

## Cancer Statistics, 2000

Robert T. Greenlee, MPH, Taylor Murray, Sherry Bolden, Phyllis A. Wingo, PhD, MS

### Abstract

*The Surveillance Research Program of the American Cancer Society's Department of Epidemiology and Surveillance Research reports its annual compilation of estimated cancer incidence, mortality, and survival data for the United States in the year 2000. After 70 years of increases, the recorded number of total cancer deaths among men in the US declined for the first time from 1996 to 1997. This decrease in overall male mortality is the result of recent downturns in lung and bronchus cancer deaths, prostate cancer deaths, and colon and rectum cancer deaths.*

*Despite decreasing numbers of deaths from female breast cancer and colon and rectum cancer, mortality associated with lung and bronchus cancer among women continues to increase. Lung cancer is expected to account for 25% of all female cancer deaths in 2000.*

*This report also includes a summary of global cancer mortality rates using data from the World Health Organization. (CA Cancer J Clin 2000;50:7-33.)*

Mr. Greenlee is an Epidemiologist with the Surveillance Research Program, Department of Epidemiology and Surveillance, American Cancer Society, Atlanta, GA.

Mr. Murray is Manager, Surveillance Data Systems, with the Surveillance Research Program, Department of Epidemiology and Surveillance, American Cancer Society, Atlanta, GA.

Ms. Bolden is Manager, Surveillance Information Services, with the Surveillance Research Program, Department of Epidemiology and Surveillance, American Cancer Society, Atlanta, GA.

Dr. Wingo is Director of the Surveillance Research Program, Department of Epidemiology and Surveillance, American Cancer Society, Atlanta, GA.

The authors thank Cheryll Cardinez, Marlo Corrao, April Harris, Elyse Luke, and Kate O'Brien for their assistance in preparation of this manuscript.

This article is also available online at <http://www.ca-journal.org>.

### Introduction

Cancer is an important public health concern in the United States and around the world. To provide an up-to-date perspective on the occurrence of cancer, the American Cancer Society presents an overview of cancer frequency, incidence, mortality, and survival statistics for the year 2000.

### Methods

#### ESTIMATED NEW CANCER CASES

Because the US does not have a nationwide cancer registry, the exact number of new cases of cancer diagnosed each year in the US and in individual states is not known. Consequently, we first estimated the number of new cancer cases occurring annually in the US from 1979 through 1996 using population data reported by the US Bureau of the Census and age-specific cancer incidence rates collected by the National Cancer Institute's Surveillance, Epidemiology, and End Results (SEER) program.<sup>1</sup> We fitted these annual cancer case estimates to an autoregressive quadratic model to forecast the number of cancer cases expected to be diagnosed in the US in the year 2000 (Table 1, Fig. 1).<sup>2</sup>

Between 1987 and 1992, the incidence rate of prostate cancer increased 85%, followed by a decline of 29% between 1992 and 1996.<sup>3</sup> The sharp increase in incidence followed by the decline in recent years probably reflects extensive use of prostate-specific antigen (PSA) screening in a previously unscreened population and the subsequent increase in diagnoses at an early stage.<sup>4</sup> We assumed that the number of prostate cancer cases would approximate the rates observed prior to widespread use of PSA screening, and there-

fore, we estimated new cases of prostate cancer for 2000 using a linear projection based on data from 1979 to 1989.

Because cancer incidence rates and case counts for 1979 through 1996 were not available for many states, we could not use the methods mentioned above to estimate new cases for individual states (Table 3). To derive these estimates, we assumed that the ratio of cancer deaths to cancer cases for each state was the same as the ratio for the US.<sup>2</sup>

#### ESTIMATED CANCER DEATHS

We estimated the number of cancer deaths expected to occur in the US in the year 2000 using underlying cause-of-death data from death certificates as reported to the National Center for Health Statistics (Table 2, Fig. 2).<sup>5</sup> The recorded numbers of cancer deaths occurring annually from 1979 to 1997 were fitted to an autoregressive quadratic model to forecast the number of cancer deaths expected to occur in the US in 2000. The estimated number of cancer deaths for each state was calculated with the same modeling procedure used for the total US (Table 4).<sup>2</sup>

#### OTHER STATISTICS

Mortality statistics for the leading causes of death (Tables 6, 7, and 12), the leading causes of death from cancer (Tables 8, 9), and cancer mortality rates from 1930 to 1996 (Figs. 5, 6) were obtained using data from the National Center for Health Statistics.<sup>5</sup> Incidence rates (Table 10, Figs. 3, 4), the probability of developing cancer (Table 5), and five-year relative survival rates (Tables 11, 13; Figs. 7, 8) were obtained from the SEER program.<sup>3,6</sup> We computed global cancer mortality rates (Table 14) using data compiled by the World Health Organization.<sup>7</sup> We included data from countries that have: 1) submitted data for at least one of the years between 1994 and 1997 using codes from the ninth or tenth revision of the International Classification of Diseases; 2) populations of 500,000 or more; 3) death

registration of at least 82%; and 4) a proportion of deaths with medically certified cause of death of at least 95%.<sup>8</sup>

### Selected Findings

#### EXPECTED NUMBERS OF NEW CANCER CASES

In the year 2000, we estimate that about 1,220,100 new cases of invasive cancer will be diagnosed in the US (Table 1). This estimate does not include carcinoma in situ of any site except urinary bladder, and it does not include basal and squamous cell cancers of the skin. Approximately 1.3 million cases of basal and squamous cell skin cancers, 42,600 cases of breast carcinoma in situ, and 28,600 cases of in situ melanoma are expected to be newly diagnosed in 2000.

Among men, the most common cancers in 2000 are expected to be cancers of the prostate, lung and bronchus, and colon and rectum (Fig. 1). The prostate is the leading site for cancer incidence, accounting for 29% of new cancer cases in men. This year, 180,400 new cases of prostate cancer are expected to be diagnosed.

Among women, the three most commonly diagnosed cancers are expected to be cancers of the breast, lung and bronchus, and colon and rectum (Fig. 1). Cancers occurring at these sites are expected to account for over 50% of new cancer cases in women. Breast cancer alone is expected to account for 182,800 new cancer cases (30%) in 2000.

#### TRENDS IN CANCER INCIDENCE

For all sites combined, SEER cancer incidence rates appeared to peak in 1992 and decreased an average of -2.2% per year from 1992 to 1996.<sup>9</sup> Similar declines have been seen recently for specific leading cancer sites (Figs. 3 and 4).

Breast cancer incidence rates have remained approximately level during the 1990s; however, they appear to be decreasing in younger women. Decreases in colon and rectum cancer incidence rates

began in the mid-1980s, and have been observed among both males and females in all racial/ethnic groups (with the exception of American Indian women in whom data were not sufficient to make a determination as to the direction of this trend).<sup>3</sup> Incidence rates of colon and rectum cancer declined significantly between 1990 and 1996, on average -2.1% per year.<sup>9</sup>

A downturn in the incidence of lung and bronchus cancer in males began in the late 1980s, and between 1990 and 1996, incidence rates decreased significantly, -2.6% per year. Incidence rates of lung and bronchus cancer among females are stabilizing, and have begun to decline among women aged 40 to 59.<sup>9</sup> Prostate cancer incidence rates also declined significantly between 1990 and 1996, on average -2.0% per year.

#### EXPECTED NUMBERS OF CANCER DEATHS

In 2000, an estimated 552,200 Americans are expected to die of cancer—more than 1,500 people a day (Table 2). Most cancer deaths in men (52%) in the year 2000 are expected to be from cancers of the lung and bronchus, prostate, and colon and rectum (Fig. 2).

Among women, cancers of the lung and bronchus, breast, and colon and rectum are expected to account for more than half of all cancer deaths in 2000 (Fig. 2). In 1987, lung cancer surpassed breast cancer as the leading cause of cancer death in women and is expected to account for 25% of all female cancer deaths in 2000.

#### TRENDS IN THE RECORDED NUMBER OF CANCER DEATHS

Following more than 70 years of increases, the recorded number of total cancer deaths among men in the US has declined for the first time, from a peak of 281,898 in 1996 to 281,110 in 1997. This promising change results from recent downturns in each of the top three causes of cancer death among men. Lung and bronchus cancer deaths among men declined from a peak of 92,493 in 1993 to 91,278 in 1997.

Prostate cancer deaths declined from a peak of 34,902 in 1994 to 32,891 in 1997. Colon and rectum cancer deaths among men were highest in 1990 at 28,635 and have declined to 28,075 in 1997.

Among women, the recorded number of total cancer deaths continues to increase, although the rate of increase has diminished in recent years. The upward trend among females is primarily due to sustained increases in the number of deaths from lung and bronchus cancer. The numbers of deaths from breast and colorectal cancers among females, however, have begun to decline. Breast cancer deaths were highest in 1995 at 43,844 and have declined to 41,943 in 1997. Colorectal cancer deaths among women have declined from a recent peak of 29,237 in 1995 to 28,621 in 1997, although these deaths reached their all-time high in 1984 at 29,522.

#### TRENDS IN CANCER DEATH RATES

Death rates for all cancers combined peaked in 1991 and decreased an average -0.7% per year from 1991 to 1996 (Figs. 5 and 6).<sup>9</sup> Significant decreases have been seen among both males and females, persons younger than 65 years of age, and among whites, blacks, and Hispanics.

Breast cancer death rates in females decreased an average of -1.8% per year between 1990 and 1996; decreases were more pronounced among white women and among younger women. During the period from 1990 to 1996, colon and rectum cancer death rates decreased significantly, on average -1.7% per year.

Similar to trends in incidence, significant decreases in death rates for lung and bronchus cancer have occurred only among males (on average -1.6% per year between 1990 and 1996); rates among females recently have begun to slow and appear to be stabilizing. Prostate cancer death rates decreased on average -1.6% per year during the period between 1990 and 1996.

#### TRENDS IN CANCER BY RACE/ETHNICITY

Overall rates of cancer incidence vary considerably among racial and ethnic groups (Table 10). Blacks have the highest cancer incidence rates: They are about 60% more likely to develop cancer than are Hispanics and Asian/Pacific Islanders and more than twice as likely to develop cancer as American Indians. Between 1990 and 1996, incidence rates decreased among whites (-1.2% per year), Hispanics (-1.7% per year), and American Indians (-0.7% per year), and remained relatively stable among blacks and Asian/Pacific Islanders.<sup>3</sup>

White women are more likely to develop breast cancer than are women of other racial and ethnic groups, and black women are more likely to develop cancers of the colon and rectum.<sup>3</sup> Black men have the highest incidence rates for cancers of the colon and rectum, lung and bronchus, and prostate. They are also at least 50% more likely to develop prostate cancer than men of other racial and ethnic groups.

Blacks are about 33% more likely to die of cancer than are whites, and more than twice as likely to die of cancer as are Asian/Pacific Islanders, American Indians, and Hispanics. Between 1990 and 1996, mortality rates decreased significantly among whites (-0.5% per year), blacks (-0.9% per year), and Hispanics (-0.6% per year); remained relatively stable among Asian/Pacific Islanders; and may be increasing among American Indians.<sup>3</sup>

Black women are more likely to die of breast (see article by Dignam in this issue of *CA*, page 50) and colon and rectum cancers than are women of any other racial or ethnic group, and they have approximately the same lung and bronchus cancer death rate as white women. As was seen with incidence rates, black men have the highest mortality rates of colon and rectum, lung and bronchus, and prostate cancers.<sup>3</sup>

#### CANCER IN CHILDREN


Cancer is the second leading cause of death among children between one and 14 years of age in the US; accidents are the most frequent cause of death in this age group (Table 12). The most commonly occurring cancers in children are leukemias (in particular, acute lymphocytic leukemia), tumors of the central and sympathetic nervous systems, lymphomas, soft-tissue sarcomas, and renal tumors.<sup>3</sup> Over the past 20 years, there have been significant improvements in the five-year relative survival rate for many childhood cancers, especially acute lymphocytic and acute myeloid leukemia, non-Hodgkin's lymphoma, and Wilms' Tumor (Table 13). Between 1974/1976 and 1989/1995, five-year relative survival rates for childhood cancers at all sites combined improved from 56% to 75%.

#### Limitations and Future Challenges

Our estimates of the expected numbers of new cancer cases and cancer deaths should be interpreted with caution when tracking trends over time. These estimates may vary considerably from year to year, particularly for rare cancers and for states with smaller populations. We therefore discourage the use of these estimates to track year-to-year changes in cancer occurrence and death. The recorded number of cancer deaths and cancer death rates from the National Center for Health Statistics, and SEER cancer incidence rates are generally more informative statistics for the purpose of tracking cancer trends. For example, breast cancer incidence rates increased about 1% per year between 1979 and 1982, increased 4% per year between 1982 and 1987, and were approximately constant between 1987 and 1996. Despite the stabilization of incidence rates during the latter time period, the estimates of new breast cancer cases increased between 1988 and 1996.

