#### **CANCER STATISTICS REVIEW 1975-2006: INTRODUCTION**

The annual SEER Cancer Statistics Review (CSR) contains incidence, mortality, prevalence, and survival statistics from 1975 through the most recent year for which data are available. This report is published by the Surveillance Research Program of the National Cancer Institute, which manages the Surveillance, Epidemiology, and End Results (SEER) Program. The scope and purpose of the CSR follow a report to the Senate Appropriations Committee (Breslow, 1988), which recommended that a broad profile of cancer be presented regularly to the American public.

The SEER program is an authoritative source of information on cancer incidence and survival in the United States. SEER collects and publishes these statistics from population-based registries covering 26% of the US population. The 17 SEER registries routinely collect data on patient demographics, primary tumor site, tumor morphology, extent of disease, first course of treatment, and active follow-up for vital status. Detailed information describing these fields can be found at <a href="http://seer.cancer.gov/resources/">http://seer.cancer.gov/resources/</a>.

This report presents statistics on 27 primary sites and subsites, organized into site-specific chapters. Detailed statistics on cancer incidence, mortality, survival, and prevalence are reported by sex, race and ethnicity, age, stage at diagnosis, and geographic area. Information on tumor morphology is also presented. In addition, the *CSR* features chapters exclusively focusing on adolescent and young adult cancers and on childhood cancers. Information on some rare cancers can be found in the summary tables of section I. For a detailed list of primary sites, the summary tables provide incidence and death rates for the most recent 5-year period, trends from 1975 to the most recent year, median age at diagnosis, median age at death, and survival rates.

Delay-adjusted cancer incidence rates are a distinctive feature of the *CSR*. Delay-adjustment corrects the current case count to account for underreporting and corrections to the data. The final delay-adjusted rates are valuable in more precisely estimating trends.

New features recently added to the *CSR* include detailed histology breakdowns for lymphomas and for cancers of the oral cavity and pharynx, soft tissue, and pancreas; cause-specific survival by expanded race and ethnic groups; SEER 13 delay-adjustment; and adjustments for Veterans' Administration (VA) underreporting.

The *CSR* files are provided in both PDF and HTML formats. The HTML format is provided as an alternative and accessible version of the *SEER Cancer Statistics Review*. The current edition of the *CSR* is available on the web at <a href="http://seer.cancer.gov/csr/">http://seer.cancer.gov/csr/</a>. Statistics from SEER may also be obtained via *FastStats* (<a href="http://seer.cancer.gov/faststats">http://seer.cancer.gov/canques</a>), which allow the user to access over 10,000,000 cancer statistics. The SEER Limited-Use Data file may be accessed by the public, either through

**SEER\*Stat** software or in an ASCII text format that can be analyzed with your own statistical software.

While most of the rates in this publication have been age-adjusted to the 2000 US standard population, some previous SEER publications have used the 1970 US standard million population. Therefore, rates given in this publication cannot be compared to rates given in those publications. This change conforms to a federal policy for reporting disease rates; it allows for the age-adjusted rate to more accurately reflect the current age distribution and burden of cancer.

#### INTERPRETATION OF CANCER STATISTICS

A number of factors may affect the interpretation of various cancer incidence, mortality, and survival statistics provided in this report,

Survival rates for all cancers combined: The mix of cancers changes over time as the incidence of some cancers increases and the incidence of others decreases. The overall cancer survival rate can fluctuate even when the survival rates for site-specific cancers remain unchanged. (While it is possible to adjust the survival rate for all cancers combined on the basis of the relative frequencies of the component cancers, rates adjusted in this manner differ by only a small amount from unadjusted rates. In the future, such an adjustment may become more important if there are substantial changes in the incidence of various cancers.)

Early detection/screening: The improved earlier detection and diagnosis of cancers—caused by new screening procedures--may produce an *increase* in both incidence rates and survival rates. These increases can occur as a result of the introduction of a new procedure to screen subgroups of the population for a specific cancer; they need not be related to whether use of the screening test results in a decrease in mortality from that cancer. As the proportion of cancers detected at screening increases, presumably as a result of increased screening of the population, patient survival rates will *increase*, because they are based on survival time *after diagnosis*. The interval between the time a cancer is diagnosed by a screening procedure and the time when the cancer would have been diagnosed in the absence of screening is called lead-time (Zelen, 1976). (Screening for breast cancer has been demonstrated to result in increased survival over and above that resulting from lead-time alone and to reduce breast cancer mortality. The benefit of screening is being studied for some other cancers.)

If a new screening procedure consistently detects cancer in a *preinvasive* phase, it may result in a *decrease* in survival rates for *invasive* cancer. In this case, **length-biased sampling** (Zelen, 1976) may be operating. Length-biased sampling would result in the preferential detection—in a preinvasive phase—of those cancers that would have had a relatively good prognosis had they progressed to invasive disease; these potentially invasive cancers would be systematically eliminated. If this occurs, the mix of cancers that are not detected at screening and then

progress to invasive behavior may become less prognostically favorable, resulting in a *decrease* in survival rates for patients with invasive cancers. (Length-biased sampling may at least partially explain survival trends for cervical cancer. Other cancers possibly affected include breast, colon, rectum, and prostate.)

Changes in diagnostic criteria: Early detection of cancer--resulting from either screening or earlier response to symptoms--may result in the increasing diagnosis of small tumors that are not yet life-threatening. This may have the effect of raising the incidence and survival rates without changing the mortality rates. Breast, colon, prostate, cervix uteri, bladder, and skin (melanoma) are the cancer sites most likely to be affected.

**Technological advances in diagnostic procedures:** In this report, trends in survival by stage at diagnosis are not presented for specific cancers; trends in stage distributions are presented rarely. However, it is possible to compare survival rates by stage.

The assignment of a given stage to a particular cancer may change over time due to advances in diagnostic technology. Introduction of new technology can give rise to a phenomenon known as stage migration. Stage migration occurs when diagnostic procedures change over time, resulting in an *increase* in the probability that a given cancer will be diagnosed in a *more* advanced stage. For example, certain distant metastases that would have been undetectable a few years ago can now be diagnosed by a computer tomography (CT) scan or by magnetic resonance imaging (MRI). Therefore, some patients who would have been diagnosed previously as having cancer in a localized or regional stage are now diagnosed as having cancer in a distant stage. The likely result would be to remove the worst survivors—those with previously undetected distant metastases—from the localized and regional categories and put them into the distant category. As a result, the stage-at-diagnosis distribution for a cancer may become less favorable over time, but the survival rates for each stage may improve: the early stage will lose cases that will survive shorter than those remaining in that category, while the advanced stage will gain cases that will survive longer than those already in that category. However, overall survival would not change (Feinstein et al., 1985). Stage migration is an important concept to understand when examining temporal trends in survival by stage at diagnosis as well as temporal trends in stage distributions; it could affect the analysis of virtually all solid tumors.

**Evolution of stage classifications**: Every few years, the American Joint Committee on Cancer produces a new cancer-staging manual (Greene et al, 2002). The evolution of such classifications reflects the identification of new prognostic factors that may influence choice of treatment. Historically, the SEER Program has only collected data on **extent of disease** (**EOD**), rather than stage. EOD is *more specific* than stage and usually determines stage, even when stage definitions change. Thus, SEER easily adapts to changes in stage definitions; moreover, trends in a newly redefined stage can usually be calculated. Recently the SEER Program has begun collecting Collaborative Stage. Collaborative Stage has the advantage of being a consolidated data collection system of three main staging systems (TNM, EOD, and

Summary Stage) and allows combined pathological and clinical stage to be captured. For those cancers for which new prognostic variables are introduced into staging, so that previously collected EOD data cannot determine new stage categories, there can be problems in assessing trends in stage of disease. Only by reviewing the evolution of staging for a given cancer is it possible to determine what effect changes in stage definitions have had on stage-specific survival and on stage-at-diagnosis distributions. Stage migration (mentioned above) and EOD migration need also be taken into account. For some sites, the historic stage (*localized*, *regional*, or *distant*) is not shown, either because of inconsistencies in its definition over time or because stage isn't appropriate (such as for leukemias, which are all considered to be distant at diagnosis).

Interpreting relative survival rates: The relative survival rate is the ratio of the observed survival rate to the expected survival rate for a given patient cohort. The expected survival rate is based on mortality rates for the entire population, taking into account, as appropriate, the age, sex, race, and year of diagnosis of the patients. Assuming that the presence of cancer is the only factor that distinguishes the cancer patient cohort from the general population, the relative survival rate approximates the probability that a patient will not die of the diagnosed cancer within the given time interval. This is the same as the probability that the patient will either survive the interval or die of a different cause.

A factor related to the risk of a cancer may also be related to the risk of dying from causes unrelated to the cancer. An example of such a factor is smoking. Smoking is a major risk factor for lung cancer; therefore, a cohort of lung cancer patients will contain a much higher proportion of smokers than does the general population. However, smoking is also a risk factor for other diseases, resulting in smokers having a shorter life expectancy than nonsmokers. For this reason, expected survival rates for lung cancer patients that are based on the life tables for the general population will be unduly optimistic; they will result in relative rates that are *lower* than they would be if the population consisted only of smokers. The problem cannot be easily corrected because separate life tables for smokers and nonsmokers are not available. Moreover, amount of smoking (usually measured in pack-years) is clearly an important variable and can't be easily quantified. The possibility that expected rates may not be appropriate for a given patient cohort should also be considered when examining relative survival rates for patients with cancers of the cervix uteri or breast, because the risk of these cancers has been associated with socioeconomic status (Baquet et al., 1991), which may be related to life expectancy.

Previous to the *CSR* for 1973–1996, the expected rate tables used were for 1970 and 1980; there were separate tables for whites, blacks, American Indians, Chinese, Japanese, Filipinos, white Hispanics, and Hawaiians. In updating the tables for 1990, several problems emerged. The US life tables are based on age, race, and sex information from death certificates. The information on race on the death certificate may not be accurate (Rosenberg et al., 1999). One reason is that funeral directors may inaccurately report race on a death certificate. Also, reported age at death, especially for those older than 85, may not be accurate because birth

certificates were not issued with as much regularity in the early 1900s as they are today. Although race misclassification and age-at-death misreporting exist across all races, they may be more problematic for races other than white or black because of those races' smaller population sizes. Therefore, life tables were generated for 1970, 1980, 1990, and 2000 only for white, black, and other; these life tables were used to produce the relative survival rates in this book. There may be small variations among survival rates calculated in this *CSR* and those in *CSR*s prior to 1973–1996.

Comparison with other databases: The SEER data are obtained from population-based cancer registries covering about 26 percent of the US population. It is sometimes of interest to compare cancer statistics for SEER areas with those from other registries both in the US and worldwide. In making such comparisons, one must carefully consider the factors considered above for both data sources. In addition, one should assess all of the following: (1) completeness of case ascertainment, (2) rules used to determine multiple primaries, (3) follow-up, (4) rules used in assigning and coding cause of death, and (5) the sources and procedures used in obtaining population estimates. Depending on the rates being compared, there could be other confounding factors which should be considered. The same standard or standard million population should be used for the age-adjustment of each group being compared; most statistics from outside the US are based on the 2000 world standard million population.

