	0.0	0.0-231.3	^
Sumner	38	184.9	130.8-253.8	^	^	^_^	^
Trousdale	^	^	^_^	0	0.0	0.0-385.0	^
Williamson	36	147.9	103.5-204.9	^	^	^_^	^
Wilson	31	213.9	145.3-303.7	^	^	^_^	^

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**Appendix XIII Continued**

	Incidence			Mortality			M:I	Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI		
<b>Northeast Region</b>	<b>99</b>	<b>171.8</b>	<b>139.6-209.2</b>	<b>^</b>	<b>^</b>	<b>^_^</b>	<b>^</b>	
Carter	10	154.1	73.8-283.5	^	^	^_^	^	
Greene	10	124.8	59.8-230.1	^	^	^_^	^	
Hancock	^	^	^_^	0	0.0	0.0-464.7	^	
Hawkins	14	206.1	112.6-345.8	0	0.0	0.0-54.1	0.00	
Johnson	^	^	^_^	^	^	^_^	^	
Sullivan	32	176.8	120.9-249.8	^	^	^_^	^	
Unicoi	^	^	^_^	0	0.0	0.0-190.7	^	
Washington	20	147.7	90.2-228.2	^	^	^_^	^	
<b>Northwest Region</b>	<b>62</b>	<b>194.2</b>	<b>148.9-249.1</b>	<b>^</b>	<b>^</b>	<b>^_^</b>	<b>^</b>	
Benton	^	^	^_^	0	0.0	0.0-201.4	^	
Carroll	12	319.8	165.0-560.1	0	0.0	0.0-100.8	0.00	
Crockett	^	^	^_^	^	^	^_^	^	
Dyer	^	^	^_^	^	^	^_^	^	
Gibson	12	190.0	98.2-331.9	^	^	^_^	^	
Henry	^	^	^_^	0	0.0	0.0-99.3	^	
Lake	^	^	^_^	0	0.0	0.0-514.6	^	
Obion	10	252.0	120.8-463.1	0	0.0	0.0-92.1	0.00	
Weakley	^	^	^_^	^	^	^_^	^	
<b>South Central Region</b>	<b>85</b>	<b>172.2</b>	<b>137.5-212.9</b>	<b>19</b>	<b>38.4</b>	<b>23.1-60.0</b>	<b>0.22</b>	
Bedford	13	208.3	110.6-356.3	^	^	^_^	^	
Coffee	10	146.9	70.4-269.7	^	^	^_^	^	
Giles	^	^	^_^	^	^	^_^	^	
Hickman	^	^	^_^	^	^	^_^	^	
Lawrence	^	^	^_^	0	0.0	0.0-64.0	^	
Lewis	^	^	^_^	^	^	^_^	^	
Lincoln	15	363.3	203.3-598.9	^	^	^_^	^	
Marshall	^	^	^_^	0	0.0	0.0-94.7	^	
Maury	14	130.2	71.1-218.6	^	^	^_^	^	
Moore	^	^	^_^	0	0.0	0.0-534.1	^	
Perry	^	^	^_^	^	^	^_^	^	
Wayne	^	^	^_^	^	^	^_^	^	

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**Appendix XIII Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
<b>Southeast Region</b>	<b>123</b>	<b>149.8</b>	<b>124.5-178.8</b>	<b>18</b>	<b>21.9</b>	<b>13.0-34.7</b>	<b>0.15</b>
Bledsoe	0	0.0	0.0-246.5	0	0.0	0.0-246.5	~
Bradley	21	170.7	105.6-261.0	^	^	^_^	^
Franklin	11	215.9	107.3-387.8	^	^	^_^	^
Grundy	^	^	^_^	^	^	^_^	^
Hamilton	63	150.3	115.5-192.4	^	^	^_^	^
McMinn	^	^	^_^	^	^	^_^	^
Marion	^	^	^_^	0	0.0	0.0-105.0	^
Meigs	^	^	^_^	0	0.0	0.0-253.1	^
Polk	^	^	^_^	0	0.0	0.0-188.4	^
Rhea	^	^	^_^	^	^	^_^	^
Sequatchie	^	^	^_^	0	0.0	0.0-214.0	^
<b>Southwest Region</b>	<b>303</b>	<b>158.9</b>	<b>141.5-177.9</b>	<b>52</b>	<b>27.3</b>	<b>20.4-35.9</b>	<b>0.17</b>
Chester	^	^	^_^	0	0.0	0.0-173.6	^
Decatur	0	0.0	0.0-279.8	0	0.0	0.0-279.8	~
Fayette	^	^	^_^	^	^	^_^	^
Hardeman	^	^	^_^	^	^	^_^	^
Hardin	^	^	^_^	0	0.0	0.0-118.5	^
Haywood	^	^	^_^	0	0.0	0.0-131.3	^
Henderson	^	^	^_^	^	^	^_^	^
Lauderdale	13	353.5	188.0-605.6	^	^	^_^	^
McNairy	^	^	^_^	^	^	^_^	^
Madison	20	144.6	88.2-223.4	^	^	^_^	^
Shelby	217	154.5	134.6-176.5	46	32.8	24.0-43.8	0.21
Tipton	16	190.2	108.6-309.2	0	0.0	0.0-44.4	0.00