Our estimates are based on the most currently available cancer mortality and

incidence data; however, these data are three and four years old, respectively, at the time that the estimates are calculated. As such, the effects of large changes occurring in the three- or four-year interval between 1996 or 1997 and 2000 cannot be captured by our modeling efforts. Finally, our estimates of new cancer cases are based on incidence rates for the geographic locations that participate in the SEER program and, therefore, may not be representative of the total US.

Despite these limitations, our estimates do describe current patterns of cancer incidence and mortality in the US. Such estimates will assist our continuing efforts to reduce the public health burden of cancer as we enter the 21st century. 

#### References

1. National Cancer Institute: SEER Cancer Incidence Public-Use Database, 1973-1996, August 1998 Submission. US Department of Health and Human Services, Public Health Service. Bethesda, MD, 1999.
2. Wingo PA, Landis S, Parker S, et al: Using cancer registry and vital statistics data to estimate the number of new cancer cases and deaths in the United States for the upcoming year. *J Reg Management* 1998;25:43-51.
3. Ries LAG, Kosary CL, Hankey BF, Miller BA, Edwards BK (eds). SEER Cancer Statistics Review, 1973-1996. National Cancer Institute, Bethesda, MD, 1997.
4. Wingo PA, Landis S, Ries LAG: An adjustment to the 1997 estimate for new prostate cancer cases. *CA Cancer J Clin* 1997;47:239-242.
5. National Center for Health Statistics, Division of Vital Statistics. Multiple Cause-of-Death for ICD9, 1996 Data Public-Use Documentation. (Web site) [www.cdc.gov/nchswww/about/major/dvs/mcd/1996mcd.htm](http://www.cdc.gov/nchswww/about/major/dvs/mcd/1996mcd.htm) 1999.
6. DEVCAN: Probability of Developing or Dying of Cancer (Software), version 4. Feuer EJ, Wun LM. National Cancer Institute, Bethesda, MD, 1999.
7. World Health Organization: WHO Mortality Database. (Web site) [www.who.int/whosis/mort](http://www.who.int/whosis/mort) 1999.
8. World Health Organization: World Health Statistics Annual, 1996. Geneva, Switzerland, 1997.
9. Wingo PA, Ries LAG, Giovino GA, et al. Annual report to the nation on the status of cancer 1973-1996, with a special section on lung cancer and tobacco smoking. *J Natl Cancer Inst* 1999;91:675-690.

## ANNOUNCING...

Continuing Medical Education in *CA—A Cancer Journal for Clinicians*

The American Cancer Society is pleased to announce that a Continuing Medical Education activity will be included in each upcoming issue of *CA—A Cancer Journal for Clinicians*.

**When?** Starting March/April 2000!

**What?** AMA PRA category 1 CME credits or AAFP Elective hours. *Topics to include management of cancer pain; malignant melanoma; new treatments for smoking cessation; lymphedema; and mind-body integration.*

**How?** Save each issue of *CA*. Review the article designated for CME credit. Complete the accompanying CME quiz and program evaluation. Submit by fax or mail for CME credit, according to instructions.

**Who?** The American Cancer Society, Inc., is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.

**Table 1**  
**Estimated New Cancer Cases by Gender, US, 2000\***

	Total	Male	Female
<b>All Sites</b>	<b>1,220,100</b>	<b>619,700</b>	<b>600,400</b>
<b>Oral cavity &amp; pharynx</b>	<b>30,200</b>	<b>20,200</b>	<b>10,000</b>
Tongue	6,900	4,500	2,400
Mouth	10,900	6,500	4,400
Pharynx	8,200	5,900	2,300
Other oral cavity	4,200	3,300	900
<b>Digestive system</b>	<b>226,600</b>	<b>117,600</b>	<b>109,000</b>
Esophagus	12,300	9,200	3,100
Stomach	21,500	13,400	8,100
Small intestine	4,700	2,300	2,400
Colon	93,800	43,400	50,400
Rectum	36,400	20,200	16,200
Anus, anal canal, & anorectum	3,400	1,400	2,000
Liver & intrahepatic bile duct	15,300	10,000	5,300
Gallbladder & other biliary	6,900	2,900	4,000
Pancreas	28,300	13,700	14,600
Other digestive organs	4,000	1,100	2,900
<b>Respiratory system</b>	<b>179,400</b>	<b>101,500</b>	<b>77,900</b>
Larynx	10,100	8,100	2,000
Lung & bronchus	164,100	89,500	74,600
Other respiratory organs	5,200	3,900	1,300
<b>Bones &amp; joints</b>	<b>2,500</b>	<b>1,500</b>	<b>1,000</b>
<b>Soft tissue (including heart)</b>	<b>8,100</b>	<b>4,300</b>	<b>3,800</b>
<b>Skin (excluding basal &amp; squamous)</b>	<b>56,900</b>	<b>34,100</b>	<b>22,800</b>
Melanomas-skin	47,700	27,300	20,400
Other non-epithelial skin	9,200	6,800	2,400
<b>Breast</b>	<b>184,200</b>	<b>1,400</b>	<b>182,800</b>
<b>Genital system</b>	<b>265,900</b>	<b>188,400</b>	<b>77,500</b>
Uterine cervix	12,800		12,800
Uterine corpus	36,100		36,100
Ovary	23,100		23,100
Vulva	3,400		3,400
Vagina & other genital, female	2,100		2,100
Prostate	180,400	180,400	
Testis	6,900	6,900	
Penis & other genital, male	1,100	1,100	
<b>Urinary system</b>	<b>86,700</b>	<b>58,600</b>	<b>28,100</b>
Urinary bladder	53,200	38,300	14,900
Kidney & renal pelvis	31,200	18,800	12,400
Ureter & other urinary organs	2,300	1,500	800
<b>Eye &amp; orbit</b>	<b>2,200</b>	<b>1,200</b>	<b>1,000</b>
<b>Brain &amp; other nervous system</b>	<b>16,500</b>	<b>9,500</b>	<b>7,000</b>
<b>Endocrine system</b>	<b>20,200</b>	<b>5,600</b>	<b>14,600</b>
Thyroid	18,400	4,700	13,700
Other endocrine	1,800	900	900
<b>Lymphoma</b>	<b>62,300</b>	<b>35,900</b>	<b>26,400</b>
Hodgkin's disease	7,400	4,200	3,200
Non-Hodgkin's lymphoma	54,900	31,700	23,200
<b>Multiple myeloma</b>	<b>13,600</b>	<b>7,300</b>	<b>6,300</b>
<b>Leukemia</b>	<b>30,800</b>	<b>16,900</b>	<b>13,900</b>
Acute lymphocytic leukemia	3,200	1,800	1,400
Chronic lymphocytic leukemia	8,100	4,600	3,500
Acute myeloid leukemia	9,700	4,800	4,900
Chronic myeloid leukemia	4,400	2,600	1,800
Other leukemia	5,400	3,100	2,300
<b>Other &amp; unspecified primary sites</b>	<b>34,000</b>	<b>15,700</b>	<b>18,300</b>

\*Excludes basal and squamous cell skin cancers and in situ carcinomas except urinary bladder.

**Table 2**  
**Estimated Cancer Deaths by Gender, US, 2000\***

	Total	Male	Female
<b>All Sites</b>	<b>552,200</b>	<b>284,100</b>	<b>268,100</b>
<b>Oral cavity &amp; pharynx</b>	<b>7,800</b>	<b>5,100</b>	<b>2,700</b>
Tongue	1,700	1,100	600
Mouth	2,300	1,300	1,000
Pharynx	2,100	1,500	600
Other oral cavity	1,700	1,200	500
<b>Digestive system</b>	<b>129,800</b>	<b>69,300</b>	<b>60,500</b>
Esophagus	12,100	9,200	2,900
Stomach	13,000	7,600	5,400
Small intestine	1,200	600	600
Colon	47,700	23,100	24,600
Rectum	8,600	4,700	3,900
Anus, anal canal, & anorectum	500	200	300
Liver & intrahepatic bile duct	13,800	8,500	5,300
Gallbladder & other biliary	3,400	1,200	2,200
Pancreas	28,200	13,700	14,500
Other digestive organs	1,300	500	800
<b>Respiratory system</b>	<b>161,900</b>	<b>93,100</b>	<b>68,800</b>
Larynx	3,900	3,100	800
Lung & bronchus	156,900	89,300	67,600
Other respiratory organs	1,100	700	400
<b>Bones &amp; joints</b>	<b>1,400</b>	<b>800</b>	<b>600</b>
<b>Soft tissue (including heart)</b>	<b>4,600</b>	<b>2,200</b>	<b>2,400</b>
<b>Skin (excluding basal &amp; squamous)</b>	<b>9,600</b>	<b>6,000</b>	<b>3,600</b>
Melanomas-skin	7,700	4,800	2,900
Other non-epithelial skin	1,900	1,200	700
<b>Breast</b>	<b>41,200</b>	<b>400</b>	<b>40,800</b>
<b>Genital system</b>	<b>59,000</b>	<b>32,500</b>	<b>26,500</b>
Uterine cervix	4,600		4,600
Uterine corpus	6,500		6,500
Ovary	14,000		14,000
Vulva	800		800
Vagina & other genital, female	600		600
Prostate	31,900	31,900	
Testis	300	300	
Penis & other genital, male	300	300	
<b>Urinary system</b>	<b>24,600</b>	<b>15,700</b>	<b>8,900</b>
Urinary bladder	12,200	8,100	4,100
Kidney & renal pelvis	11,900	7,300	4,600
Ureter & other urinary organs	500	300	200
<b>Eye &amp; orbit</b>	<b>200</b>	<b>100</b>	<b>100</b>
<b>Brain &amp; other nervous system</b>	<b>13,000</b>	<b>7,100</b>	<b>5,900</b>
<b>Endocrine system</b>	<b>2,100</b>	<b>1,000</b>	<b>1,100</b>
Thyroid	1,200	500	700
Other endocrine	900	500	400
<b>Lymphoma</b>	<b>27,500</b>	<b>14,400</b>	<b>13,100</b>
Hodgkin's disease	1,400	700	700
Non-Hodgkin's lymphoma	26,100	13,700	12,400
<b>Multiple myeloma</b>	<b>11,200</b>	<b>5,800</b>	<b>5,400</b>
<b>Leukemia</b>	<b>21,700</b>	<b>12,100</b>	<b>9,600</b>
Acute lymphocytic leukemia	1,300	700	600
Chronic lymphocytic leukemia	4,800	2,800	2,000
Acute myeloid leukemia	7,100	3,900	3,200
Chronic myeloid leukemia	2,300	1,300	1,000
Other leukemia	6,200	3,400	2,800
<b>Other &amp; unspecified primary sites</b>	<b>36,600</b>	<b>18,500</b>	<b>18,100</b>

\*Excludes in situ carcinomas except urinary bladder.