Examples of other databases are US Cancer Statistics (<a href="http://apps.nccd.cdc.gov/uscs">http://apps.nccd.cdc.gov/uscs</a>) and CINA+ Online (<a href="http://www.naaccr.org/cinap/index.htm">http://www.naaccr.org/cinap/index.htm</a>).

It is sometimes interesting to compare survival data for cancer patients in SEER areas with data from clinical trials. *This must be done with great caution*. Survival data from clinical trials may have been obtained from a patient population that differs from that of SEER patients in prognostic factors for the given cancer; any survival comparisons would have to adjust for such differences. Also, it is necessary to verify that the methodology used in computing survival rates is the same for both data sources. Furthermore, clinical-trials patients may differ from SEER patients in characteristics that may be related to survival but are not recorded in either database. If this were true for a given cancer, it would not be possible to make valid comparisons of this type.

**Errors in data collection:** In the process of registering cancer patients, errors may be made in abstracting and coding the data, which include demographic information, cancer site, histology, extent of disease, treatment, and patient survival. Quality control studies are periodically carried out to detect and correct this type of error, but no attempt is made to incorporate this source of error into the variance estimates of cancer rates reported here.

**Comparison of this report with previous reports:** The cancer registries that participate in the SEER Program submit data on all cancers diagnosed in their coverage areas to the NCI each

year. Because of the dynamic nature of the registries' databases, the reported number of new cancer cases in a particular race, sex, age, cancer category in a given calendar year may change from that which has been reported in a previous publication. For a given diagnosis year, additional cancer cases that were previously overlooked may have been found and reported to the central registry. There may have been follow-back of cancers diagnosed by death certificate only; successful efforts to establish the dates of diagnosis for such patients will change the number of patients reported for a given diagnosis year. Code changes may occur when a patient dies; for example, information on race is generally available on the death certificate and may be used to update a previously unknown value. There may have been elimination of duplicate records for the same patient, often due to name changes or misspellings.

Thus, a recent report may have a different number of cases for a given diagnosis year than an earlier report, with resulting effects on incidence and possibly survival rates. Population estimates may also change from one report to another for some calendar years. This occurs because the NCI receives population estimates that are regularly revised and updated by the Bureau of the Census (**BOC**). Such changes may result in some differences between incidence and mortality rates for a given calendar period as published in different reports. See our website for the most current information about the population estimates (<a href="http://seer.cancer.gov/popdata/">http://seer.cancer.gov/popdata/</a>).

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# **TECHNICAL NOTES**

There are four measures that are commonly used to assess the impact of a cancer in the general population. The **incidence rate** is the number of new cases per year per 100,000 persons. The **death** (or **mortality**) **rate** is the number of deaths per year per 100,000 persons. The **survival rate** is the proportion of patients alive at some point subsequent to the diagnosis of their cancer. The **prevalence count** is the number of people alive that have ever been diagnosed with a cancer. All four measures are employed in this report. The Surveillance, Epidemiology, and End Results (**SEER**) Program (*http://seer.cancer.gov*) (based within the Surveillance Research Program (**SRP**) at the National Cancer Institute (**NCI**)) collects incidence and survival data for all areas that participate in the Program. The National Center for Health Statistics (**NCHS**) provides mortality data for the entire United States (**US**). All incidence and mortality rates in this report are age-adjusted (see below) to the 2000 US standard population (see Appendix) unless otherwise specified. Age-adjustment minimizes the effect of a difference in age distributions when comparing rates.

## THE SEER PROGRAM

The National Cancer Act of 1971 mandated the collection, analysis, and dissemination of data useful in the prevention, diagnosis, and treatment of cancer. This mandate led to the establishment of the SEER Program. The population-based cancer registries participating in NCI's SEER Program routinely collect data on all cancers occurring in residents of the participating areas. Trends in cancer incidence and patient survival in the US are derived from this database.

The SEER Program is a sequel to two earlier NCI programs—the End Results Program and the Third National Cancer Survey. The initial SEER reporting areas were the States of **Connecticut**, **Iowa**, **New Mexico**, **Utah**, and **Hawaii**; the metropolitan areas of **Detroit**, Michigan, and **San Francisco-Oakland**, California; and the Commonwealth of Puerto Rico. Case ascertainment began with January 1, 1973, diagnoses.

In 1974-1975, the program was expanded to include the metropolitan area of New Orleans, Louisiana, the thirteen-county **Seattle-Puget Sound** area in the State of Washington, and the metropolitan area of **Atlanta**, Georgia. New Orleans participated in the program only through the 1977 data collection year. In 1978, ten predominantly African-American counties in **rural Georgia** were added. **American Indian residents of Arizona** were added in 1980. In 1983, four counties in New Jersey were added with coverage retrospective to 1979. New Jersey and Puerto Rico participated in the program until the end of the 1989 reporting year. The National Cancer Institute also began funding a cancer registry that, with technical assistance from SEER, collects information on cancer cases among **Alaska Native** populations residing in Alaska. In 1992, the SEER Program was expanded to increase coverage of minority populations, especially Hispanics, by adding **Los Angeles County** and four counties in the **San Jose-Monterey** area south of San Francisco. In 2001, the SEER Program expanded coverage to

include **Kentucky**, **Greater California** (the counties of California that were not already covered by SEER), **New Jersey**, and **Louisiana**.

The long-term incidence trends and survival data for this report are from five states (Connecticut, Hawaii, Iowa, New Mexico, and Utah) and four metropolitan areas (Detroit, Atlanta, San Francisco-Oakland, and Seattle-Puget Sound) (Fig. I-1); this set of registries is called the **SEER 9**. Additional tables show more recent incidence trends for the **SEER 13** areas (the 9 areas above plus Los Angeles, San Jose-Monterey, Alaska Native Registry, and rural Georgia) since 1992 and additional information on race and ethnicity. Other tables give statistics for the **SEER 17** areas; these are the SEER 13 plus Kentucky, Greater California, New Jersey, and Louisiana.

The participating regions were selected principally for their ability to operate and maintain a population-based cancer reporting system and for their epidemiologically significant population subgroups. With respect to selected demographic and epidemiologic factors, they are when combined a reasonably representative subset of the US population. Data from the 9, 13, or 17 SEER geographic areas are used in this report; the given areas contain, respectively, approximately 9,14, or 26 percent of the US population. By the end of the 2006 diagnosis year, the database of 13 SEER and 4 expansion registries (plus Arizona Indians) contained information on over 7 million cases diagnosed since 1973. New cases added in the most recent data year numbered over 385,000.

The goals of the SEER Program are:

- 1) to assemble and report, on a periodic basis, estimates of cancer incidence, mortality, survival, and prevalence in the US;
- to monitor annual cancer incidence trends to identify unusual changes in specific forms of cancer occurring in population subgroups defined by geographic and demographic characteristics;
- 3) to provide continuing information on trends over time in the extent of disease at diagnosis, trends in therapy, and associated changes in patient survival; and
- 4) to promote studies designed to identify factors amenable to cancer control interventions, such as: (a) environmental, occupational, socioeconomic, dietary, and health-related exposures; (b) screening practices, early detection and treatment; and (c) determinants of the length and quality of patient survival.

#### DATA SOURCES

## INCIDENCE AND SURVIVAL DATA

The SEER Program contracts with nonprofit, medically-oriented organizations having statutory responsibility for registering diagnoses of cancer among residents of their respective geographic coverage areas. Each SEER contractor:

1) maintains a cancer information reporting system;

- 2) abstracts records for *resident* cancer patients seen in every hospital both inside and outside the coverage area;
- 3) abstracts all death certificates of *residents* (dying both inside and outside the coverage area) on which cancer is listed as a cause of death;
- 4) strives for complete ascertainment of cases by searching records of private laboratories, radiotherapy units, nursing homes, and other health services units that provide diagnostic service;
- 5) registers all in situ and malignant neoplasms (with the exceptions of certain histologies for cancer of the skin and—beginning in 1996—in situ neoplasms of the cervix uteri);
- 6) records data on all newly diagnosed cancers, including selected patient demographics, primary site, morphology, diagnostic confirmation, extent of disease, and first course of cancer-directed therapy;
- 7) provides active follow-up on all living patients (except for those with in situ cancer of the cervix uteri);
- 8) maintains confidentiality of patient records;
- 9) at least annually submits electronically to NCI data on all reportable diagnoses of cancer made in residents of the coverage area.

For 1992 to 2000 diagnoses, the SEER program codes site and histology by the *International Classification of Diseases for Oncology*, second edition (**ICD-O-2**) (Percy, Van Holten, & Muir, 1990). All cases before 1992 were machine-converted to ICD-O-2. Beginning with 2001 diagnoses, cases have been coded according to the third edition (**ICD-O-3**) (Fritz et al., 2000). The primary site groupings used for incidence are found in the Appendix. Changes were made to the site recode for ICD-O-2 for comparability with cases coded to ICD-O-3. Follow-up rates are also in the Appendix.

A recent policy change of the Department of Veterans Affairs (VA) regarding sharing of VA cancer data has resulted in incomplete reporting of VA hospital cases in some central cancer registries. The issue began to affect reporting in the 3<sup>rd</sup> quarter of 2004 diagnosis year and continues to be a concern through the 2006 diagnosis year. The section on VA reporting quantifies the missing number of VA patients in the SEER registries and provides adjustments of new case counts for 2005 and 2006 based on prior years information. These VA adjustment factors may be used to correct for underreporting of 2005 and 2006 age-specific incidence rates or age-adjusted incidence rates for SEER-9 and SEER-17 regions. Additional details can be found in Howlader et al, 2009.

**Excluded cancers:** Some cancers were excluded from most of the analyses.

Myelodysplastic syndrome (MDS), for example, was reclassified in ICD-O-3 (effective diagnosis year 2001) from nonmalignant to malignant; other cancers so reclassified include endometrial stromal sarcoma (low grade), papillary ependymoma, papillary meningioma, polycythemia vera, chronic myeloproliferative disease (NOS), myelosclerosis with myeloid metaplasia, essential thrombocythemia, refractory anemia, refractory anemia with sideroblasts, refractory anemia with excess blasts, and refractory anemia with excess blasts in transformation. In contrast, borderline tumors of the ovary were reclassified from malignant to nonmalignant at the same SEER CANCER STATISTICS REVIEW 1975-2006: Technical Notes Page 3

time. In addition, benign brain/CNS tumors were collected beginning for 2004 diagnoses. All of these cancers were excluded from most of the analyses, especially time trends. Pilocytic astrocytoma, although reclassified in ICD-O-3, was not excluded. Separate tables for MDS and benign brain/CNS are shown.