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**Appendix XIII Continued**

	Incidence			Mortality			M:I Ratio <sup>†</sup>
	Count	Rate*	CI	Count	Rate*	CI	
Upper-Cumberland Region	73	178.1	139.6-224.0	^	^	^_^	^
Cannon	^	^	^_^	0	0.0	0.0-217.6	^
Clay	0	0.0	0.0-395.1	0	0.0	0.0-395.1	~
Cumberland	^	^	^_^	^	^	^_^	^
DeKalb	^	^	^_^	0	0.0	0.0-153.1	^
Fentress	^	^	^_^	0	0.0	0.0-170.8	^
Jackson	^	^	^_^	0	0.0	0.0-304.9	^
Macon	^	^	^_^	0	0.0	0.0-125.2	^
Overton	^	^	^_^	^	^	^_^	^
Pickett	^	^	^_^	0	0.0	0.0-691.2	^
Putnam	16	162.5	92.4-265.9	^	^	^_^	^
Smith	^	^	^_^	0	0.0	0.0-149.1	^
Van Buren	^	^	^_^	0	0.0	0.0-595.7	^
Warren	^	^	^_^	^	^	^_^	^
White	13	416.5	221.7-712.0	^	^	^_^	^

\*Rates were adjusted to the 2000 U.S. standard population and reported as rate per 1,000,000.

<sup>†</sup>Mortality incidence ratio. See Technical Notes for details.

^Cell suppressed where there were 1-9 cases.

**Appendix XIV. Incidence and Mortality of Common Cancers, Three-Year Moving Average, Tennessee, 2004-2008**

Primary Site	Year	Incidence			Mortality			M:I Ratio <sup>†</sup>
		Count	Rate*	CI	Count	Rate*	CI	
All Sites	2004-06	87,857	463.0	459.9 - 466.1	38,534	206.0	203.9 - 208.1	0.44
	2005-07	92,095	473.3	470.2 - 476.4	39,089	203.5	201.4 - 205.5	0.43
	2006-08	94,441	473.3	470.3 - 476.4	39,227	198.7	196.7 - 200.7	0.42
Lung and Bronchus	2004-06	15,792	83.0	81.7 - 84.3	12,887	68.2	67.0 - 69.4	0.82
	2005-07	15,892	81.4	80.1 - 82.6	13,048	67.3	66.2 - 68.5	0.83
	2006-08	15,970	79.5	78.3 - 80.8	12,964	65.2	64.1 - 66.3	0.82
Prostate	2004-06	11,324	133.6	131.1 - 136.2	1,777	27.3	26.0 - 28.7	0.20
	2005-07	12,732	145.6	143.1 - 148.3	1,825	26.8	25.6 - 28.1	0.18
	2006-08	13,673	150.9	148.3 - 153.5	1,803	25.4	24.2 - 26.7	0.17
Female Breast	2004-06	12,024	116.3	114.3 - 118.5	2,691	25.3	24.4 - 26.3	0.22
	2005-07	12,548	118.7	116.6 - 120.8	2,682	24.6	23.7 - 25.6	0.21
	2006-08	12,778	118.3	116.2 - 120.4	2,605	23.3	22.4 - 24.2	0.20
Colon and Rectum	2004-06	9,430	49.9	48.9 - 51.0	3,431	18.5	17.9 - 19.2	0.37
	2005-07	9,593	49.5	48.5 - 50.5	3,503	18.3	17.7 - 19.0	0.37
	2006-08	9,513	47.8	46.9 - 48.8	3,568	18.1	17.6 - 18.8	0.38
Melanoma of the Skin	2004-06	3,700	19.6	19.0 - 20.3	570	3.1	2.8 - 3.3	0.16
	2005-07	3,902	20.3	19.6 - 20.9	561	2.9	2.7 - 3.2	0.14
	2006-08	3,887	19.8	19.2 - 20.4	571	2.9	2.7 - 3.2	0.15
Pancreas	2004-06	1,963	10.4	9.9 - 10.9	2,031	10.8	10.4 - 11.3	1.04
	2005-07	2,097	10.9	10.4 - 11.3	2,054	10.7	10.2 - 11.2	0.98
	2006-08	2,226	11.2	10.8 - 11.7	2,122	10.8	10.3 - 11.2	0.96

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

<sup>†</sup>Mortality incidence ratio. See Technical Notes for details.