**Table 3**  
**Estimated New Cancer Cases by Site and State, US, 2000\***

State	All Sites	Female Breast	Uterine Cervix	Colon & Rectum	Uterine Corpus	Lung & Bronchus	Melanoma	Non-Hodgkin's Lymphoma	Kidney	Prostate	Urinary Bladder
Alabama	21,500	2,700	200	1,800	500	3,000	900	900	400	3,500	800
Alaska	1,500	200	—	200	—	200	100	100	—	100	100
Arizona	20,300	2,800	200	2,000	600	2,800	1,000	900	500	3,300	900
Arkansas	13,700	1,900	100	1,300	400	2,200	400	500	400	2,200	500
California	113,200	17,900	1,300	11,400	3,200	14,000	5,000	5,300	2,900	16,400	5,200
Colorado	13,400	2,000	100	1,400	400	1,500	700	700	400	1,800	600
Connecticut	15,400	2,300	100	1,500	500	1,900	600	700	400	2,300	800
Delaware	3,900	500	100	400	100	600	100	200	100	600	200
Dist. of Col.	2,700	500	—	300	100	300	—	100	—	600	100
Florida	88,100	12,000	900	9,100	2,500	12,600	3,500	4,000	2,000	13,700	4,300
Georgia	29,400	4,600	400	2,800	900	4,200	1,000	1,000	700	4,400	1,000
Hawaii	4,300	500	—	400	100	500	100	200	100	700	100
Idaho	4,700	700	—	500	100	600	200	200	200	800	200
Illinois	55,100	8,900	600	6,000	1,600	7,300	1,900	2,500	1,400	7,800	2,400
Indiana	27,900	4,200	300	3,100	800	4,000	1,000	1,200	800	3,900	1,200
Iowa	14,200	2,100	100	1,900	600	1,900	500	700	400	2,200	600
Kansas	11,900	1,600	100	1,200	300	1,600	500	500	300	1,800	500
Kentucky	20,500	2,700	300	2,200	500	3,400	900	800	600	2,600	600
Louisiana	20,800	3,200	300	2,200	500	2,900	700	800	600	3,200	700
Maine	6,800	900	100	700	100	1,000	200	300	200	900	400
Maryland	22,600	3,700	300	2,600	700	3,100	800	900	500	3,300	1,000
Massachusetts	30,100	4,400	200	3,500	800	3,900	1,300	1,400	700	4,200	1,700
Michigan	44,100	6,700	400	4,800	1,400	6,100	1,400	2,100	1,200	6,600	2,100
Minnesota	19,900	2,800	200	2,000	500	2,300	700	1,100	600	3,300	1,000
Mississippi	13,200	2,000	200	1,300	200	1,900	400	500	300	2,200	300
Missouri	27,000	3,700	300	2,900	800	4,000	1,100	1,100	700	3,600	1,100
Montana	4,100	600	—	400	100	500	100	200	100	700	200
Nebraska	7,300	1,100	100	1,000	200	900	200	300	200	1,000	300
Nevada	8,300	1,000	100	900	200	1,200	400	300	200	1,200	400
New Hampshire	5,500	700	—	600	100	700	200	300	100	700	300
New Jersey	40,000	6,400	400	4,600	1,500	4,800	1,700	1,900	1,000	5,600	2,100
New Mexico	6,600	1,000	100	700	200	700	300	300	200	1,200	200
New York	81,500	13,700	1,000	9,200	3,200	9,800	2,600	3,800	1,900	11,800	4,100
North Carolina	35,700	5,200	400	3,700	1,100	5,200	1,300	1,400	900	5,300	1,400
North Dakota	3,000	500	—	400	100	300	100	100	100	500	100
Ohio	56,100	8,600	600	6,200	2,000	7,800	1,900	2,700	1,500	7,800	2,500
Oklahoma	16,100	2,400	200	1,700	300	2,500	700	700	500	2,100	700
Oregon	15,800	2,200	100	1,600	400	2,200	700	700	400	2,700	700
Pennsylvania	66,600	10,500	600	7,800	2,200	8,600	2,400	3,000	1,700	10,000	3,100
Rhode Island	5,400	800	100	600	100	800	200	300	100	700	300
South Carolina	18,000	2,600	200	1,900	500	2,500	500	700	500	2,900	800
South Dakota	3,500	400	—	400	100	400	200	200	100	600	100
Tennessee	27,300	3,800	400	2,900	600	4,200	1,300	1,200	700	3,600	900
Texas	76,100	11,500	1,000	8,300	2,100	10,700	3,400	3,600	2,200	11,300	2,800
Utah	5,100	900	100	600	200	400	400	300	100	1,200	200
Vermont	2,700	400	100	400	100	400	200	100	100	300	100
Virginia	29,300	4,500	300	2,900	1,000	4,000	1,200	1,200	700	4,400	1,100
Washington	23,600	3,500	200	2,300	600	3,100	1,100	1,100	600	3,200	1,000
West Virginia	10,500	1,400	100	1,100	300	1,600	400	400	300	1,300	400
Wisconsin	23,600	3,300	200	2,500	700	2,800	1,000	1,200	700	3,800	1,200
Wyoming	2,000	300	—	300	100	200	100	100	100	400	—
United States†	1,220,100	182,800	12,800	130,200	36,100	164,100	47,700	54,900	31,200	180,400	53,200

— Estimate is 50 or fewer cases. State case estimates between 51 and 99 were rounded to 100.

\* Excludes basal and squamous cell skin cancers and in situ carcinomas except urinary bladder.

† State estimates may not add up to United States total due to rounding.



**Table 4**  
**Estimated Cancer Mortality by Site and State, US, 2000\***

State	Reported Death Rate per 100,000†	Estimated Number of Deaths										
		All Sites	Female Breast	Colon & Rectum	Liver	Leukemia	Lung & Bronchus	Hodgkin's Lymphoma	Ovary	Pancreas	Prostate	Stomach
Alabama	179	9,700	600	800	300	300	2,800	400	200	500	600	200
Alaska	167	700	100	100	—	—	200	—	—	—	—	—
Arizona	155	9,200	600	900	200	300	2,600	400	200	500	600	200
Arkansas	181	6,200	400	600	200	200	2,100	300	200	300	400	100
California	156	51,200	4,000	4,900	1,700	2,100	13,400	2,500	1,400	2,700	2,900	1,500
Colorado	142	6,100	400	600	100	300	1,400	300	100	300	300	100
Connecticut	163	7,000	500	600	200	300	1,900	300	200	400	400	200
Delaware	195	1,800	100	200	—	100	500	100	—	100	100	—
Dist. of Col.	212	1,200	100	100	—	—	300	—	—	100	100	100
Florida	166	39,900	2,700	3,900	1,000	1,500	12,000	1,900	900	2,100	2,400	900
Georgia	175	13,300	1,000	1,200	300	500	4,000	500	400	600	800	300
Hawaii	133	2,000	100	200	100	100	500	100	—	100	100	100
Idaho	148	2,100	200	200	—	100	500	100	100	100	100	—
Illinois	178	24,900	2,000	2,600	700	1,000	6,900	1,200	700	1,300	1,400	600
Indiana	178	12,600	900	1,300	300	500	3,900	600	300	600	700	200
Iowa	160	6,400	500	800	100	300	1,800	300	200	300	400	100
Kansas	159	5,400	400	500	100	200	1,600	200	100	300	300	100
Kentucky	192	9,300	600	900	200	300	3,200	400	200	400	500	200
Louisiana	193	9,400	700	1,000	300	400	2,700	400	200	500	600	300
Maine	185	3,100	200	300	—	100	900	200	100	200	200	100
Maryland	184	10,200	800	1,100	200	400	2,900	400	200	500	600	300
Massachusetts	178	13,600	1,000	1,500	300	500	3,700	700	300	700	700	300
Michigan	173	20,000	1,500	2,100	500	700	5,800	1,000	500	1,000	1,200	400
Minnesota	156	9,000	600	900	200	400	2,200	500	200	500	600	200
Mississippi	182	6,000	400	600	200	200	1,800	200	100	300	400	100
Missouri	176	12,200	800	1,300	300	500	3,800	500	300	500	600	300
Montana	159	1,900	100	200	100	100	500	100	100	100	100	—
Nebraska	155	3,300	300	400	100	200	900	200	100	100	200	100
Nevada	184	3,800	200	400	100	100	1,200	200	100	200	200	100
New Hampshire	181	2,500	200	300	100	100	700	100	100	100	100	—
New Jersey	179	18,100	1,400	2,000	500	800	4,600	900	500	1,000	1,000	500
New Mexico	146	3,000	200	300	100	100	700	100	100	100	200	100
New York	169	36,900	3,100	4,000	900	1,400	9,400	1,800	1,000	2,200	2,100	1,100
North Carolina	175	16,200	1,200	1,600	300	600	5,000	700	400	800	900	300
North Dakota	155	1,300	100	200	—	100	300	100	—	100	100	—
Ohio	180	25,400	1,900	2,700	500	1,000	7,400	1,300	600	1,300	1,400	500
Oklahoma	170	7,300	500	700	200	300	2,400	300	200	300	400	100
Oregon	166	7,100	500	700	100	300	2,100	300	200	400	500	100
Pennsylvania	177	30,100	2,300	3,400	700	1,200	8,200	1,400	800	1,500	1,800	600
Rhode Island	178	2,400	200	300	100	100	800	100	100	100	100	100
South Carolina	178	8,200	600	800	200	300	2,400	300	200	400	500	200
South Dakota	155	1,600	100	200	—	100	400	100	—	100	100	—
Tennessee	181	12,400	900	1,200	300	400	4,000	600	300	600	600	300
Texas	168	34,400	2,600	3,600	1,100	1,400	10,300	1,700	900	1,700	2,000	900
Utah	122	2,300	200	200	100	100	400	100	100	100	200	40
Vermont	172	1,200	100	200	—	—	400	100	—	—	100	—
Virginia	177	13,300	1,000	1,300	300	500	3,800	600	300	600	800	300
Washington	162	10,700	800	1,000	300	500	3,000	500	300	500	600	200
West Virginia	184	4,800	300	500	100	200	1,500	200	100	200	200	100
Wisconsin	163	10,700	700	1,100	200	500	2,700	600	300	600	700	200
Wyoming	157	900	100	100	—	—	200	—	—	—	100	—
United States‡	170	552,200	40,800	56,300	13,800	21,700	156,900	26,100	14,000	28,200	31,900	13,000

— Estimate is 50 or fewer deaths. State death estimates between 51 and 99 were rounded to 100.

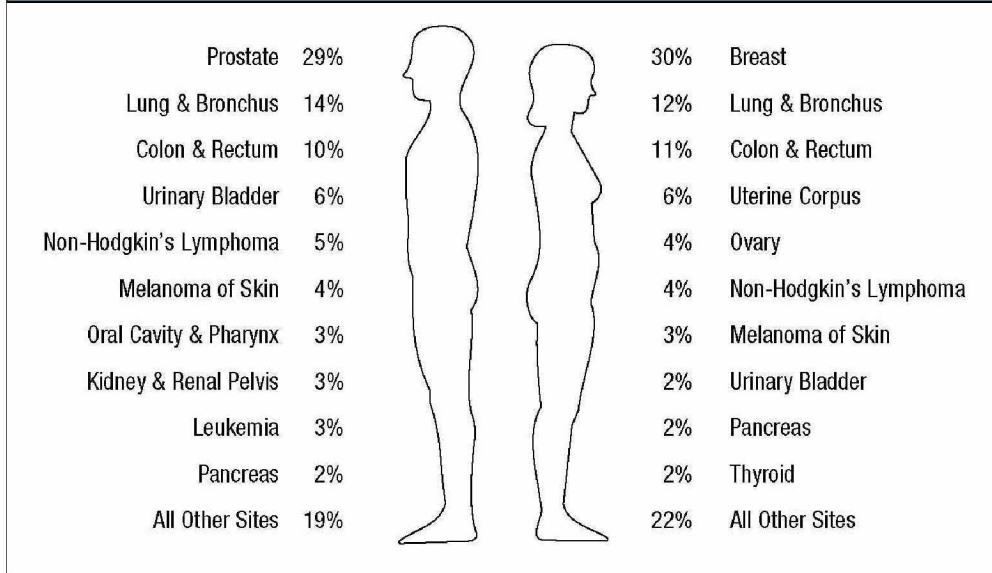
\* Excludes in situ carcinomas except urinary bladder.

† Average annual mortality rate between 1992 and 1996, age-adjusted to the 1970 US standard population.

Source: US Mortality 1992-1996, National Center for Health Statistics, Centers for Disease Control and Prevention 1999, Surveillance, Epidemiology, and End Results Program, Division of Cancer Control and Population Sciences, National Cancer Institute.<sup>3</sup>

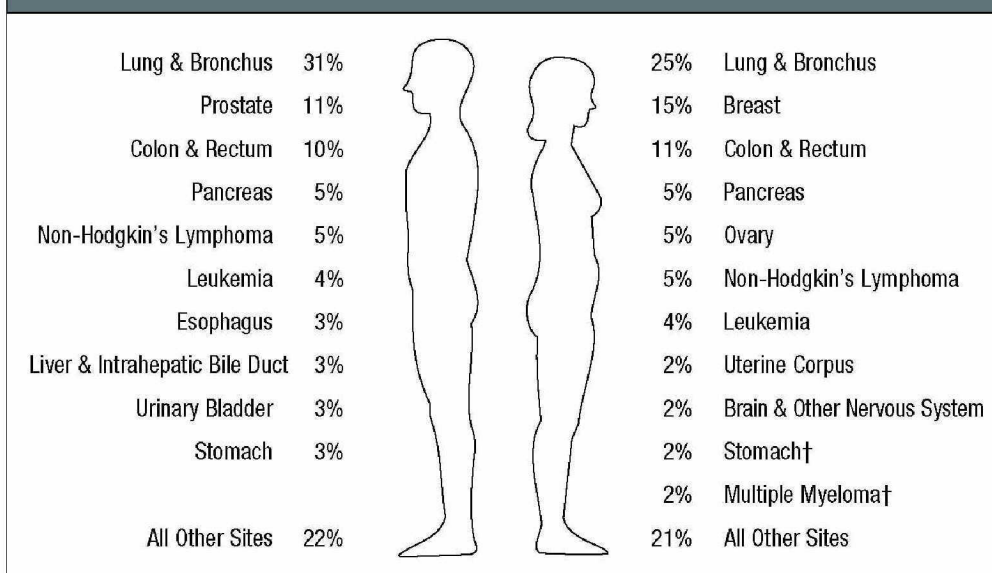
‡ State estimates may not add up to United States total due to rounding.