## **MORTALITY DATA**

The SEER Program annually obtains from the National Center for Health Statistics (NCHS) a file containing information on all deaths occurring in the US by calendar year. Information on each death includes age at death, sex, geographic area of residence, and underlying and contributing causes of death. For this publication, only the underlying cause of death is used in the calculation of death rates. Cause of death for 1969-1978 was coded according to ICD-8; for 1979-1998, ICD-9 was used; beginning with deaths in 1999, ICD-10 was used. Mortality rates for the SEER geographic areas, for each state, and for the entire US are obtained from these data. A list of the mortality site groupings used in this publication is in the Appendix and reflects updates made in 2004.

#### POPULATION DATA

The population estimates used in the SEER\*Stat software to calculate cancer incidence and mortality rates for this report are a modified version of the annual time series of July 1 county population estimates by age, sex, race, and Hispanic origin that are produced by the Population Estimates Program of the US Census Bureau (<a href="http://www.census.gov/popest/estimates.php">http://www.census.gov/popest/estimates.php</a>) with support from the NCI through an interagency agreement. Descriptions of the methodologies employed by the Census Bureau for various sets of estimates may be found on the same website. County population estimates for 2000 and later years must be bridged from 31 race categories used in Census 2000 to the four race categories specified under earlier OMB standards in order to report long-term cancer trends. The bridging methodology was developed by the National Center for Health Statistics and is described in a report (Ingram et al., 2003) and on their website <a href="http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm">http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm</a>.

Modifications made by the NCI to the population estimates are documented in "Population Estimates Used in NCI's SEER\*Stat Software" (<a href="http://seer.cancer.gov/popdata/methods.html">http://seer.cancer.gov/popdata/methods.html</a>) and the population data files are available for download (see "Download US Population Data" from <a href="http://seer.cancer.gov/popdata/download.html">http://seer.cancer.gov/popdata/download.html</a>). Several of the modifications pertaining to the grouping of specific counties needed to assure the compatibility of all incidence, mortality and population datasets. Another modification affects only population estimates for the State of Hawaii. The Epidemiology Program of the Hawaii Cancer Research Center has developed its own set of population estimates, based on sample survey data collected by the Hawaii Department of Health. This effort grew out of a concern that the native Hawaiian population has been vastly undercounted in previous censuses. The "Hawaii-adjustment" to the Census Bureau's estimates has the net result of reducing the estimated white population and increasing SEER CANCER STATISTICS REVIEW 1975-2006: Technical Notes Page 4

the estimated Asian and Pacific Islander population for the state. The estimates for the total population, black population, and American Indian and Alaska Native populations in Hawaii are not modified.

The 2001-2006 cancer incidence and mortality rates for American Indians and Alaska Natives (Al/AN) are based on the geographic areas (counties) included in the Indian Health Service's Contract Health Service Delivery Area (CHSDA). This reflects a concern that previously reported Al/AN rates were underestimated due to racial/ethnic misclassification of American Indian cases in geographic areas outside of CHSDA. This change has the net effect of higher, and more accurate, incidence and mortality rates for this population.

Usually the use of a population estimate for July 1 of a particular year reflects the average population of that area for the year. Both Hurricane Katrina and Hurricane Rita struck the Gulf Coast area of the United States in 2005. This had the effect of displacing large populations. Since there weren't any population estimates by age, race, sex, and county for time periods just after the hurricanes, it is very difficult to estimate the actual population at risk for certain areas along the Gulf Coast for 2005. For Louisiana, only the first six months of incidence data for 2005 coupled with ½ of the population estimate for July 1, 2005, were used to calculate cancer incidence. For death rate calculations, no adjustments were made to the total U.S. population, but for the Gulf area, an adjustment for displaced populations was made for 2005 state rates. For more details, see <a href="http://seer.cancer.gov/popdata/methods.html">http://seer.cancer.gov/popdata/methods.html</a>.

## 2000 US STANDARD POPULATION

Starting with the November 2004 SEER submission of data (diagnoses through 2002), the SEER Program age-adjusts using the 2000 US standard population based on single years of age from the Census P25-1130 series estimates of the 2000 US population (Day, 1996). For the *CSR*, 19 age groupings were used for age-adjustment: <1, 1–4, 5–9, ..., 80–84, 85+.

# STATISTICAL METHODS

# **ESTIMATED CANCER CASES AND DEATHS IN 2009**

The American Cancer Society (**ACS**) projects the numbers of new cancer cases and cancer deaths in the US in 2009 (American Cancer Society, 2009). The ACS projects incidence in 2009 based on incidence rates for 1995-2005 from 41 states, representing about 85% of the US population. These high quality incidence data were submitted to the North American Association of Central Cancer Registries (NAACCR) by 41 states belonging to the SEER Program and/or the National Program of Cancer Registries (NPCR). For additional details please refer to <a href="http://www.cancer.org/docroot/STT/STT\_0.asp">http://www.cancer.org/docroot/STT/STT\_0.asp</a>

# **LONG-TERM TRENDS, 1950-2006**

Trends in cancer mortality from 1950 to 2006 are summarized by age both for all cancers combined and for lung cancer (Table I-2). These cancer mortality trends are based on the mortality experience in the entire US. Summaries of long-term trends back to 1950 in cancer survival are also shown for whites.

Use caution when interpreting these statistics. Evaluating trends over a long period of time may hide recent changes in the trends.

## YEARS OF LIFE LOST DUE TO PREMATURE DEATH FROM VARIOUS CAUSES

Death rates alone give an incomplete picture of the burden that deaths impose on the population. Another measure, which adds a different dimension, is the years of life lost due to premature death. This shows the extent to which life is cut short by a particular cause or disease.

This measure is estimated by linking life table data to each death of a person of a given age and sex. The life table permits a determination of the number of additional years an average person of that age, race, and sex would be expected to live. In this report, the age groups used in the calculation were 1-year intervals. These remaining years of life left are summed over all deaths due to a particular cause, yielding the estimate of the number of person-years of life lost (PYLL). The average years of life lost (AYLL) is obtained by dividing the PYLL by the number of deaths. Both of these measures can be calculated for any cause of death.

## **CAUSE-SPECIFIC SURVIVAL**

Cancer survival rates differ substantially among race and ethnic groups in the United States. Evaluation of these differences via the relative survival method, however, is hampered by the non-availability of expected life tables for races other than White or Black. The relative survival method assumes a valid life-table for each race and ethnic group. Furthermore, the U.S. National Center for Health Statistics estimates (Rosenberg et al, 1999) that the published mortality rates are overstated for Whites (1%) and Blacks (5%), and grossly under-stated for American Indians (21%) and Asian Pacific Islanders (11%). Cause-specific can serve as an alternative method to estimate survival within diverse subgroups of the U.S. populations. However, this measure has not been systematically used in population-based registries because of misclassification of cause of death on death-certificates. For example, the site of metastasis might be reported as the cause of death as opposed to the original site of disease (Percy et al, 1981) creating ambiguity when attempting to define endpoints for reliable survival estimates.

Here we describe a new endpoint for calculating cause-specific survival that uses a broad definition of cause of death (COD) based on death certificate. The COD chosen varies

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depending on the sequence of the tumor and the site of the original cancer diagnosis. For those with one and only one cancer (i.e., sequence number 00), the end point of death is any cancer or HIV/AIDS with cancer. The rationale for including all malignant cancers or an AIDS/HIV diagnosis with cancer is that the among patients diagnosed with only one cancer, cause of death coded to another cancer site is likely to be a misclassification, such as one due to metastatic disease (Percy et al, 1981). For those individuals who had more than one cancer, (i.e., sequence number 01, 02, 03, and beyond) cause-specific survival was calculated only for the first cancer diagnosed (sequence number 01) and the cause of death was limited to deaths due to that cancer, site-specific disorders, and to multiple cancers of known or unknown site. The cause of death classification and detailed ICD codes by primary cancer site can be found in the Appendix.

## **CANCER PREVALENCE**

**Methods:** In this report prevalence is calculated at 1/1/2006. *Limited-duration prevalence* is calculated using the counting method implemented in the SEER\*Stat software. This method calculates the number or proportion of people alive at the prevalence date who had a diagnosis of the disease within the past x years (e.g., x = 5, 10, 20, or the full history of the registry). Because SEER has available information for the various racial/ethnic groups for different numbers of years, different years and registries were used to estimate limited duration prevalence. Prevalence estimates for all races combined, for whites, and for blacks use cases from 1975 through 2005 from the SEER 9 registries; prevalence estimates for Asian Pacific Islanders and Hispanics use cases diagnosed from 1990 through 2005 from the SEER 11 areas and rural Georgia.

The limited duration prevalence method includes a correction for people lost to follow-up. For each individual lost to follow-up, a probability of being alive at the prevalence date is estimated from an appropriate survival function stratified by age at diagnosis (0–59, 60–69, 70+), sex, cancer site, year of diagnosis, and race, conditional on being alive at the time of loss to follow-up. Year of diagnosis is stratified into 5-year groups from the prevalence date, with the least recent interval being of varying length (4-8 years), depending on the length of years used to calculate prevalence. Race is stratified into white, black, other (American Indian/Alaska Native, Asian/Pacific Islander), and unknown/other-unspecified. When we use the SEER 11 registries, the same stratification as before is used, with American Indian/Alaska Native separated from Asian/Pacific Islander. Prevalence calculations for Hispanics use race stratified into: white, non-white, and unknown.

Different methods can be used to determine which tumors are to be included for people diagnosed with multiple tumors. Unless otherwise specified, prevalence calculations included only the *first malignant tumor per person*; that is, in situ cancers and second-or-later primary cancers were not included. Thus, if a woman had a melanoma prior to a breast cancer diagnosis, her melanoma would contribute to the prevalence of melanoma and to the prevalence of all sites, but the breast cancer would not contribute to the prevalence of breast

cancer. Counting only one cancer per individual avoids some ambiguity in prevalence counts, and allows the counts for individual sites to sum to the all sites total. Prevalence using different selection criteria is compared in a table in the overview chapter. For more information on tumor selection criteria refer to <a href="http://srab.cancer.gov/prevalence/methods.html">http://srab.cancer.gov/prevalence/methods.html</a>.

**Complete prevalence** is an estimate of the number of persons (or the proportion of population) alive on a specified date who had been diagnosed with the given cancer, no matter how long ago that diagnosis was. It was estimated for all races, whites, and blacks by applying the completeness index method (Capocaccia & De Angelis, 1997; Merrill et al., 2000; Mariotto et al., 2002) to limited-duration prevalence. The completeness index method is implemented in the COMPREV software which can be found at <a href="http://srab.cancer.gov/comprev/">http://srab.cancer.gov/comprev/</a>. Validation of the completeness index for all races and for whites was made by using data from the Connecticut Tumor Registry (CTR) beginning with 1940; for blacks, SEER 9 data beginning with 1975 were used. Identification of blacks is not possible in the CTR data prior to 1970. To validate the completeness index for blacks, we have compared the performance of the method to obtain 24year prevalence from 10-year limited-duration prevalence. For all races combined and for whites, in cases where the validation indicated some lack of fit of the model, an approximation to the completeness index was derived from the CTR data. If there was a lack of fit for blacks, no estimate of complete prevalence was reported. Complete prevalence for Asian/Pacific Islanders and Hispanics is not available at this time. Complete prevalence by age for all races combined was validated by comparing estimated 10-year complete prevalence with observed prevalence from the CTR data. Prevalence by age is reported for the sites that validated well.