**Figure 1**  
**Estimated New Cancer Cases\***  
**10 Leading Sites by Gender, US, 2000**



\*Excludes basal and squamous cell skin cancers and in situ carcinomas except urinary bladder. Percentages may not total 100% due to rounding.

**Figure 2**  
**Estimated Cancer Deaths\***  
**10 Leading Sites by Gender, US, 2000**



\*Excludes in situ carcinomas except urinary bladder.

†These two cancers both received a ranking of 10; they have the same projected number of deaths and contribute the same percentage. Percentages may not total 100% due to rounding.

**Table 5**  
**Probability of Developing Invasive Cancers Over Selected Age Intervals,**  
**by Gender, US, 1994-1996\***

		Birth to 39 (%)	40 to 59 (%)	60 to 79 (%)	Birth to Death (%)
All sites†	Male	1.61 (1 in 62)	8.17 (1 in 12)	33.65 (1 in 3)	43.56 (1 in 2)
	Female	1.94 (1 in 52)	9.23 (1 in 11)	22.27 (1 in 4)	38.11 (1 in 3)
Breast	Female	0.43 (1 in 235)	4.06 (1 in 25)	6.88 (1 in 15)	12.56 (1 in 8)
Colon & Rectum	Male	0.06 (1 in 1,579)	0.85 (1 in 124)	3.97 (1 in 29)	5.64 (1 in 18)
	Female	0.05 (1 in 1,947)	0.67 (1 in 149)	3.06 (1 in 33)	5.55 (1 in 18)
Lung & Bronchus	Male	0.04 (1 in 2,592)	1.29 (1 in 78)	6.35 (1 in 16)	8.11 (1 in 12)
	Female	0.03 (1 in 2,894)	0.94 (1 in 106)	3.98 (1 in 25)	5.69 (1 in 18)
Prostate	Male	(Less than 1 in 10,000)	1.90 (1 in 53)	13.69 (1 in 7)	15.91 (1 in 6)

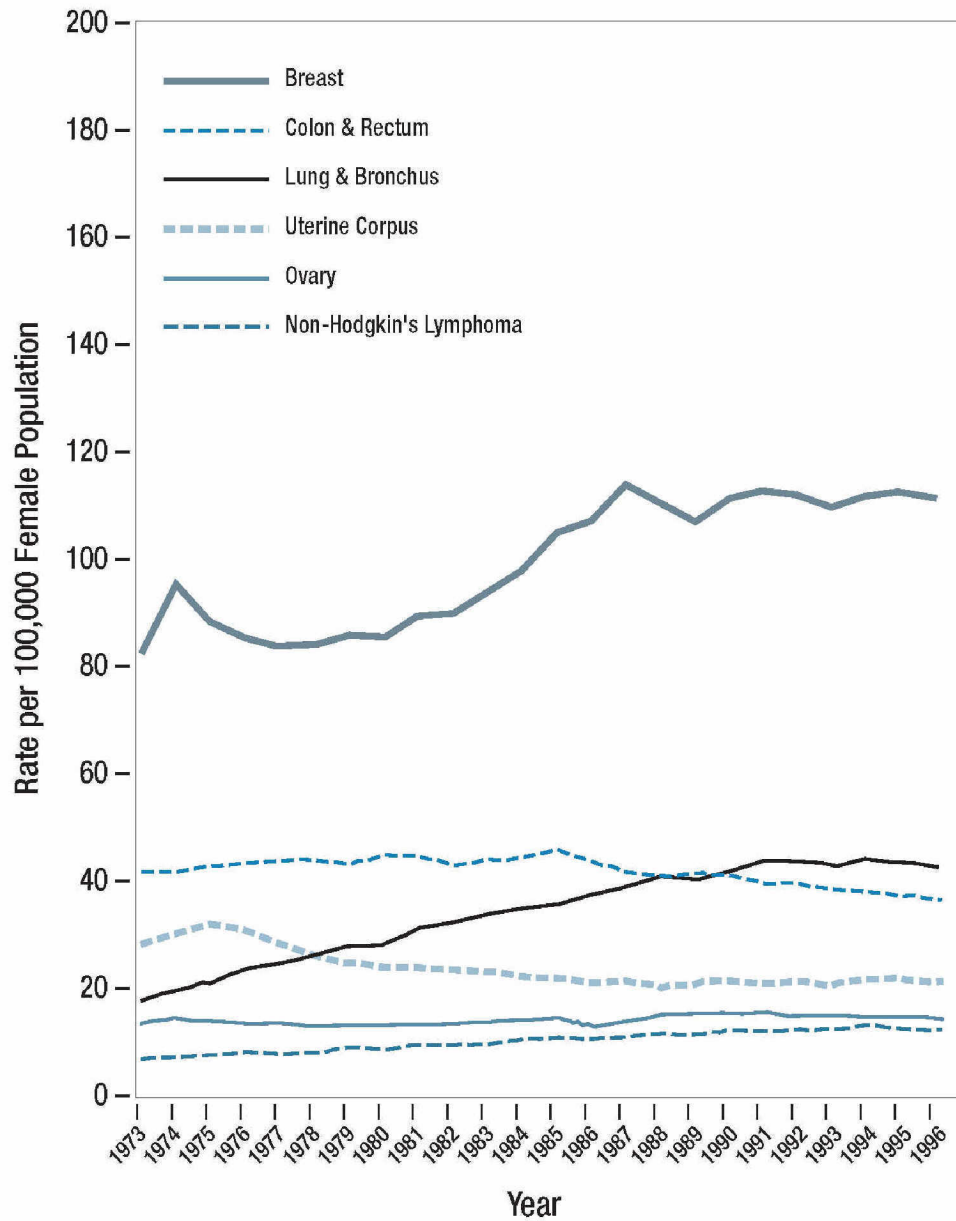
\*Of those free of cancer at beginning of age interval and based on cancer cases diagnosed between 1994 and 1996.

The "1 in" statistic and the inverse of the percentage may not be equivalent due to rounding.

†Excludes basal and squamous cell skin cancers and in situ carcinomas except urinary bladder.

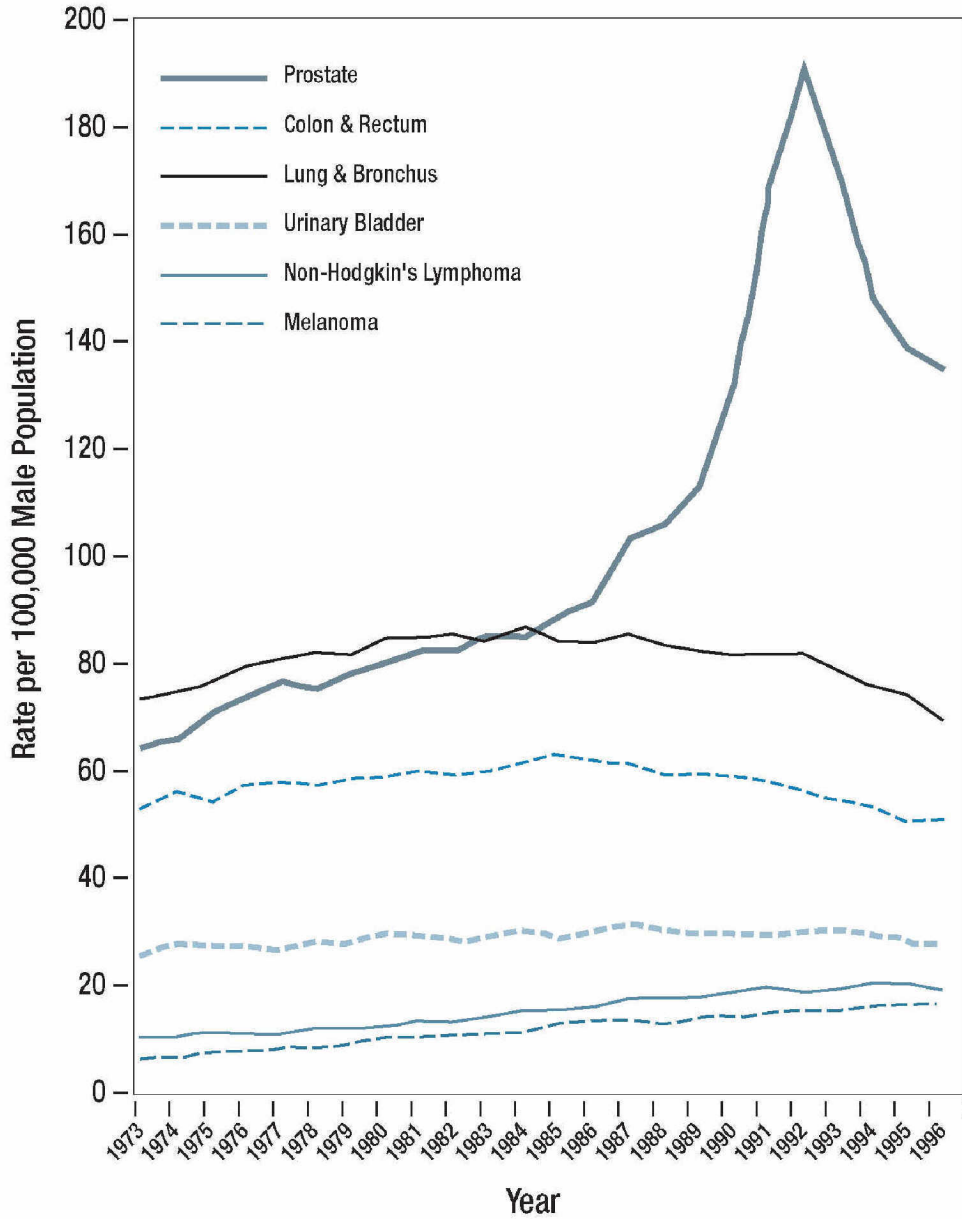
Source: Surveillance, Epidemiology, and End Results Program, 1973-1996, Division of Cancer Control and Population Sciences, National Cancer Institute, DEVCAN Software, Version 4.0, National Cancer Institute.<sup>6</sup>

**Figure 3**  
**Age-Adjusted Cancer Incidence Rates\***  
**for Females by Site, US, 1973-1996**



\* Rates are per 100,000 population and are age-adjusted to the 1970 US standard population.  
 Source: Surveillance, Epidemiology, and End Results Program, 1973-1996, Division of Cancer Control and Population Sciences, National Cancer Institute.<sup>3</sup>

**Figure 4**  
**Age-Adjusted Cancer Incidence Rates\***  
**for Males by Site, US, 1973-1996**



\* Rates are per 100,000 population and are age-adjusted to the 1970 US standard population.  
 Source: Surveillance, Epidemiology, and End Results Program, 1973-1996, Division of Cancer Control and Population Sciences, National Cancer Institute.<sup>3</sup>

**Table 6**  
**Reported Deaths for the 10 Leading Causes of Death**  
**by Age and Gender, US, 1997**

	All Ages		Ages 1-19		Ages 20-39	
	Male	Female	Male	Female	Male	Female
	<b>All Causes</b> 1,154,039	<b>All Causes</b> 1,160,206	<b>All Causes</b> 18,149	<b>All Causes</b> 9,685	<b>All Causes</b> 69,832	<b>All Causes</b> 31,150
1.	Heart Diseases 356,598	Heart Diseases 370,376	Accidents 7,882	Accidents 4,097	Accidents 20,240	Accidents 6,463
2.	Cancer 281,110	Cancer 258,467	Homicide 2,740	Cancer 963	Suicide 9,426	Cancer 6,159
3.	Cerebro-vascular Diseases 62,564	Cerebro-vascular Diseases 97,227	Suicide 1,723	Homicide 710	Homicide 8,669	Heart Diseases 2,794
4.	Accidents 61,963	Chronic Obstructive Pulmonary Diseases 53,045	Cancer 1,207	Congenital Anomalies 570	HIV Infection 5,994	Suicide 2,037
5.	Chronic Obstructive Pulmonary Diseases 55,984	Pneumonia & Influenza 47,165	Congenital Anomalies 683	Suicide 386	Heart Diseases 5,833	Homicide 2,001
6.	Pneumonia & Influenza 39,284	Diabetes Mellitus 34,449	Heart Diseases 557	Heart Diseases 385	Cancer 5,467	HIV Infection 1,918
7.	Diabetes Mellitus 28,187	Accidents 33,681	Cerebral Palsy 241	Pneumonia & Influenza 200	Cirrhosis of Liver 1,149	Cerebro-vascular Diseases 878
8.	Suicide 24,492	Alzheimer's Disease 15,437	Pneumonia & Influenza 215	Cerebral Palsy 186	Cerebro-vascular Diseases 878	Diabetes Mellitus 619
9.	Cirrhosis of Liver 16,260	Nephritis 13,191	Chronic Obstructive Pulmonary Diseases 165	Benign Neoplasms 103	Diabetes Mellitus 842	Cirrhosis of Liver 571
10.	Homicide 15,449	Septicemia 12,741	Peripheral Nervous System Diseases 148	Chronic Obstructive Pulmonary Diseases 101	Pneumonia & Influenza 730	Pneumonia & Influenza 505

Source: US Mortality Public Use Data Tape 1997, National Center for Health Statistics, Centers for Disease Control and Prevention, 1999.