The US cancer prevalence counts at 1/1/2006 were estimated by multiplying the SEER ageand race-specific prevalence proportions by the corresponding US population estimates based on the average of 2005 and 2006 population estimates from the US Bureau of the Census. US cancer prevalence counts for all races were estimated by summing the US estimated counts for whites/unknown, blacks, and other races. For Hispanics, the estimates for Hispanics of white or unknown race and for Hispanics of other races were summed.

Complete prevalence estimates of the number of individuals in the U.S. diagnosed with cancer as children (ages 0-19), including those surviving for more than 31 years, is introduced this year using a statistical method that estimates the number of childhood survivors diagnosed before 1975 (Simonetti et al. 2008, Mariotto et al 2009). Limited-duration prevalence proportions by age at prevalence are not shown for childhood cancers (age at diagnosis 0-19) since many of these estimates are not informative. For example, the number of people diagnosed with childhood cancers in the last 25 years and who are currently age 50-59 is zero by definition. For more details on available prevalence estimates, see <a href="http://srab.cancer.gov/prevalence/index.html">http://srab.cancer.gov/prevalence/index.html</a>.

The overview chapter contains two prevalence tables. The first table reports US complete prevalence counts by age at prevalence and sex for some main cancer sites. The second table

reports US prevalence counts for people diagnosed in the 5 years and 30 years prior to the prevalence date using different tumor inclusion criteria. Each site-specific chapter contains a prevalence table that reports limited-duration US prevalence counts by time since diagnosis for different racial/ethnic groups. US complete prevalence estimates are also reported when available. The second part of the site-specific tables displays the percent of the population in the SEER 11 areas diagnosed in the previous 15 years with the specific cancer by 10-year age groups for the different racial/ethnic groups.

## PROBABILITY OF BEING DIAGNOSED WITH OR DYING FROM CANCER

Lifetime and interval risks of being diagnosed with cancer: The probability of being diagnosed with cancer is computed by applying cross-sectional age-specific 2003-2005 incidence rates from the SEER 17 areas and death rates from those same areas to a hypothetical cohort of 10,000,000 live births. This cohort is considered to be at risk for two mutually exclusive events: (1) developing the specified cancer, and (2) dying of other causes without developing the specified cancer. Using these two types of events, a standard multiple decrement life table (with 20 age groups from 0-4 to 90-94 and 95+) is derived. For each age interval, the number alive and free of the specified cancer at the beginning of the interval is decremented by the number who develop the specified cancer and the number who die of other causes. The lifetime risk of being diagnosed with the specified cancer is derived by summing all cancer cases from age 0-4 through age 95+ and dividing by 10,000,000. This calculation does not assume that an individual lives to any particular age; rather, it is the sum over all age intervals of the probability of living to the beginning of that interval without developing the given cancer times the probability of developing the cancer in that interval. The probability of developing cancer during any time period (e.g., between age 50 and age 60) is calculated by adding up all the cancers in the life table over the specified age range and dividing by the number of individuals alive and free of the specified cancer at the beginning of the period. The methodology is described in detail in Fay (2003, 2004). To improve the precision of the calculations, rates were calculated beyond the usual last open ended age interval (i.e. 85+) for the age groups 85-89, 90-94, and 95+.

**Lifetime risk of dying from cancer:** The lifetime risk of dying from a specified cancer is derived using a standard multiple decrement life table (Elandt-Johnson & Johnson, 1980). For each age, the risks of dying of the specified cancer and of all other causes are calculated, based on mortality data from the entire United States.

**Detailed methodology and software:** The estimates of developing and dying from cancer are implemented in DevCan (Probablity of DEVeloping or dying from CANcer software). More details on the software, various databases, and the methodology can be found at <a href="http://srab.cancer.gov/devcan/">http://srab.cancer.gov/devcan/</a>.

## U.S. CANCER DEATH RATES BY STATE

Each cancer-site-specific section presents the death rate for the given cancer for each state and the District of Columbia, specifying the five highest and the five lowest death rates by state for the most recent 5-year period for all persons, males only, and females only. The rates are per 100,000 persons; they are age-adjusted to the 2000 US standard million population. (In some previous editions of the CSR, the 1970 US standard million population was used; *death rates standardized to the 2000 US standard million population cannot be compared to death rates standardized to the 1970 US standard million population.*)

The **percent difference (PD)** between a state rate and the rate for the total US is given by the formula:

The **standard error** for each age-adjusted state death rate is calculated, based on the assumptions that (1) for each age-specific rate, the number of deaths is a Poisson random variable (Keyfitz, 1966) and (2) the variance of the age-adjusted rate is a linear combination of the variances of the age-specific rates (Snedecor & Cochran, 1980; pp. 188-9).

The **standard error of the difference** ( $SE_d$ ) between a state rate and the total US rate is given by the formula

$$SE_d = Square Root of [SE_S^2 + SE_U^2 - 2 * Cov_{S,U}]$$

where  $SE_S$  and  $SE_U$  are the standard errors of a state rate and of the total US rate, respectively, and  $Cov_{S,U}$  is the covariance between the two rates. The variance of each rate (i.e., the square of the standard error) and the covariance between the two rates are based on the Poisson assumption. The standard error does not represent the total error that may be present in the age-adjusted rate; it is merely the square root of the variance associated with the rates. In addition to this variance, there also exist potential biases and errors in the measurement of the rate that are difficult to assess accurately and probably impact differently on the error calculations for different states.

The difference between each age-adjusted state rate and the age-adjusted US rate is tested for statistical significance (see below) by calculating a  $\boldsymbol{Z}$  (standard normal) statistic from the formula:

$$Z = (State rate - Total US rate) / SE_d$$

Although the rates being compared are not independent because each state is part of the US, the statistical test may not be substantially affected if the state represents a small proportion of the total US. There is also an adjustment for multiple comparisons; see below under *Statistical Significance*.

# **JOINPOINT REGRESSION ANALYSIS OF CANCER TRENDS**

An advance in the presentation of cancer trends is the use of joinpoint models (Kim et al., 2000). In some past issues of the *Cancer Statistics Review*, certain time intervals (e.g., 1973–1996) were specified and the annual percent changes (APC) were computed over those intervals. The choices of where to start and where to end an interval were arbitrary and sometimes did not give an accurate picture of the trend for a given cancer site. For example, the rates might be increasing and decreasing in different parts of the same interval. For some sites, increases occurred in the earlier years, followed by declines in more recent years.

To achieve greater descriptive accuracy, a statistical algorithm finds the optimal number and location of places where a trend changes. The point (in time) where a trend changes is called a **joinpoint**. Trends may change in different ways at a joinpoint: from up to down, from down to up, from up to up at a different rate, or from down to down at a different rate. A **joinpoint regression model** describes the trends by a sequence of connected segments where each segment is connected by a straight line on a log scale. Adjacent segments are connected at a joinpoint. The segments are connected because we assume that rates generally change smoothly, rather than "jump" abruptly. The rates are assumed to grow or decay exponentially, i.e., to change by a constant percentage each year. Thus the slope in each segment can be associated with a fixed annual percent change (**APC**).

Joinpoint analysis first assumes no joinpoints are needed to describe the data accurately, i.e., the trend over the entire interval 1975-2005 does not change. Joinpoints are added in turn if they are statistically significant. Thus, in the final model, each joinpoint represents a significant change in trend. Computational considerations currently limit the maximum possible number of segments to be no larger than four, with three joinpoints. Smoother polynomial models may provide a good fit overall, but are less sensitive to what is occurring at the ends of the data.

In running the Joinpoint program, we set the program parameters as follows: maximum number of joinpoints 3, minimum interval between joinpoints 2 years, minimum interval between a joinpoint and an endpoint 2 years, joinpoints occurring only at exact years. These restrictions provide some added stability to the resultant models. Different values for these parameters may yield a different joinpoint model. Since the test statistic to determine if additional joinpoints are necessary cannot be compared against any known standard distribution to determine significance, (e.g., the normal, t, or f) a permutation test is used which simulates the distribution of the test statistic under the null hypothesis. Thus an element of randomness is introduced by the random number stream used. However, for greater consistency in the p-values obtained if one were to change the random seed for each run, we run the program for 4499 permutations.

**Average Annual Percent Change (AAPC)** is a summary measure of a trend over a prespecified fixed interval based on an underlying joinpoint model. It allows us to use a single number to describe the average trend over a period of multiple years. It can be estimated even if the joinpoint model indicates that there were changes in trends during those years, since it is

estimated as a geometric weighted average of the joinpoint APCs, with the weights equal to the lengths of each segment over the pre-specified fixed interval. In this report, we have included AAPCs as an addendum to the underlying joinpoint trends, and as a summary measure to compare fixed interval trends by race/ethnicity. For more information on how the AAPC is calculated and the advantages of reporting an AAPC over APCs, see <a href="http://srab.cancer.gov/joinpoint/aapc.html">http://srab.cancer.gov/joinpoint/aapc.html</a>.

A Windows-based program, *Joinpoint*, is freely available at <a href="http://srab.cancer.gov/joinpoint/">http://srab.cancer.gov/joinpoint/</a>; it accepts data from the *SEER\*Stat* program, as well as user defined data. Further details on joinpoint regression may be found at the web site.

## **REPORTING DELAY**

Timely and accurate calculation of cancer incidence rates is hampered by **reporting delay**, the time lapse before a diagnosed cancer case is reported to the NCI or the delay in receiving updated information for an existing case. Currently, the NCI allows a standard delay of 22 months between the end of the diagnosis year and the time the cancers are reported to the NCI in November, almost two years later. The data are released to the public in the spring of the following year. For example, cases diagnosed in 2006 were first reported to the NCI in November 2008 and released to the public in April 2009. However, in each subsequent release of the SEER data, *records from all prior diagnosis years* (e.g., diagnosis years 2005 and earlier in the 2008 submission to the NCI) *are updated* as either new cases are found or new information is received about previously submitted cases.

The submissions for the most recent diagnosis year are, in general, about two percent below the total number of cancers that will eventually be submitted for that year, although this varies by cancer site and other factors.

The idea behind modeling reporting delay is to adjust the recent rates to anticipate future corrections (additions, changes, and deletions) to the data. These adjusted rates and the associated delay model are valuable in more precisely determining current cancer trends, as well as in monitoring the timeliness of data collection—an important aspect of quality control (Clegg et al., 2002). Reporting delay models have been previously used in the reporting of AIDS cases (Brookmeyer & Damiano, 1989; Pagano et al., 1994; Harris, 1990).

In this report, we show SEER age-adjusted incidence rates and trends, along with their calculated delay adjustments for SEER 9 and SEER 13 areas. The adjusted rates, factors, and trends are available for all cancers combined (malignant only except for urinary bladder), for female breast in situ, for urinary bladder (in situ and malignant), and for 22 malignant cancer sites: melanoma (for all races combined and whites only), lung/bronchus, colon/rectum, prostate, female breast, liver and intrahepatic bile duct, pancreas, cervix uteri, corpus and uterus, ovary, testis, kidney and renal pelvis, brain and other nervous system, Hodgkin lymphoma, non-Hodgkin lymphoma, all leukemias, esophagus, larynx, myeloma, oral cavity and SEER CANCER STATISTICS REVIEW 1975-2006: Technical Notes Page 12

pharynx, thyroid, and stomach.

Estimates of observed incidence rates, delay-adjusted incidence rates, and delay-adjustments factors may be found in the Cancer Query Systems at <a href="http://seer.cancer.gov/canques/">http://seer.cancer.gov/canques/</a>

# The SEER 9 delay model

For each cancer site, many combinations of covariates were considered in prediction models of delay probabilities. Potential <u>covariates</u> included delay time, year of diagnosis, age at diagnosis, sex, race, and reporting year effect [Zou et al, 2009]. Models were evaluated by fitting the SEER 9 models using 1983 and 2007 annual submissions, with a maximum 26 year delay, then predicting the counts for the 2008 submission. For each cancer site, the model that minimized the sum of squared prediction errors was chosen as the default final model. However, to choose a more parsimonious model, we added an additional selection step in which possible competing models were selected using the following criteria:

- the competing model had fewer number of parameters of the default model, and
- the percent change between the prediction errors of the competing and the default models per extra parameter (i.e., percent change in prediction errors divided by the difference in the numbers of parameters between the two models) was less than 1 percent.

If more than one competing model met the criteria, the model with the smallest percentage change per extra parameter was generally selected. However, if there are other competing models that had fewer parameters and the differences between their percentage changes per extra parameter and the smallest one did not exceed 0.02, the competing model with the fewest number of parameters (rather than the model with the smallest percentage change per extra parameter) was selected. The chosen model was then refitted using all data (1983-2008 submissions, 1981-2006 diagnosis years) to estimate delay distributions and calculate delay adjusted estimates of the cancer counts.

Age-adjusted (using the 2000 US standard million population) cancer incidence rates were then calculated with and without adjusting for reporting delay. Joinpoint linear regression was used to obtain the annual percentage changes for the 1975-2006 incidence rates for the data series with and without delay adjustment. Because the delay distribution was assumed complete after 26 years, incidence rates for diagnosis years prior to 1982 were not reporting-adjusted. In joinpoint regression analyses, up to four change points (i.e, 5 trend-line segments) were allowed, and these were modeled to fall at either whole years or midway between diagnosis years. Change points were constrained to be at least 2 years away from both the beginning and the end of the data series and at least 2 years apart. Models were fitted using weighted least squares (weighted by appropriate variances of age-adjusted incidence rates) of the joinpoint regression software.

Results show that adjusting for delay tends to raise cancer incidence rates in more current

reporting years. While this adjustment increases the rate of change over the most recent diagnosis years, it probably will only rarely cause the detection of a new joinpoint, although this is possible. See Clegg et al. (2002) for details on the impact of reporting-delay adjustment to SEER cancer incidence rates.

## The SEER 13 Delay Model

Starting with the April 2009 release of the *Cancer Statistics Review* we estimated delay adjusted rates for SEER 13 registries. SEER 13 consists of SEER 9 registries, covering diagnosis years 1975 through the present, plus 4 newer registries (Los Angeles, San Jose-Monterey, Rural Georgia, Alaska Native Tumor Registry) covering diagnosis years 1992 through the present. These four registries will be referred to here as SEER 13-9.

Delay-adjusted rates for SEER 13 were obtained through a 2 step process. First, the delay adjustment factors are derived separately for SEER 9 and SEER13-9. Delay adjusted age specific case counts are computed for SEER 9 and SEER 13-9 using their respective delay adjustment factors. Weighted averages of the SEER 9 and SEER 13-9 age specific cancer case counts (with the weights equal to the populations in each registry group) are combined to compute the delay adjusted case counts for SEER 13. These adjusted case counts are then paired with the appropriate denominator to obtain age-specific rates, and are age-adjusted in the usual manner. The formula to compute the age-adjusted combined SEER 13 rates is:

Delay adjusted rate for *i*th age group =

$$\frac{\sum_{j} \text{delay counts for SEER 9 for age/stratum (i, j)} + \sum_{j} \text{delay counts for SEER 13-9 for age/stratum (i, j)}}{\sum_{j} \text{population for age/stratum (i, j)}}$$

$$AAR = \sum_{i} \frac{\text{Standard Population in } i \text{th age group}}{\text{Total Standard Population}} \times (\text{delay adjusted rate for } i \text{th age group})$$

i is for age, j is for stratum defined by multiple variables included in the delay model.

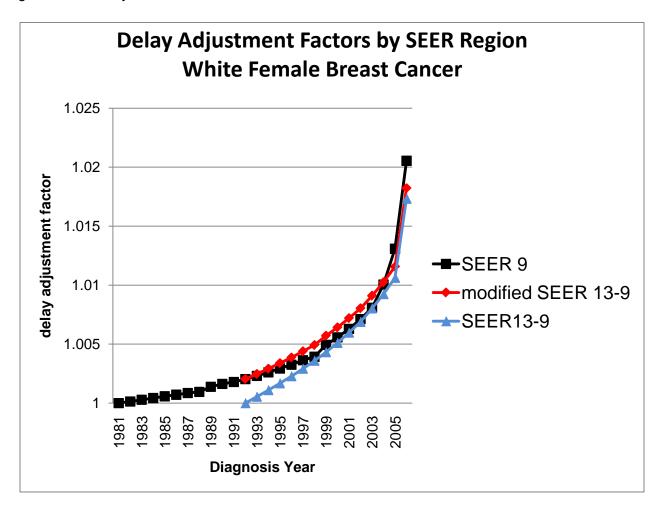
Future developments will include an application program to allow the computation of SEER 13 combined delay adjusted rates based on this formula.

Consecutive data submissions were not available for the Alaska Native Tumor Registry for the entire period of interest. Modeling SEER 13-9, therefore, was conducted using only Los Angeles, San Jose-Monterey and Rural Georgia though the final delay-adjustment factors were applied across the four registries.

In creating the SEER 13-9 model, we first followed the same process of model selection and delay adjustment factor estimation as is used in SEER 9. We then modified the SEER 13-9 factors to share the same delay adjustment factors as SEER 9 under the assumption that the SEER CANCER STATISTICS REVIEW 1975-2006: Technical Notes Page 14

data have the same delay distribution prior to 1992. The modified delay adjusted factors are then the final estimated factors for SEER 13-9. As with SEER 9, we also assume that in SEER 13-9 there is no delay after 26 year of reporting.

The example in the graph below shows white female breast cancer delay adjustment factors for SEER 9, SEER 13-9, and modified SEER 13-9 for diagnosis years 1981 through 2006. The maximum delay time for the registries in SEER13-9 is only 15 years. We assume that the delay adjustment factors for SEER 13-9 are the same as those for SEER 9 factors when delay time is greater than 15 years.



The black line represents the fit to the SEER 9 registries and assumes there is no delay after 26 years. The 26 year maximum delay was set using all of the currently available data submissions (1983- present) in our archive and also because updates to case information beyond 26 years is deemed minimal. The blue line represents the fit to SEER 13-9 registries and has a maximum 15 year delay which corresponds to the first NCI data submission for these registries in 1994.

The SEER 9 line shows that at 15 years there is a delay adjustment of 1.002 (0.2% further adjustment from 15 to 26 years). Finally, the red line corresponds to the modified delay adjustment factors for SEER 13-9, assuming that 0.2% also remains to be reported by SEER SEER CANCER STATISTICS REVIEW 1975-2006: Technical Notes Page 15

13-9 after 15 years. The combined SEER 13 delay adjusted rates for 2006 are obtained by utilizing the delay adjustment factors for both SEER 9 (1.021) and SEER 13-9 (1.018).

#### **Cancer Sites and Variables**

Delay-adjusted incidence rates and trends are reported for all cancers combined (malignant only except for urinary bladder), for female breast in situ, for urinary bladder (in situ and malignant), and for 22 malignant cancer sites: melanoma (for all races combined and whites only), lung/bronchus, colon/rectum, prostate, female breast, liver and intrahepatic bile duct, pancreas, cervix uteri, corpus and uterus, ovary, testis, kidney and renal pelvis, brain and other nervous system, Hodgkin lymphoma, non-Hodgkin lymphoma, all leukemias, esophagus, larynx, myeloma, oral cavity and pharynx, thyroid, and stomach.

A delay distribution models the probability of a cancer being reported after a delay of *d* years (*d* = 2, 3, ...25). The number of cancers reported at each delay year is assumed to follow a Poisson distribution. Cases are removed as corrections to the data are made, and the probability of removing cases is modeled as a binomial distribution. To reduce the number of parameters that have to be estimated and to achieve stability in the tails of the delay distributions, an assumption is made that all cancer cases will be reported within 25 years of diagnosis.

The delay distributions were modeled as a function of covariates using a discrete-time proportional hazards model. The following potential covariates are included: age at diagnosis, sex, diagnosis year, delay times, and race/ethnicity. For each cancer site, a delay distribution was calculated for all races combined and a separate delay distribution was calculated for whites and blacks. In the distributions for all races combined, if a patient's race value changed between two submission years the change of value does not contribute to the delay model. For melanoma, only all races combined and whites were analyzed because melanoma is rare for blacks. A complete list of covariates and as well this year's models for each cancer site can be found at <a href="http://srab.cancer.gov/delay/covariates.html">http://srab.cancer.gov/delay/covariates.html</a>

## STATISTICAL SIGNIFICANCE

Errors may be made in the estimation of a given statistic. In order to test whether two groups (such as the populations of a state and the entire US) have the same or different *actual* rates, the *observed* rates for the groups are compared. Statisticians consider that a difference in observed rates can be explained by one of two hypotheses: ( $H_0$ ) The actual rates are really the same, but the observed rates are different because of some combination of error-causing factors, or ( $H_1$ ) the actual rates of the groups are really different.  $H_0$  is called the **null hypothesis** (because it says there is *no* real difference);  $H_1$  is called the **alternate hypothesis**. Typically,  $H_0$  is rejected only if there is strong evidence in favor of  $H_1$ . (Thus, if the observed rates are equal, we cannot reject  $H_0$ .)