**Table 6 (Continued)**

Ages 40-59		Ages 60-79		Ages 80+	
Male	Female	Male	Female	Male	Female
All Causes 182,834	All Causes 111,414	All Causes 513,377	All Causes 410,559	All Causes 353,742	All Causes 585,057
Heart Diseases 51,356	Cancer 45,781	Heart Diseases 168,426	Cancer 131,274	Heart Diseases 130,028	Heart Diseases 231,179
Cancer 47,118	Heart Diseases 19,744	Cancer 161,581	Heart Diseases 115,982	Cancer 65,685	Cancer 74,240
Accidents 15,507	Accidents 5,779	Chronic Obstructive Pulmonary Diseases 31,528	Cerebrovascular Diseases 27,798	Cerebrovascular Diseases 28,609	Cerebrovascular Diseases 63,175
Cirrhosis of Liver 7,642	Cerebrovascular Diseases 5,175	Cerebrovascular Diseases 26,491	Chronic Obstructive Pulmonary Diseases 27,501	Pneumonia & Influenza 21,773	Pneumonia & Influenza 34,046
Suicide 7,568	Diabetes Mellitus 4,032	Diabetes Mellitus 15,082	Diabetes Mellitus 16,310	Chronic Obstructive Pulmonary Diseases 20,368	Chronic Obstructive Pulmonary Diseases 21,682
Cerebrovascular Diseases 6,295	Chronic Obstructive Pulmonary Diseases 3,372	Pneumonia & Influenza 13,576	Pneumonia 10,443	Diabetes Mellitus 7,302	Diabetes Mellitus 13,453
HIV Infection 6,109	Cirrhosis of Liver 2,814	Accidents 10,650	Accidents 7,145	Accidents 7,163	Alzheimer's Disease 12,215
Diabetes Mellitus 4,921	Suicide 2,405	Diseases of Arteries 8,289	Diseases of Arteries 5,300	Nephritis 5,599	Accidents 9,853
Chronic Obstructive Pulmonary Diseases 3,478	Pneumonia & Influenza 1,805	Cirrhosis of Liver 6,461	Nephritis 4,624	Diseases of Arteries 5,044	Atherosclerosis 8,017
Homicide 2,963	HIV Infection 1,446	Nephritis 5,136	Cirrhosis of Liver 4,269	Alzheimer's Disease 4,663	Nephritis 7,530

Source: US Mortality Public Use Data Tape 1997, National Center for Health Statistics, Centers for Disease Control and Prevention, 1999.

**Table 7**  
**Fifteen Leading Causes of Death, US, 1997**

Rank	Cause of Death	Number of Deaths	Death Rate per 100,000 Population*	Percent (%) of Total Deaths†
	<b>All Causes</b>	<b>2,314,245</b>	<b>654.3</b>	<b>100.0</b>
1	Heart Diseases	726,974	194.6	31.4
2	Cancer	539,577	164.1	23.3
3	Cerebrovascular Diseases	159,791	40.8	6.9
4	Chronic Obstructive Pulmonary Diseases	109,029	30.6	4.7
5	Accidents	95,644	31.5	4.1
6	Pneumonia & Influenza	86,449	21.2	3.7
7	Diabetes Mellitus	62,636	18.3	2.7
8	Suicide	30,535	10.2	1.3
9	Diseases of Arteries	27,792	7.7	1.2
10	Nephritis	25,331	6.7	1.1
11	Cirrhosis of Liver	25,175	8.2	1.1
12	Alzheimer's Disease	22,475	5.2	1.0
13	Septicemia	22,396	6.1	1.0
14	Homicide	19,846	7.3	0.9
15	HIV Infection	16,516	5.0	0.7
	Other & Ill-defined	344,079		14.9

\*Age-adjusted to the 1970 US standard population.  
†Percentages may not total 100% due to rounding.  
Source: US Mortality Public Use Data Tape 1997, National Center for Health Statistics, Centers for Disease Control and Prevention, 1999.



**Table 8**  
**Reported Deaths for the Five Leading Cancer Sites**  
**for Males by Age, US, 1997**

All Ages	< 20	20-39	40-59	60-79	≥80
<b>All Sites</b> 281,110	<b>All Sites</b> 1,252	<b>All Sites</b> 5,467	<b>All Sites</b> 47,118	<b>All Sites</b> 161,581	<b>All Sites</b> 65,685
Lung & Bronchus 91,278	Leukemia 423	Non-Hodgkin's Lymphoma 723	Lung & Bronchus 15,379	Lung & Bronchus 59,558	Lung & Bronchus 15,823
Prostate 32,891	Brain & ONS 288	Leukemia 662	Colon & Rectum 4,347	Prostate 16,277	Prostate 15,511
Colon & Rectum 28,075	Endocrine System 115	Brain & ONS 625	Pancreas 2,584	Colon & Rectum 15,842	Colon & Rectum 7,459
Pancreas 13,470	Bones & Joints 86	Lung & Bronchus 512	Non-Hodgkin's Lymphoma 2,552	Pancreas 7,898	Urinary Bladder 2,900
Non-Hodgkin's Lymphoma 12,286	Non-Hodgkin's Lymphoma 86	Colon & Rectum 412	Esophagus 2,069	Non-Hodgkin's Lymphoma 6,383	Pancreas 2,843

Note: "All Sites" excludes in situ carcinomas except urinary bladder.  
 ONS = other nervous system.  
 Source: US Mortality Public Use Data Tape 1997, National Center for Health Statistics, Centers for Disease Control and Prevention, 1999.

**Table 9**  
**Reported Deaths for the Five Leading Cancer Sites**  
**for Females by Age, US, 1997**

All Ages	< 20	20-39	40-59	60-79	≥80
<b>All Sites</b> 258,467	<b>All Sites</b> 1,009	<b>All Sites</b> 6,159	<b>All Sites</b> 45,781	<b>All Sites</b> 131,274	<b>All Sites</b> 74,240
Lung & Bronchus 61,922	Leukemia 322	Breast 1,629	Breast 12,093	Lung & Bronchus 38,488	Lung & Bronchus 12,879
Breast 41,943	Brain & ONS 253	Uterine Cervix 629	Lung & Bronchus 10,088	Breast 18,385	Colon & Rectum 12,046
Colon & Rectum 28,621	Soft Tissue 85	Lung & Bronchus 462	Colon & Rectum 3,426	Colon & Rectum 12,799	Breast 9,835
Pancreas 14,205	Endocrine System 79	Leukemia 462	Ovary 2,801	Pancreas 7,437	Pancreas 5,045
Ovary 13,507	Bones & Joints 71	Brain & ONS 385	Uterine Cervix 1,803	Ovary 7,207	Non-Hodgkin's Lymphoma 3,859

Note: "All Sites" excludes in situ carcinomas except urinary bladder.  
 ONS = other nervous system.  
 Source: US Mortality Public Use Data Tape 1997, National Center for Health Statistics, Centers for Disease Control and Prevention, 1999.

**Table 10  
Incidence and Mortality Rates\* by Site, Race,  
and Ethnicity, US, 1990-1996**

Site	White	Black	Asian/Pacific Islander	American Indian	Hispanic†
<b>INCIDENCE</b>					
<b>All Sites</b>					
<b>Total</b>	<b>402.9</b>	<b>442.9</b>	<b>279.1</b>	<b>153.4</b>	<b>275.4</b>
Male	480.2	598.0	325.5	177.8	326.9
Female	351.6	335.6	244.9	136.8	243.2
Breast Female)	113.2	99.3	72.6	33.9	69.4
Colon & Rectum					
<b>Total</b>	<b>43.9</b>	<b>50.4</b>	<b>38.6</b>	<b>16.4</b>	<b>29.0</b>
Male	53.2	58.1	47.5	21.5	35.7
Female	36.8	44.9	31.4	12.4	24.0
Lung & Bronchus					
<b>Total</b>	<b>55.9</b>	<b>73.9</b>	<b>35.8</b>	<b>18.6</b>	<b>27.6</b>
Male	73.1	112.3	52.4	25.3	38.8
Female	43.3	46.2	22.5	13.5	19.6
Prostate	147.3	222.9	81.5	46.5	102.8
<b>MORTALITY</b>					
<b>All Sites</b>					
<b>Total</b>	<b>167.5</b>	<b>223.4</b>	<b>103.4</b>	<b>104.0</b>	<b>104.9</b>
Male	208.8	308.8	129.2	123.3	131.8
Female	139.8	168.1	83.5	90.2	86.3
Breast (Female)	25.7	31.4	11.4	12.3	15.3
Colon & Rectum					
<b>Total</b>	<b>17.4</b>	<b>23.1</b>	<b>10.9</b>	<b>9.9</b>	<b>10.4</b>
Male	21.5	27.8	13.4	11.0	13.2
Female	14.5	20.0	9.0	8.9	8.4
Lung & Bronchus					
<b>Total</b>	<b>49.3</b>	<b>60.5</b>	<b>23.7</b>	<b>28.8</b>	<b>19.9</b>
Male	70.1	100.8	34.9	40.5	32.0
Female	33.8	32.8	14.9	19.8	11.0
Prostate	23.7	54.8	10.7	14.3	16.7

Note: Incidence data are from the 11 SEER areas; mortality data are from all states except Connecticut, Oklahoma, Louisiana, and New Hampshire.

\*Rates are per 100,000 population and are age-adjusted to the 1970 US standard population.

†Hispanic is not mutually exclusive of white, black, Asian/Pacific Islander, or American Indian.

Sources: Surveillance, Epidemiology, and End Results Program 1973-1996, Division of Cancer Control and Population Sciences, National Cancer Institute<sup>3</sup> (Incidence); US Mortality 1973-1996, National Center for Health Statistics, Centers for Disease Control and Prevention 1999, Surveillance, Epidemiology, and End Results Program, Division of Cancer Control and Population Sciences, National Cancer Institute<sup>3</sup> (Mortality).

**Table 11**  
**Trends in Five-Year Relative Cancer Survival Rates\* (%)**  
**by Race and Year of Diagnosis, US, 1974-1995**

	1974-1976	1980-1982	1989-1995	1974-1976	1980-1982	1989-1995	1974-1976	1980-1982	1989-1995
Site	White			Black			All Races		
All Sites	51	52	61†	39	40	48†	50	51	59†
Brain	22	25	30†	27	31	39†	22	25	30†
Breast (Female)	75	77	86†	63	66	71†	75	76	85†
Colon	51	56	62†	46	49	52†	50	55	62†
Esophagus	5	7	13†	4	5	9†	5	7	12†
Hodgkin's Disease	72	75	83†	69	72	76	71	75	82†
Kidney	52	51	61†	49	55	58†	52	52	60†
Larynx	66	69	66	60	58	53	66	68	65
Leukemia	35	39	44†	31	33	34	34	39	43†
Liver	4	4	6†	2	2	3	4	4	5†
Lung & Bronchus	13	14	14†	12	12	11	13	13	14†
Melanoma of Skin	80	83	88†	67‡	61§	68‡	80	83	88†
Multiple Myeloma	24	28	28†	28	29	31	24	28	28†
Non-Hodgkin's Lymphoma	48	52	52†	48	50	41†	47	51	51†
Oral Cavity & Pharynx	55	55	56	36	31	34	53	53	53
Ovary	37	39	50†	41	39	47†	37	39	50†
Pancreas	3	3	4†	3	5	4†	3	3	4†
Prostate	68	75	93†	58	65	84†	67	73	92†
Rectum	49	53	60†	42	38	51†	49	52	60†
Stomach	15	17	19†	17	19	22	15	18	21†
Testis	79	92	96†	76‡	90‡	88	79	92	95†
Thyroid	92	94	95†	88	94	89	92	94	95†
Urinary bladder	74	79	82†	48	58	62†	73	78	81†
Uterine Cervix	70	68	71†	64	61	59	69	67	70
Uterine Corpus	89	83	86†	61	54	56	88	82	84†

\*Survival rates are adjusted for normal life expectancy and are based on follow-up of patients through 1996.