Using statistical theory, one can determine the distribution of the rate difference under the assumption that  $H_0$  is true. Then values of the rate difference that are very unlikely to occur if  $H_0$  is true are identified. More specifically, a small positive number, called **alpha** ( $\alpha$ ), is chosen; usually,  $\alpha$  is 0.05 or 0.01. (Alpha is called the **significance level** of the hypothesis test.) One can then identify limits for the difference in rates such that, if  $H_0$  is true, the probability of the difference being outside of those limits is  $\alpha$ . If the observed difference is *outside* of these limits, then the observed result is *very unlikely* to happen if  $H_0$  is true, so  $H_0$  is rejected.

Another way of looking at the same process is to calculate, assuming  $H_0$  is true, the probability that the observed difference or any greater observed difference would occur; this number is called the **P-value** of the observed result. If the P-value of a comparison is less than  $\alpha$  (that is, the observed difference is *very unlikely* to happen if the null hypothesis is true),  $H_0$  will be rejected. If the P-value of a test is greater than the significance level  $\alpha$ ,  $H_0$  will not be rejected. When a difference in rates is sufficiently large to cause the null hypothesis to be rejected for a given value of  $\alpha$  (usually 0.05), it is called a **statistically significant** difference.

When a null hypothesis is rejected, there remains a small chance that a wrong decision has been made. If many statistical comparisons are done, even with  $\alpha = 0.01$ , the chance of making at least one wrong decision becomes a concern. In testing the differences between the total US rate and the rate for each state (or for the District of Columbia) for a given cancer, 51 statistical comparisons of the type described above are performed. Based on one of Bonferroni's inequalities (if there are n events and  $p_i$  is the probability of success in event i, then  $P(\text{at least 1 success}) < p_1 + ... + p_n)$  (Snedecor & Cochran,1980; p. 115-117), the significance level  $\alpha$  for each individual comparison was set equal to  $0.01/51 \approx 0.0002$ . Thus, only individual-state-to-total-US comparisons with an associated P-value less than 0.0002 are considered to be statistically significant. That is, a *very small* significance level  $\alpha$  (0.0002) is used in order to minimize the total risk (0.01) of falsely deciding that some pair of equal rates are unequal.

Use caution in assessing statistically significant differences. Population size has an important role in any calculation of statistical significance. Some states may have estimated rates that are very close to the estimated total US rate, but because of their large population, the difference between their estimated rate and the estimated total US rate is found to be statistically significant. In this case, the true state rate and the true US rate are almost certainly different, because the observed difference, though small, is nearly impossible if the null hypothesis (equal rates) is true. A small difference in rates, however, may have no practical importance. On the other hand, some smaller states may have estimated rates that differ substantially from the estimated total US rate, but because of their relatively small population, the differences are found to be statistically nonsignificant. When this happens, if the true state rate and the true US rate were equal, the probability of obtaining a difference at least as large as what has been observed is greater than  $\alpha \approx 0.0002$ . Therefore, because the evidence against it isn't strong enough, the null hypothesis (equal rates) is not rejected.

If the percent difference (PD) between the two rates is small, there may be some question about the importance of the difference. It is difficult to specify a minimally significant absolute PD, below which the difference would always be unimportant, because the observed PD will depend on the populations of the areas involved. It may be of value to consider the size of the PD between a state rate and the US rate in assessing the importance of a statistically significant difference.

Comparing individual state rates with the US rate and assessing statistical significance is not an appropriate procedure for assessing geographic clustering of state rates. Identification of states which may represent regional clusters of high or low rates would require additional statistical and graphical analyses.

For a number of cancers, the District of Columbia has the highest death rates. *Use caution when comparing cancer rates for the District with those from the 50 states.* The District is an entirely urban area, whereas a state includes urban, suburban, and rural areas. Mortality rates for many cancers are higher in urban areas. Also, the District has a higher percentage of blacks (58% of the total population in 2005) than any state. In addition, their higher mortality rates for several types of cancer elevate the overall rate for the District.

#### STANDARD ERRORS OF RATES

**Survival rates:** In the tables presenting survival rates, the magnitude of the standard error is given as a clue to the reliability of a given rate: the greater the standard error, the less reliable the rate. In addition, if there were fewer than 25 diagnoses in the first interval of the life table constructed to calculate survival, or if all cases became lost to follow-up within an interval, a valid survival rate could not be calculated, as is noted in the table footnotes.

The **standard error** (**SE**) of a relative survival rate is obtained as follows (Ederer et al., 1961):

$$SE(CR_t) = CR_t * square root of [q_1/(e_1-d_1) + q_2/(e_2-d_2) + ... + q_t/(e_t-d_t)]$$

where  $CR_t$  is the t-year relative survival rate, and for i = 1, ..., t,  $q_i$  is the probability of dying in year i after diagnosis,  $e_i$  is the effective number of patients at risk in year i after diagnosis, and  $d_i$  is the number of deaths in year i after diagnosis.

**Incidence and mortality rates:** The standard errors of age-adjusted incidence and mortality rates are often not specified. However, the reader can approximate the SE of a particular incidence or mortality rate by the SE of a crude incidence or mortality rate (Keyfitz, 1966), that is, the SE can be approximated by the rate divided by the square root of the number of cancer cases (or the number of deaths).

Appendix tables provide numbers of cancer diagnoses within SEER areas and numbers of deaths in the entire US, respectively, by race and sex for the most recent 5-year period. These can be used to obtain approximations of the standard errors for associated age-adjusted rates for the same time period using the above formula. To approximate the standard error of a rate for a single year, use the formula but replace the number of cancer cases or deaths with the number of cancer cases or deaths divided by 5.

# **DEFINITIONS**

Several technical terms are used in presenting the data in this report. Their definitions are presented here to clarify them for the reader.

**Incidence rate:** The cancer incidence rate is the number of new cancers of a specific site/type occurring in a specified population during a year, usually expressed as the number of cancers per 100,000 persons at risk. That is,

Incidence rate = (New cancers / Population) \* 100,000.

The *numerator* of the incidence rate is the number of new cancers; the *denominator* of the incidence rate is the size of the population. 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. In general, the incidence rate would not include recurrences. *The population used depends on the rate to be calculated.* For cancer sites that occur in only one sex, the sexspecific population (e.g., females for cervical cancer) is used.

The incidence rate can be computed for a given type of cancer or for all cancers combined. Except for 5-year age-specific rates, all incidence rates in this report are *age-adjusted* (see below) to the 2000 US standard population (or, where appropriate, to the world standard million population). (In some previous editions of the *CSR*, the 1970 US standard million population was used; therefore, *incidence rates in this edition cannot be compared to rates published in those editions.*) Incidence rates are for *invasive cancer only*, unless otherwise specified. (Exceptions are the incidence rate for cancer of the urinary bladder (where both in situ and invasive cancers are counted) and breast cancer in situ, which is shown separately.)

**Death rate:** The cancer death (or mortality) rate is the number of deaths with cancer given as the underlying cause of death occurring in a specified population during a year, usually expressed as the number of deaths due to cancer per 100,000 persons. That is,

Death Rate = (Cancer Deaths / Population) \* 100,000.

The *numerator* of the death rate is the number of deaths; the *denominator* of the death rate is the size of the population. As with the incidence rate, *the population used depends on the rate to be calculated.* The death rate can be computed for a given cancer site or for all cancers combined. Except for 5-year age-specific rates, all death rates in this report are *age-adjusted* 

(see below) to the 2000 US standard million population (or, where appropriate, to the world standard million population). (In some previous editions of the *CSR*, the 1970 US standard million population was used; therefore, *death rates in this edition cannot be compared to rates published in those editions.*)

**Age distribution:** A table showing a partition of the entire lifespan into disjoint age intervals, along with the proportion of the population in each interval.

**Median age:** The age at which half of a population is younger and half is older.

**Standard population:** A **standard population** for a geographic area, such as the US or the world, is a table giving the proportions of the population falling into the age groups 0, 1-4, 5-9, ..., 80-84, and 85+. A **standard million population** for a geographic area is a table giving the number of persons in each age group 0, 1-4, ..., 85+ out of a theoretical cohort of 1,000,000 persons that is distributed by age in the same proportions as the standard population. Table A-7 shows the US 2000 standard population and the world standard million population. (Some World Health Organization mortality publications use a different world standard million population.)

**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. The potential confounding effect of age is reduced when comparing age-adjusted rates based on the same standard million population. For this report, the 2000 US standard million population (or, where appropriate, the world standard million population) is used in computing age-adjusted rates, unless otherwise noted.

Percent change: The percent change (PC) in a statistic over a given time interval is

Percent change = (Final value – Initial value) / Initial value \* 100.

A positive PC corresponds to an increasing trend, a negative PC to a decreasing trend.

**Annual percent change:** The annual percent change (**APC**) is calculated by first fitting a regression line to the natural logarithms of the rates (r) using calendar year (x) as a regressor variable. In this report the method of weighted least squares is used to calculate the regression equation. If In(r) = mx + b is the resulting regression equation (with slope m), then  $APC = 100 * (e^m - 1)$ . A positive APC corresponds to an increasing trend, a negative APC to a decreasing trend.

Because the methods used in their calculation are mathematically different, the signs of the PC and the APC for a given statistic and time interval may differ, as occurs in a few of the tables presented. That is, one of these statistics may show an increasing trend, the other a decreasing trend.

Testing the hypothesis that the actual mean annual percent change is 0 is equivalent to testing the hypothesis that the theoretical slope estimated by the slope m of the line representing the equation  $\ln(\mathbf{r}) = \mathbf{m}\mathbf{x} + \mathbf{b}$  is 0. The latter hypothesis is tested using the t distribution of  $m / SE_m$  with n-2 degrees of freedom. The standard error of m, called  $SE_m$ , is obtained from the fit of the regression (Kleinbaum et al., 1988). (This calculation assumes that the rates increased or decreased at a constant rate over the entire calendar year interval; the validity of this assumption was not assessed.) In those few instances where at least one of the rates was 0, the linear regression was not calculated.

**Average Annual Percent Change:** The average annual percent change (**AAPC**) is a summary measure of a trend over a pre-specified fixed interval based on an underlying joinpoint model. It allows us to use a single number to describe the average trend over a period of multiple years. It can be estimated even if the joinpoint model indicates that there were changes in trends during those years, since it is estimated as a weighted average of the joinpoint APCs, with the weights equal to the lengths of each segment over the pre-specified fixed interval.

**Life table:** A table for a given population listing, for each sex and each age from 0 to 120, how many members die at that age and how many survive one more year.

**Observed survival rate:** The observed survival rate represents the proportion of cancer patients surviving for a specified time interval after diagnosis. Note that some of those not surviving died of the given cancer and some died of other causes.

**Relative survival rate:** The relative survival rate is calculated using a procedure (Ederer et al., 1961) whereby the observed survival rate is adjusted for expected mortality. The relative survival rate approximates the likelihood that a patient cohort will not die from causes associated specifically with the given cancer before some specified time after diagnosis. It is always larger than the observed survival rate for the same group of patients.