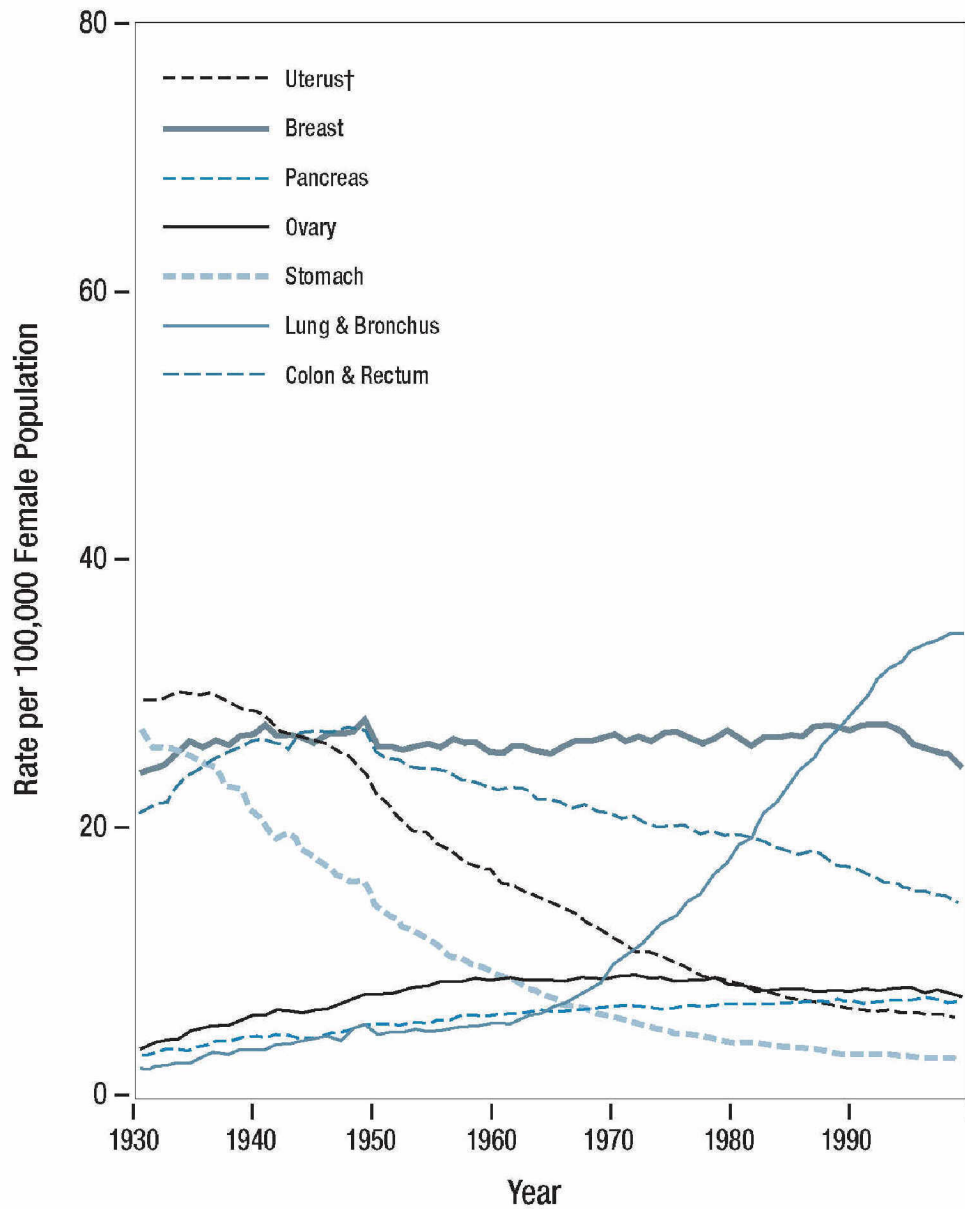
†The difference in rates between 1974-1976 and 1989-1995 is statistically significant ( $p < 0.05$ ).

‡The standard error of the survival rate is between five and 10 percentage points.

§The standard error of the survival rate is greater than 10 percentage points.

Source: Surveillance, Epidemiology and End Results Program 1973-1996, Division of Cancer Control and Population Sciences, National Cancer Institute.<sup>3</sup>

**Figure 5**  
**Age-Adjusted Cancer Death Rates\* for Females by Site, US, 1930-1996**



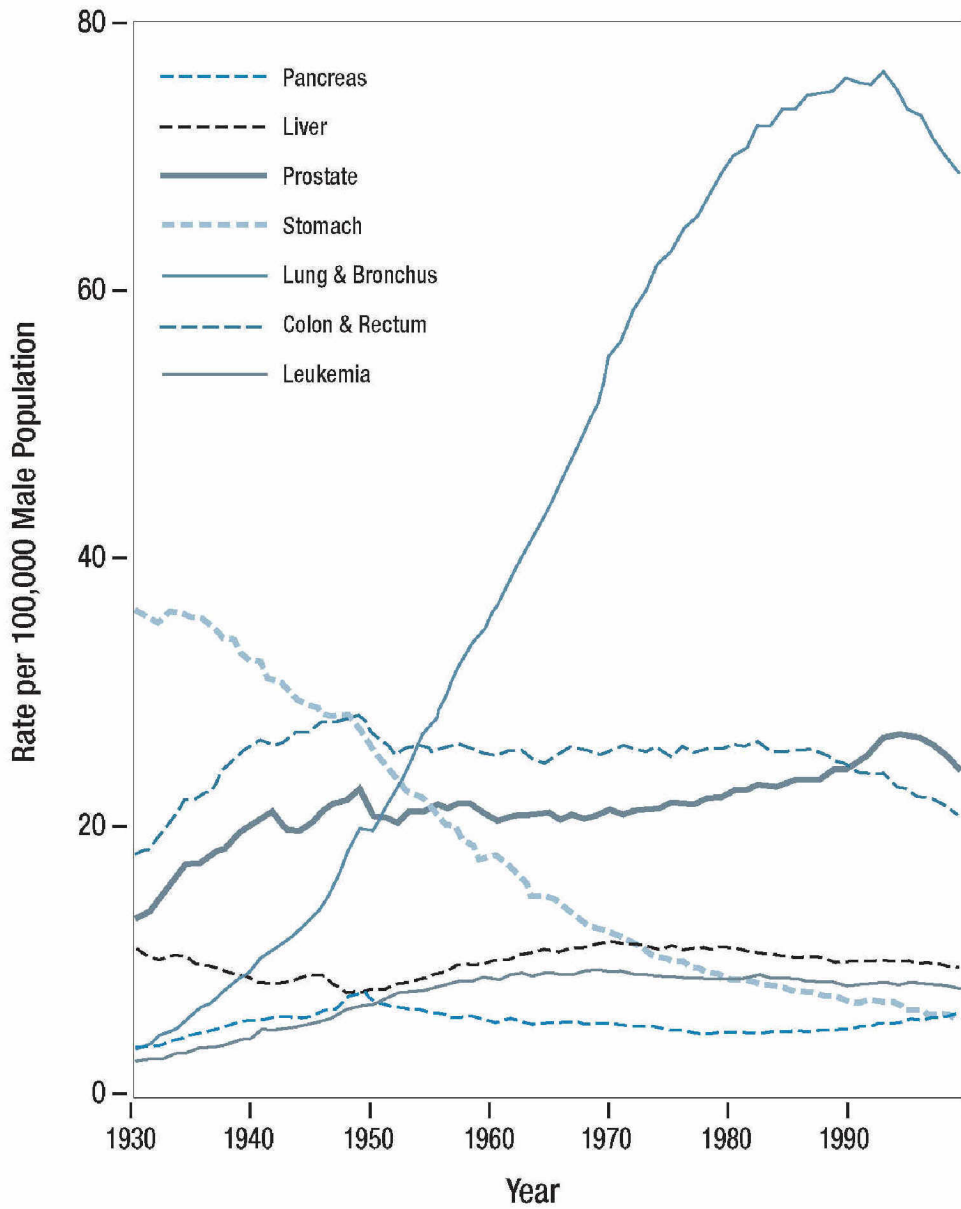
Note: Due to changes in the ICD coding, numerator information has changed over time. Rates for cancer of the uterus, ovary, lung & bronchus, and colon & rectum are affected by these coding changes.

\* Rates are per 100,000 population and are age-adjusted to the 1970 US standard population.

† Uterine cancer death rates are for uterine cervix and uterine corpus combined.

Source: US Mortality Public Use Data Tapes 1960-1996, US Mortality Volumes 1930-1959, National Center for Health Statistics, Centers for Disease Control and Prevention, 1999.

**Figure 6**  
**Age-Adjusted Cancer Death Rates\* for Males by Site,**  
**US, 1930-1996**

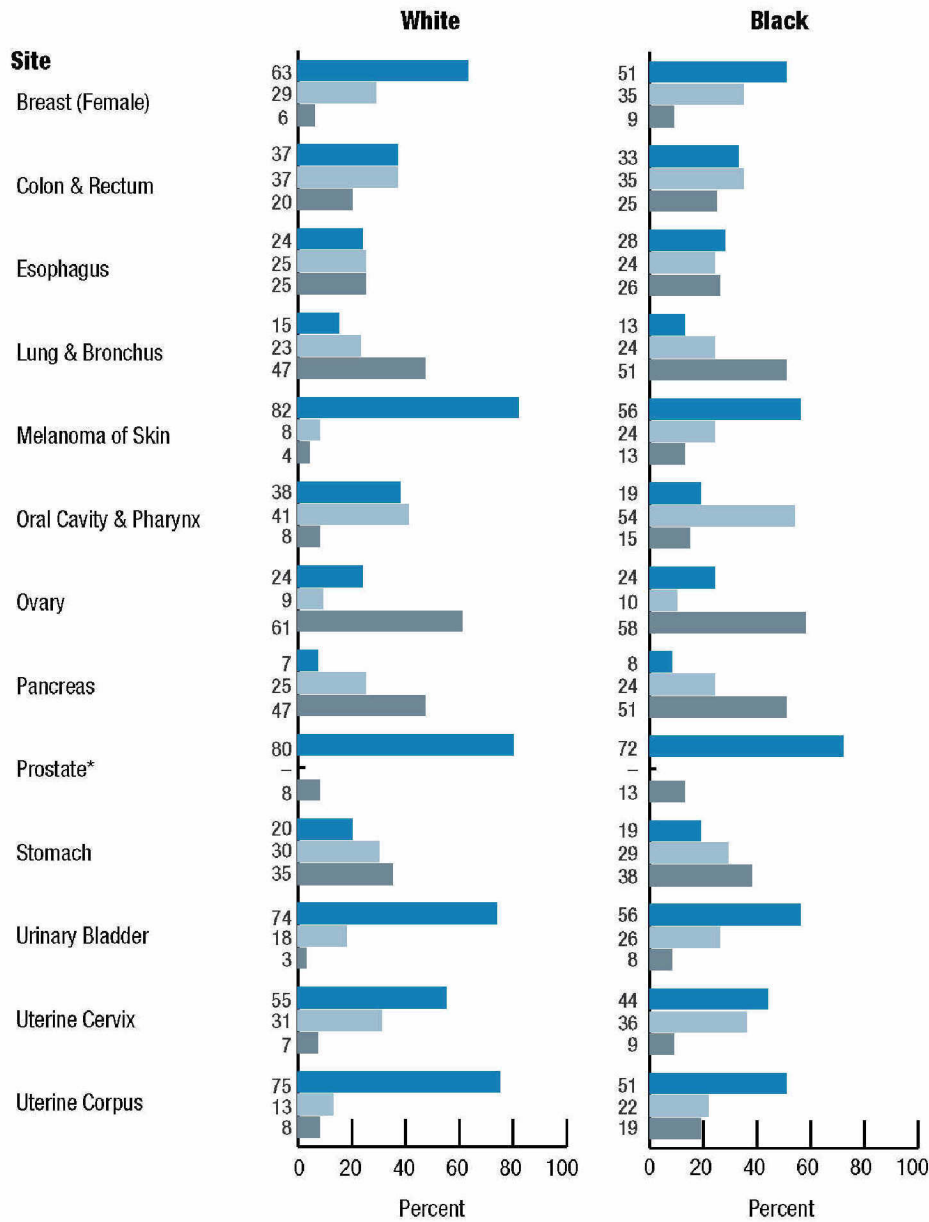


Note: Due to changes in the ICD coding, numerator information has changed over time. Rates for cancer of the liver, lung & bronchus, and colon & rectum are affected by these coding changes.

\* Rates are per 100,000 population and are age-adjusted to the 1970 US standard population.

Source: US Mortality Public Use Data Tapes 1960-1996, US Mortality Volumes 1930-1959, National Center for Health Statistics, Centers for Disease Control and Prevention, 1999.

**Figure 7**  
**Percent Distribution of Cancer Cases by Race and Stage at Diagnosis, US, 1989-1995**



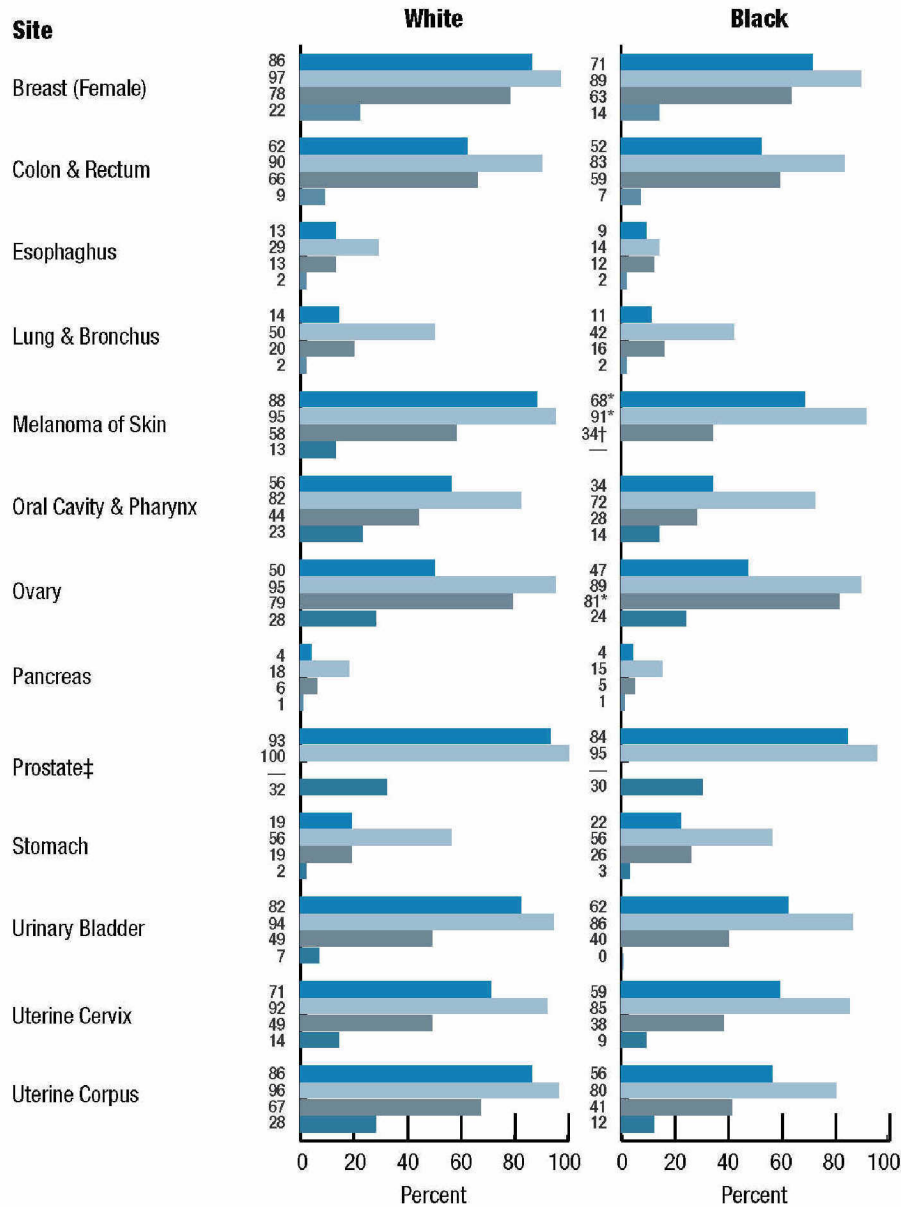
\*The rate for local stage represents local and regional stages combined.

Note: Staging according to SEER summary stage categories rather than the American Joint Committee on Cancer (AJCC) staging system. For each site and race, stage categories do not total 100% because sufficient information is not available to assign a stage to all cancer cases.

Source: Surveillance, Epidemiology, and End Results Program 1973-1996, Division of Cancer Control and Population Sciences, National Cancer Institute.<sup>3</sup>

Localized   
 Regional   
 Distant

**Figure 8**  
**Five-Year Relative Survival Rates by Race and**  
**Stage at Diagnosis, US, 1989-1995**



\*The standard error is between five and 10 percentage points.

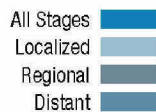
†The standard error is greater than 10 percentage points.

‡The rate for local stage represents local and regional stages combined.

—Statistic could not be calculated.

Note: Staging according to SEER summary stage categories rather than the American Joint Committee on Cancer (AJCC) staging system.

Source: Surveillance, Epidemiology, and End Results Program 1973-1996, Division of Cancer Control and Population Sciences, National Cancer Institute.<sup>3</sup>



**Table 12**  
**Fifteen Leading Causes of Death Among Children**  
**Aged 1-14 Years, US, 1997**

Rank	Cause of Death	Number of Deaths	Death Rate per 100,000 Population*	Percent (%) of Total Deaths†
	<b>All Causes</b>	<b>13,562</b>	<b>24.6</b>	<b>100.0</b>
1	Accidents	5,376	9.8	39.6
2	Cancer	1,468	2.7	10.8
3	Congenital Anomalies	1,036	1.8	7.6
4	Homicide	832	1.5	6.1
5	Heart Diseases	525	1.0	3.9
6	Pneumonia & Influenza	321	0.6	2.4
7	Cerebral Palsy	313	0.6	2.3
8	Suicide	307	0.6	2.3
9	Chronic Obstructive Pulmonary Diseases	170	0.3	1.3
10	HIV Infection	156	0.3	1.2
11	Benign Neoplasms	141	0.3	1.0
12	Cerebrovascular Diseases	132	0.2	1.0
13	Septicemia	125	0.2	0.9
14	Viral Diseases	107	0.2	0.8
15	Anemias	103	0.2	0.8
	<b>All Others</b>	<b>2,450</b>		<b>18.1</b>

\* Age-adjusted to the 1970 US standard population.

† Percentages may not total 100% due to rounding.

Source: US Mortality Public Use Data Tape 1997, National Center for Health Statistics, Centers for Disease Control and Prevention, 1999.



**Table 13**  
**Trends in Five-Year Relative Cancer Survival Rates\* (%)**  
**for Children Under Age 15, US, 1974-1995**

Site	Five-Year Relative Survival Rates (%)					
	Year of Diagnosis					
	1974-1976	1977-1979	1980-1982	1983-1985	1986-1988	1989-1995
All Sites	56	62	65	68	70	75†
Acute Lymphocytic Leukemia	53	67	71	69	78	81†
Acute Myeloid Leukemia	14	28‡	21‡	32‡	32‡	43†
Bones and Joints	53‡	53‡	54‡	57‡	62‡	67†
Brain & Other Nervous System	55	56	55	62	62	64†
Hodgkin's Disease	78	84	91	90	90	93†
Neuroblastoma	53	54	53	55	59	71†
Non-Hodgkin's Lymphoma	44	51	61	71	70	77†
Soft Tissue	61	69	65	76	66	77†
Wilms' Tumor	74	78	87	86	91	93†

Note: "All sites" excludes basal and squamous cell skin cancers and in situ carcinomas except urinary bladder.

\* Survival rates are adjusted for normal life expectancy and are based on follow-up of patients through 1996.

† The difference in rates between 1974-1976 and 1989-1995 is statistically significant ( $p < 0.05$ ).

‡ The standard error of the survival rate is between five and 10 percentage points.

Source: Surveillance, Epidemiology, and End Results Program 1973-1996, Division of Cancer Control and Population Sciences, National Cancer Institute.<sup>3</sup>

**Table 14  
Cancer Around the World: Age-Adjusted Death Rates\* per 100,000 Population  
for Selected Sites for 45 Countries, 1994-1997**