**Standard error:** The standard error of a rate is a measure of the sampling variability of the rate.

**Person-years of life lost:** The person-years of life lost (**PYLL**) is calculated as follows: For each individual who dies of the cancer of interest, the number of years of expected additional life for an average person of that age, race, and sex is obtained from life tables for the US population (available from the NCHS). The PYLL in the general population associated with a particular cancer for a given year is simply the sum of this expectation over all those individuals who died of that cancer in that year.

Average years of life lost: The average years of life lost (AYLL) associated with a

particular cancer for a given year is the PYLL associated with that cancer in the general population divided by the number of deaths from that cancer in the general population in that year.

**Prevalence:** Prevalence is defined as the number or percent of people alive on a certain date in a population who previously had a diagnosis of the disease. It includes new (incident) and pre-existing cases and is a function of past incidence, past survival, and the size and age structure of the population. *Limited-Duration Prevalence* represents the proportion of people alive on a certain day who had a diagnosis of the disease within the past x years (e.g. x = 5, 10, or 20 years). *Complete prevalence* is an estimate of the number of persons (or the proportion of the population) alive on a specified date who had been diagnosed with the given disease, no matter how long ago that diagnosis was. For more details on cancer prevalence definitions and methods, refer to http://srab.cancer.gov/prevalence/.

Stage of disease at diagnosis: Extent-of-disease information determines stage of disease at diagnosis. The SEER summary stage presented has four levels. An invasive neoplasm confined entirely to the organ of origin is said to be localized. A neoplasm that has extended beyond the limits of the organ of origin, either directly into surrounding organs or tissues or into regional lymph nodes, is said to be regional. A neoplasm that has spread to parts of the body remote from the primary tumor, either by direct extension or by discontinuous metastasis, is said to be distant. When information is not sufficient to assign a stage, a neoplasm is said to be unstaged. In situ tumors (except those of the cervix uteri) are also collected by SEER but generally are not published in this series. For some cancers and diagnosis years, the extent of disease information can also be converted to Stages 0-IV as defined by the American Joint Committee on Cancer (Greene et al, 2002).

## SOFTWARE USED TO GENERATE THE SEER CANCER STATISTICS REVIEW

The SEER Cancer Statistics Review includes statistics generated by a variety of statistical software including:

- <u>SEER\*Stat</u>, statistical software for the analysis of SEER and other cancer databases, was used to generate incidence, mortality, prevalence, and survival statistics presented in the CSR.
- Analysis generated by the <u>Joinpoint Regression Program</u> are presented to better describe trends that are not constant over time.
- The <u>DevCan</u> system generated the probability of developing cancer from twelve SEER areas and the probability of dying from cancer from the total United States.
- The ComPrey software was used to calculate complete prevalence estimates.

Additional statistics can be obtained via SEER's <u>Cancer Query Systems</u>. These data retrieval applications provide access to pre-calculated cancer statistics stored in online databases.

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Table 1.1 Estimated New Cancer Cases and Deaths for 2009

All Races, By Sex

	Egti	mated New C	'ageg	Estimated Deaths		
Primary Site	Total	Males	Females	Total	Males	Females
All Sites	1,479,350	766,130	713,220	562,340	292,540	269,800
Oral Cavity and Pharynx	35,720	25,240	10,480	7,600	5,240	2,360
Tongue	10,530	7,470	3,060	1,910	1,240	670
Mouth	10,750	6,450	4,300	1,810	1,110	700
Pharynx	12,610	10,020	2,590	2,230	1,640	590
Other Oral Cavity	1,830	1,300	530	1,650	1,250	400
Digestive System	275,720	150,020	125,700	135,830	76,020	59,810
Esophagus	16,470	12,940	3,530	14,530	11,490	3,040
Stomach	21,130	12,820	8,310	10,620	6,320	4,300
Small Intestine	6,230	3,240	2,990	1,110	580	530
Colona	106,100	52,010	54,090	49,920	25,240	24,680
Rectum	40,870	23,580	17,290	,		
Anus, Anal Canal, and	5,290	2,100	3,190	710	260	450
Anorectum	-,	_,	0,200			
Liver and Intrahepatic	22,620	16,410	6,210	18,160	12,090	6,070
Bile Duct	,,	,	0,==0		,	,,,,,
Gallbladder and Other	9,760	4,320	5,440	3,370	1,250	2,120
Biliary	3,,00	1,320	3,110	3,3.0	1,250	2,120
Pancreas	42,470	21,050	21,420	35,240	18,030	17,210
Other Digestive	4,780	1,550	3,230	2,170	760	1,410
Respiratory System	236,990	129,710	107,280	163,790	92,240	71,550
Larynx	12,290	9,920	2,370	3,660	2,900	760
Lung and Bronchus	219,440	116,090	103,350	159,390	88,900	70,490
Other Respiratory	5,260	3,700	1,560	740	440	300
Bones and Joints	2,570	1,430	1,140	1,470	800	670
Soft Tissue	10,660	5,780	4,880	3,820	1,960	1,860
Skin (excl. basal & squamous)	74,610	42,920	31,690	11,590	7,670	3,920
Melanoma of the Skin <sup>b</sup>	68,720	39,080	29,640	8,650	5,550	3,100
Other non-epithelial skin	5,890	3,840	2,050	2,940	2,120	820
Breast <sup>b</sup>	194,280	1,910	192,370	40,610	440	40,170
Genital Organs	282,690	201,970	80,720	56,160	28,040	28,120
Cervix (uterus)	11,270	202,570	11,270	4,070	20,010	4,070
Endometrium (uterus)	42,160		42,160	7,780		7,780
Ovary	21,550		21,550	14,600		14,600
Vulva	3,580		3,580	900		900
Vagina and other genital	2,160		2,160	770		770
organs, female	_,,		_,			
Prostate	192,280	192,280		27,360	27,360	
Testis	8,400	8,400		380	380	
Penis and other genital	1,290	1,290		300	300	
organs, male	_,,	_,				
Urinary System	131,010	89,640	41,370	28,100	18,800	9,300
Urinary Bladder	70,980	52,810	18,170	14,330	10,180	4,150
Kidney and Renal Pelvis	57,760	35,430	22,330	12,980	8,160	4,820
Ureter and other urinary	2,270	1,400	870	790	460	330
organs	,	,				
Eye and Orbit	2,350	1,200	1,150	230	120	110
Brain and Other Nervous	22,070	12,010	10,060	12,920	7,330	5,590
System	,	, -	.,	, -	,	, , , , , , ,
Endocrine System	39,330	11,070	28,260	2,470	1,100	1,370
Thyroid	37,200	10,000	27,200	1,630	690	940
Other Endocrine	2,130	1,070	1,060	840	410	430
Lymphoma	74,490	40,630	33,860	20,790	10,630	10,160
Hodgkin Lymphoma	8,510	4,640	3,870	1,290	800	490
Non-Hodgkin Lymphoma	65,980	35,990	29,990	19,500	9,830	9,670
Myeloma	20,580	11,680	8,900	10,580	5,640	4,940
Leukemia	44,790	25,630	19,160	21,870	12,590	9,280
Lymphocytic Leukemias	21,250	12,550	8,700	5,790	3,370	2,420
Myeloid Leukemias	17,860	9,850	8,010	9,470	5,390	4,080
Other leukemia	5,680	3,230	2,450	6,610	3,830	2,780
All Other Sites <sup>c</sup>	31,490	15,290	16,200	44,510	23,920	20,590
	,	-, -		,		

Cancer Facts & Figures - 2009, American Cancer Society (ACS), Atlanta, Georgia, 2009. Excludes basal and squamous cell skin and  $in\ situ$  carcinomas except urinary bladder.

Incidence projections are based on rates from the North American Association of Central Cancer Registries(NAACCR) from 1995-2005, representing about 85% of the US population.

Estimated deaths for colon & rectum cancers are combined.

Carcinoma in situ of the breast accounts for about 62,280 new cases annually, and melanoma in situ accounts for about 53,120 new cases annually. More deaths than cases suggests lack of specificity in recording underlying causes of death on death certificate.

Table 1.2 57-Year Trends in U.S. Cancer Death Rates<sup>a</sup> All Races, Males and Females

All Primary Cancer Sites Combined

				Ann Percent	Total Percent Change	
Age Group	1950	1978	2006	1950-1978	1978-2006	1950-2006
Ages 0-4	11.1	4.6	2.2	-3.0*	-2.7*	-80.1
Ages 5-14	6.7	4.1	2.3	-1.3*	-2.3*	-66.1
Ages 15-24	8.6	6.1	3.9	-1.0*	-1.6*	-54.9
Ages 25-34	20.4	14.2	9.3	-1.3*	-1.6*	-54.6
Ages 35-44	63.6	50.7	31.7	-0.6*	-1.6*	-50.2
Ages 45-54	174.2	179.6	115.9	0.1*	-1.7*	-33.5
Ages 55-64	391.3	428.9	325.0	0.4*	-1.1*	-17.0
Ages 65-74	710.0	803.4	734.7	0.4*	-0.3*	3.5
Ages 75-84	1,167.2	1,204.1	1,252.9	0.1*	0.1	7.3
Ages 85+	1,450.7	1,535.3	1,609.4	0.1	0.3*	10.9
All Ages	195.4	204.4	181.1	0.1*	-0.4*	-7.3

Lung and Bronchus Cancerb

						Total
				Ann	ual	Percent
				Percent	Change	Change
Age Group	1950	1978	2006	1950-1978	1978-2006	1950-2006
Ages 0-4	-	_	_	_	_	-
Ages 5-14	-	-	_	-	-	-
Ages 15-24	0.2	0.1	0.1	-2.7*	-0.6	-58.9
Ages 25-34	0.8	0.8	0.4	0.1	-2.1*	-50.8
Ages 35-44	4.6	10.0	4.6	3.2*	-2.3*	0.4
Ages 45-54	20.2	52.4	29.0	3.5*	-2.5*	43.5
Ages 55-64	48.9	132.8	100.7	3.4*	-1.1*	106.2
Ages 65-74	59.4	218.4	255.9	4.3*	0.5*	330.7
Ages 75-84	55.4	220.0	373.3	5.1*	1.7*	574.1
Ages 85+	42.3	157.5	301.7	5.2*	2.2*	613.3
All Ages	14.9	47.1	51.8	4.0*	0.2	246.9

Source: US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

Rates are per 100,000 and age-adjusted to the 2000 US Std Population (18 age groups - Census P25-1130).

Due to coding changes throughout the years, Lung and Bronchus includes trachea and pleura.

The APC is significantly different from zero (p<.05). Statistic not shown. Rate based on less than 16 cases for the time interval. Trend based on less than 10 cases for at least one year within the time interval.