Country	All Sites		Oral		Colon & Rectum		Breast		Prostate		Lung		Uterus			Stomach		Leukemia	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Cervix	Other	Male	Female	Male
United States†	156.0 (24)	108.3 ( 7)	3.2 (29)	1.1 (23)	15.2 (27)	10.4 (23)	20.0 (14)	15.9 (20)	16.4 (17)	50.0 (14)	28.0 ( 3)	2.4 (34)	2.5 (33)	4.4 (44)	2.0 (44)	6.3 ( 5)	3.7 (10)		
Australia‡	156.7 (22)	98.2 (25)	4.1 (26)	1.2 (12)	20.2 (10)	13.3 (10)	19.9 (15)	19.0 ( 9)	19.0 ( 9)	38.8 (29)	13.6 (10)	2.6 (31)	1.7 (43)	6.6 (40)	2.7 (43)	6.1 ( 6)	3.6 (11)		
Austria‡	161.0 (21)	99.9 (22)	6.0 (18)	1.1 (27)	21.7 ( 8)	12.2 (14)	20.9 (13)	16.9 (14)	16.9 (14)	40.7 (26)	10.3 (16)	2.6 (33)	4.0 (20)	12.8 (24)	6.9 (24)	4.8 (24)	3.2 (18)		
Azerbaijan§	117.0 (40)	62.8 (45)	2.3 (38)	0.4 (45)	6.0 (41)	4.2 (43)	8.6 (42)	5.1 (41)	5.1 (41)	22.3 (38)	3.7 (45)	1.8 (39)	3.7 (23)	24.9 (10)	9.5 (15)	3.9 (38)	2.7 (38)		
Bulgaria¶	150.0 (28)	86.5 (32)	4.9 (21)	0.8 (39)	17.2 (20)	11.4 (19)	15.9 (31)	8.5 (34)	8.5 (34)	43.7 (23)	6.6 (32)	4.9 (18)	5.7 ( 5)	18.5 (19)	8.8 (17)	4.9 (23)	3.0 (33)		
Canada‡	156.2 (23)	106.6 (13)	3.8 (27)	1.2 (17)	16.1 (26)	10.3 (25)	21.5 (10)	16.4 (17)	16.4 (17)	50.0 (14)	28.0 ( 3)	1.9 (35)	2.2 (38)	6.2 (42)	3.0 (41)	5.5 (17)	3.2 (22)		
Chile¶	142.5 (32)	105.3 (14)	2.1 (42)	0.6 (43)	7.0 (38)	6.7 (36)	12.1 (35)	16.0 (19)	16.0 (19)	20.5 (39)	6.4 (33)	10.6 ( 3)	2.8 (31)	32.2 ( 3)	11.7 ( 8)	4.2 (34)	2.7 (39)		
China¶	149.9 (29)	83.5 (37)	2.6 (36)	1.1 (24)	7.9 (36)	6.4 (37)	5.0 (44)	~	~	37.3 (30)	15.8 ( 8)	3.0 (27)	~	26.9 ( 6)	12.7 ( 4)	3.7 (40)	3.0 (31)		
Colombia¶	97.7 (43)	89.1 (29)	2.1 (41)	1.2 (19)	4.8 (44)	5.1 (40)	9.1 (40)	12.6 (28)	12.6 (28)	14.3 (44)	6.8 (30)	9.9 ( 5)	4.5 (16)	21.4 (13)	13.1 ( 3)	4.3 (33)	3.7 ( 9)		
Croatia#	212.0 ( 6)	98.7 (24)	11.4 ( 4)	1.0 (29)	22.5 ( 6)	11.5 (18)	18.5 (20)	13.0 (25)	13.0 (25)	65.1 ( 6)	8.9 (20)	2.9 (29)	4.9 ( 9)	20.9 (14)	8.5 (19)	5.7 (12)	3.1 (25)		
Cuba‡	127.2 (35)	91.8 (27)	5.5 (20)	1.5 ( 4)	9.4 (34)	11.3 (20)	14.9 (33)	20.8 ( 4)	20.8 ( 4)	35.7 (31)	12.6 (12)	5.3 (15)	8.3 ( 1)	6.4 (41)	3.2 (38)	4.6 (28)	3.3 (17)		
Czech Republic§	229.3 ( 3)	124.7 ( 3)	7.0 (13)	1.2 (16)	34.3 ( 1)	17.3 ( 3)	21.1 (12)	16.0 (18)	16.0 (18)	67.9 ( 4)	11.4 (14)	5.0 (17)	5.2 ( 8)	15.5 (23)	7.3 (22)	7.0 ( 2)	4.2 ( 6)		
Denmark§	178.6 (14)	140.0 ( 1)	4.5 (23)	1.6 ( 3)	22.7 ( 5)	15.6 ( 4)	27.6 ( 1)	19.9 ( 6)	19.9 ( 6)	49.1 (16)	28.0 ( 1)	3.8 (21)	3.5 (24)	6.6 (38)	3.1 (40)	6.0 (10)	3.9 ( 7)		
Estonia§	206.2 ( 8)	102.8 (20)	9.5 ( 7)	1.3 ( 7)	18.1 (16)	12.2 (13)	18.5 (19)	12.8 (27)	12.8 (27)	66.4 ( 5)	7.0 (28)	5.7 (13)	4.6 (14)	26.0 ( 8)	12.0 ( 6)	6.8 ( 3)	4.9 ( 1)		
Finland‡	142.3 (33)	85.0 (34)	2.2 (39)	1.0 (33)	12.1 (31)	8.5 (31)	16.8 (25)	17.6 (12)	17.6 (12)	41.2 (25)	6.9 (29)	1.0 (43)	2.4 (34)	10.2 (30)	4.7 (32)	4.7 (25)	3.2 (21)		
France‡	188.2 (12)	84.8 (35)	11.3 ( 5)	1.3 ( 9)	16.6 (22)	9.6 (29)	19.6 (16)	15.8 (21)	15.8 (21)	46.5 (19)	6.1 (34)	1.6 (42)	3.4 (26)	7.2 (37)	2.8 (42)	5.6 (14)	3.3 (16)		
Germany†	169.5 (17)	103.3 (17)	6.5 (15)	1.2 (14)	20.8 ( 9)	14.0 ( 7)	21.7 ( 8)	16.6 (16)	16.6 (16)	45.4 (20)	9.4 (17)	2.8 (30)	2.8 (30)	12.0 (26)	6.3 (27)	5.5 (16)	3.5 (14)		
Greece§	145.7 (31)	78.2 (41)	1.9 (44)	0.6 (44)	8.0 (35)	6.2 (38)	16.2 (27)	9.3 (33)	9.3 (33)	49.8 (15)	7.1 (25)	0.9 (44)	2.3 (35)	8.2 (36)	4.3 (34)	6.0 ( 9)	3.6 (12)		
Hungary**	272.2 ( 1)	138.4 ( 2)	20.0 ( 1)	2.4 ( 1)	34.3 ( 2)	18.7 ( 2)	23.7 ( 6)	18.7 (11)	18.7 (11)	85.6 ( 1)	20.3 ( 5)	6.5 (10)	4.8 (13)	18.8 (18)	8.7 (18)	7.4 ( 1)	4.4 ( 4)		
Ireland‡	171.6 (16)	121.0 ( 5)	4.4 (24)	1.3 ( 8)	22.5 ( 7)	13.3 ( 9)	26.1 ( 2)	18.8 (10)	18.8 (10)	44.5 (22)	18.6 ( 7)	3.1 (26)	2.3 (36)	10.7 (28)	5.1 (30)	4.6 (27)	3.0 (34)		
Israel§	127.1 (36)	104.5 (15)	1.5 (45)	0.7 (40)	17.9 (18)	13.8 ( 8)	25.1 ( 4)	12.0 (30)	12.0 (30)	27.1 (35)	8.7 (21)	1.7 (41)	3.0 (27)	8.6 (34)	5.1 (31)	6.1 ( 8)	4.2 ( 5)		
Japan##	155.2 (25)	75.7 (42)	3.1 (31)	0.8 (37)	17.1 (21)	9.9 (28)	7.7 (43)	5.1 (42)	5.1 (42)	31.7 (33)	6.5 (22)	1.9 (36)	2.0 (42)	30.2 ( 4)	12.3 ( 5)	4.1 (36)	2.5 (41)		

Kazakhstan	207.6 ( 7 ) 102.9 (19)	7.7 (11)	1.9 ( 2 )	12.6 (30)	8.6 (30)	13.2 (34)	5.7 (39)	62.3 (10)	8.5 (23)	6.2 (12)	4.6 (15)	33.1 ( 2 )	13.9 ( 2 )	3.3 (43)	2.6 (40)
Kyrgyzstan	123.5 (37) 72.4 (43)	3.6 (28)	1.0 (31)	6.9 (39)	4.5 (41)	10.6 (37)	4.3 (43)	25.5 (36)	4.3 (40)	6.2 (11)	3.5 (25)	29.1 ( 5 )	10.7 (10)	2.5 (45)	2.0 (45)
Latvia	224.0 ( 4 ) 107.6 ( 9 )	7.9 (10)	1.2 (21)	18.3 (12)	11.8 (15)	17.3 (24)	11.5 (31)	63.6 ( 8 )	5.9 (37)	4.2 (19)	5.4 ( 7 )	26.8 ( 7 )	11.8 ( 7 )	5.8 (11)	3.8 ( 8 )
Lithuania	203.7 (10) 101.0 (21)	8.5 ( 9 )	1.0 (30)	18.2 (13)	11.7 (16)	18.7 (18)	15.2 (22)	62.5 ( 9 )	5.3 (38)	7.4 ( 7 )	4.8 (12)	25.9 ( 9 )	10.2 (11)	6.6 ( 4 )	4.5 ( 3 )
Macedonia	137.4 (34) 82.3 (38)	2.6 (35)	0.7 (42)	10.8 (33)	7.1 (34)	16.1 (30)	6.2 (38)	39.6 (28)	6.7 (31)	3.1 (25)	5.5 ( 6 )	22.0 (11)	9.7 (13)	4.4 (31)	2.4 (42)
Mauritius	80.3 (45) 65.2 (44)	4.3 (25)	1.2 (20)	6.0 (42)	3.8 (44)	9.0 (41)	7.7 (36)	16.7 (42)	4.0 (41)	5.5 (14)	8.3 ( 2 )	10.8 (27)	5.7 (28)	3.5 (41)	2.1 (44)
Mexico	85.0 (44) 78.9 (40)	1.9 (43)	0.7 (41)	3.6 (45)	3.3 (45)	9.3 (39)	12.8 (26)	16.2 (43)	6.0 (35)	14.0 ( 1 )	2.1 (41)	9.7 (31)	7.1 (23)	3.9 (39)	3.1 (28)
Netherlands	182.3 (13) 108.0 ( 8 )	2.8 (33)	1.0 (32)	17.7 (19)	12.7 (11)	26.0 ( 3 )	19.4 ( 8 )	62.0 (11)	13.6 ( 9 )	1.7 (40)	2.2 (37)	10.3 (29)	4.2 (35)	5.7 (13)	3.1 (29)
New Zealand	167.2 (18) 121.2 ( 4 )	2.7 (34)	1.2 (13)	26.4 ( 3 )	19.1 ( 1 )	22.9 ( 7 )	19.8 ( 7 )	39.6 (27)	18.8 ( 6 )	3.4 (23)	2.1 (40)	6.0 (43)	3.2 (39)	6.1 ( 7 )	4.5 ( 2 )
Norway	146.6 (30) 103.3 (16)	3.1 (30)	1.0 (34)	20.0 (11)	14.7 ( 5 )	19.4 (17)	23.2 ( 2 )	31.7 (32)	13.3 (11)	3.1 (24)	2.9 (29)	9.1 (33)	4.6 (33)	4.3 (32)	2.8 (37)
Poland	204.9 ( 9 ) 107.6 (11)	6.3 (17)	1.1 (25)	16.4 (23)	11.0 (22)	16.1 (29)	11.1 (32)	71.3 ( 2 )	11.1 (15)	7.3 ( 8 )	3.8 (22)	18.9 (17)	6.8 (25)	5.6 (15)	3.5 (15)
Portugal	155.0 (26) 84.3 (36)	6.4 (16)	0.8 (38)	18.1 (15)	10.4 (24)	17.6 (22)	17.2 (13)	29.2 (34)	4.6 (39)	2.6 (32)	4.1 (18)	21.8 (12)	10.0 (12)	5.0 (22)	3.2 (19)
Rep. of Moldova	162.4 (20) 88.9 (30)	11.7 ( 3 )	1.3 (10)	16.2 (25)	11.1 (21)	18.2 (21)	5.7 (40)	43.0 (24)	6.0 (36)	6.6 ( 9 )	4.4 (17)	20.7 (15)	9.2 (16)	5.2 (20)	3.1 (26)
Romania	150.7 (27) 88.5 (31)	7.1 (12)	1.2 (18)	11.3 (32)	7.9 (33)	15.7 (32)	8.3 (35)	44.8 (21)	7.2 (24)	10.5 ( 4 )	4.1 (19)	17.6 (21)	6.8 (26)	4.5 (29)	3.0 (30)
Russian Fed†	237.1 ( 2 ) 107.6 (10)	9.1 ( 8 )	1.1 (26)	18.2 (14)	12.6 (12)	16.1 (28)	7.2 (37)	70.5 ( 3 )	7.0 (27)	5.0 (16)	4.9 (11)	36.9 ( 1 )	15.3 ( 1 )	5.1 (21)	3.5 (13)
Slovakia	218.1 ( 5 ) 103.5 (16)	16.8 ( 2 )	1.2 (15)	14.6 (28)	6.8 (35)	~	~	64.2 ( 7 )	7.1 (26)	~	~	~	~	3.4 (42)	2.2 (43)
Slovenia	200.9 (11) 107.4 (12)	10.7 ( 6 )	1.0 (28)	23.9 ( 4 )	14.0 ( 6 )	21.2 (11)	14.7 (23)	61.1 (12)	9.1 (19)	4.0 (20)	4.9 (10)	19.7 (16)	8.3 (20)	5.4 (18)	3.2 (20)
Spain†	173.2 (15) 79.8 (39)	7.0 (14)	0.9 (36)	16.4 (24)	10.0 (27)	17.5 (23)	13.9 (24)	48.7 (17)	3.9 (42)	1.8 (38)	3.0 (28)	12.7 (25)	5.6 (29)	5.2 (19)	3.2 (23)
Sweden	123.3 (38) 94.4 (26)	2.2 (40)	0.9 (35)	13.8 (29)	10.2 (26)	16.8 (26)	21.4 ( 3 )	22.3 (37)	12.0 (13)	1.8 (37)	2.5 (32)	6.6 (39)	3.5 (37)	4.5 (30)	3.2 (24)
Trinidad & Tobago	107.3 (41) 99.4 (23)	4.6 (22)	1.4 ( 6 )	7.8 (37)	8.3 (32)	21.5 ( 9 )	35.5 ( 1 )	11.2 (45)	3.7 (44)	8.2 ( 6 )	7.1 ( 4 )	8.4 (35)	7.7 (21)	4.2 (35)	2.9 (36)
Turkmenistan	120.8 (39) 86.0 (33)	5.8 (19)	1.5 ( 5 )	6.2 (40)	4.4 (42)	9.5 (38)	1.4 (44)	17.3 (41)	3.7 (43)	3.7 (22)	3.8 (21)	18.3 (20)	11.0 ( 9 )	3.1 (44)	2.9 (35)
United Kingdom†	164.2 (19) 116.5 ( 6 )	2.9 (32)	1.1 (22)	18.0 (17)	11.6 (17)	24.5 ( 5 )	16.6 (15)	46.6 (18)	20.5 ( 4 )	3.0 (28)	2.1 (39)	9.5 (32)	3.9 (36)	4.7 (26)	3.0 (32)
Venezuela	104.3 (42) 90.0 (28)	2.5 (37)	1.2 (11)	5.9 (43)	6.2 (39)	11.8 (36)	20.3 ( 5 )	19.4 (40)	9.3 (18)	10.8 ( 2 )	7.4 ( 3 )	16.8 (22)	9.7 (14)	4.1 (37)	3.1 (27)

Note: Figures in parentheses represent order of rank within site and sex group.

\* Rates are age-adjusted to the World Health Organization world standard population.

† 1994-1997; ‡ 1994-1995; § 1994-1996; ¶ 1994 only; \*\* 1996-1997; # 1995-1996; ## 1995-1997.

& Oral cancer mortality rate includes nasopharynx only.

~ Data not available

Source: Mortality Database 1994-1997, World Health Organization, 1999.