Table 1.3

Summary of Changes in Cancer Mortality, 1950-2006 and 5-Year Relative Survival Rates, 1950-2005

Males and Females, By Primary Cancer Site

	All H	Races		Whi	tes	
	Estimated Cancer Cases	Actual Cancer Deaths	U.S. Mortality Percent Change 1950-2006 <sup>b</sup>		5-Year Relative Survival Rates (Percent) <sup>c</sup>	
Primary Site	in 2006 <sup>a</sup>	in 2006 <sup>b</sup>	Total	APC	1950-1954	1999-2005
Oral cavity and pharynx	30,990	7,720	-52.6	-1.3*	46	64.4
Esophagus	14,550	13,685	32.3	0.7*	4	19.8
Stomach	22,280	11,345	-86.6	-3.5*	12	25.3
Colon and rectum	148,610	53,546	-49.5	-1.1*	37	68.0
Colon	106,680	44,058	-40.2	-0.8*	41	67.4
Rectum	41,930	9,488	-70.3	-2.5*	40	69.4
Liver and intrahepatic bile duct	18,510	19,952	36.2	0.7*	1	13.0
Pancreas	33,370	33,454	24.7	0.1*	1	5.7
Larynx	9,510	3,821	-30.0	-0.6*	52	65.5
Lung and bronchus	174,470	158,902	244.1	1.8*	6	16.6
Males	92,700	89,456	169.2	1.1*	5	14.4
Females	81,770	69,446	595.7	3.6*	9	19.1
Melanoma of the skin	62,190	8,441	173.6	1.5*	49	92.9
Breast(females)	212,920	40,820	-29.8	-0.5*	60	91.3
Cervix uteri	9,710	3,976	-81.4	-3.4*	59	73.1
Corpus and uterus, NOS	41,200	7,384	-68.0	-1.8*	72	86.5
Ovary	20,180	15,220	-0.9	-0.2*	30	45.5
Prostate	234,460	28,372	-25.3	-0.1	43	99.9
Testis	8,250	358	-72.5	-3.0*	57	96.5
Urinary bladder	61,420	13,909	-30.3	-0.8*	53	82.6
Kidney and renal pelvis	38,890	12,740	35.1	0.6*	34	69.4
Brain and nervous system	18,820	12,886	46.5	0.6*	21	35.1
Thyroid	30,180	1,518	-42.0	-1.3*	80	97.5
Hodgkin lymphoma	7,800	1,327	-76.9	-3.3*	30	87.4
Non-Hodgkin lymphoma	58,870	20,306	103.4	1.3*	33	70.1
Myeloma	16,570	10,784	224.1	1.5*	6	37.5
Leukemia	35,070	21,944	2.5	-0.2*	10	54.8
Childhood (Ages 0-14)	9,500	1,360	-72.9	-2.7*	20	82.4
All Sites	1,399,790	559,880	-8.2	0.0	35	69.1

The APC is the Annual Percent Change over the time interval. Rates used in the calculation of the APC are age-adjusted to the 2000 U.S. standard population (18 age groups - Census P25-1130).

Facts and Figures, 2006. American Cancer Society, Atlanta, Georgia, 2006.

U.S. Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

Due to coding changes throughout the years: Colon excludes other digestive tract; Rectum includes anal canal;

Liver & intrahepatic bile duct includes gallbladder & biliary tract, NOS; Lung & bronchus includes trachea & pleura;

Ovary includes fallopian tube; Urinary bladder includes other urinary organs; Kidney & Renal pelvis includes ureter;

NHL and myeloma each include a small number of leukemias; NHL includes a small number of ill-defined sites.

Rates for 1950-54 are from NCI Survival Report 5 with the exception of All Sites, Oral cavity & pharynx,
Colon & rectum, Non-Hodgkin lymphoma and Childhood cancers which come from historical Connecticut data.
Rates for 1999-2005 are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle,
Utah, and Atlanta). Rates are based on follow-up of patients into 2006.

<sup>\*</sup> The APC is significantly different from zero (p<.05).

## All Races

		Incidence <sup>a</sup> (2002-2006)			Mortali 2002-200		Survival <sup>c</sup> (1999-2005)		
Site	Total	Males	Females	Total	Males	Females	Total	Males	Females
All Sites	462.9	541.8	408.5	186.9	229.9	157.8	66.1	66.2	66.0
Oral Cavity & Pharynx:	10.4	15.4	6.1	2.6	3.9	1.5	61.0	59.9	63.3
Lip	0.8	1.3	0.4	0.0	0.0	0.0	91.1	90.8	91.4
Tongue	2.8	4.2	1.7	0.6	0.9	0.4	59.5	59.4	59.9
Salivary gland	1.2	1.6	1.0	0.2	0.4	0.1	73.9	68.3	81.1
Floor of mouth	0.6	0.9	0.4	0.0	0.1	0.0	53.0	51.3	56.9
Gum & other oral cavity	1.5	1.8	1.2	0.4	0.5	0.3	59.5	56.5	63.1
Nasopharynx	0.7	1.0	0.4	0.2	0.3	0.1	57.6	56.9	59.2
Tonsil	1.5	2.6	0.6	0.2	0.3	0.1	66.6	67.6	62.2
Oropharynx	0.3	0.5	0.2	0.2	0.3	0.1	39.2	39.0	39.6
Hypopharynx	0.7	1.2	0.3	0.1	0.2	0.0	29.2	28.9	30.4
Other oral cavity & pharynx	0.2	0.3	0.1	0.5	0.9	0.2	34.3	36.2	29.8
Digestive System:	87.9	107.0	72.6	44.6	57.2	34.8	45.4	43.5	47.5
Esophagus	4.5	7.7	2.0	4.4	7.8	1.7	16.8	16.6	17.3
Stomach	7.9	11.0	5.5	4.0	5.5	2.8	25.7	24.0	28.3
Small intestine	1.9	2.3	1.6	0.4	0.4	0.3	61.7	61.2	62.1
Colon & Rectum:	49.1	57.3	42.8	18.2	21.9	15.4	65.2	65.3	65.0
Colon	35.5	40.0	32.0	_	_	-	64.6	65.0	64.1
Rectum	13.6	17.2	10.7	-	-	-	66.6	65.9	67.5
Anus, anal canal & anorectum	1.6	1.4	1.7	0.2	0.2	0.2	66.3	61.4	69.6
Liver & intrahep. bile duct:	6.6	10.2	3.6	5.1	7.5	3.2	13.1	12.7	13.9
Liver	6.1	9.5	3.1	4.0	6.2	2.2	13.8	13.3	15.2
Intrahepatic bile duct	0.6	0.7	0.5	1.1	1.3	1.0	6.0	5.5	6.5
Gallbladder	1.2	0.9	1.4	0.7	0.5	0.8	15.3	13.1	16.0
Other biliary	1.8	2.1	1.5	0.5	0.6	0.4	17.2	18.5	15.7
Pancreas	11.7	13.1	10.4	10.7	12.3	9.3	5.5	5.4	5.7
Retroperitoneum	0.4	0.4	0.4	0.1	0.1	0.1	52.3	49.7	55.0
Peritoneum, omentum & mesentery	0.7	0.1	1.1	0.2	0.1	0.4	29.5	46.0	28.2
Other digestive system	0.5	0.6	0.5	0.3	0.3	0.2	10.4	9.8	10.9
Respiratory System:	67.5	85.1	54.4	54.9	73.2	41.6	18.9	18.3	19.7
Nose, nasal cavity & middle ear	0.7	0.9	0.5	0.2	0.2	0.1	55.5	53.2	58.4
Larynx	3.5	6.2	1.3	1.3	2.3	0.5	61.6	62.5	58.1
Lung & bronchus	63.1	77.7	52.5	53.4	70.5	40.9	15.6	13.4	18.1
Pleura <sup>d</sup>	0.0	0.1	0.0	0.1	0.2	0.0	33.5	28.0	42.6
Trachea & other	0.2	0.3	0.1	0.1	0.1	0.1	48.0	48.4	47.1
respiratory organs									
Bones & joints	0.9	1.0	0.8	0.4	0.5	0.4	68.4	65.0	72.5
Soft tissue (including heart)	3.1	3.8	2.7	1.3	1.4	1.1	67.2	66.9	67.5
Skin (excl. basal & squamous):	21.4	27.4	17.2	3.5	5.4	2.1	91.1	88.9	93.9
Melanoma of the skin	19.6	25.0	15.8	2.7	3.9	1.7	91.4	89.3	94.0
Other non-epithelial skin	1.8	2.4	1.4	0.8	1.4	0.4	87.9	84.5	91.6
Breast	67.1	1.2	123.8	13.8	0.3	24.5	89.1	87.0	89.1
				13.8					
Breast (in situ)	15.8	0.1	29.6	_	_	-	100.0	100.0	100.0

Note: Incidence and death rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey).

US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

SEER 17 areas. California excluding SF/SJM/LA, Kentucky, Louisiana, and New Jersey contribute cases for diagnosis years 2000-2005. The remaining 13 SEER Areas contribute cases for the entire period 1999-2005

cases for the entire period 1999-2005.

d Mesotheliomas of the Pleura are included in the separate group Mesothelioma for incidence but are included in the Pleura grouping for mortality.

<sup>-</sup> Statistic could not be calculated due to less than 16 cases in the time interval.

## Table 1.4 - continued Age-Adjusted SEER Incidence and U.S. Death Rates and 5-Year Relative Survival Rates By Primary Cancer Site, Sex and Time Period

### All Races

	( :	Incidence <sup>a</sup> (2002-2006)		US Mortality <sup>b</sup> (2002-2006)			Survival <sup>c</sup> (1999-2005)		
<u>Site</u>	Total	Males	Females	Total	Males	Females	Total	Males	Females
Female Genital System: Cervix uteri Corpus uteri	25.9 4.3 12.2	- - -	48.2 8.2 22.7	9.1 1.3 1.1	- - -	16.2 2.5 1.9	69.7 70.6 84.0	- - -	69.7 70.6 84.0
Uterus, NOS Ovary <sup>d</sup> Vagina	0.3 7.1 0.4	- - -	0.6 13.1 0.7	1.3 4.9 0.1	- - -	2.2 8.8 0.2	29.7 45.9 52.6	- - -	29.7 45.9 52.6
Vulva Other female genital system	1.2 0.4	-	2.2	0.3	-	0.5 0.2	76.1 65.7	<del>-</del> -	76.1 65.7
Male Genital System: Prostate Testis	73.8 70.6 2.7	165.7 159.3 5.4	- - -	10.0 9.8 0.1	26.1 25.6 0.3	- - -	99.4 99.7 95.3	99.4 99.7 95.3	-
Penis Other male genital system	0.3	0.8	- -	0.1	0.2	- -	67.5 84.5	67.5 84.5	- -
Urinary System: Urinary bladder	35.5 21.0	57.0 37.1	19.3 9.3	8.7 4.3	13.8	5.1 2.2	74.8 80.0	76.2 81.5	71.7 75.7
Kidney & renal pelvis Ureter Other urinary system	13.6 0.6 0.3	18.6 0.8 0.4	9.5 0.4 0.2	4.1 0.1 0.1	6.0 0.1 0.2	2.7 0.1 0.1	68.4 54.9 56.9	67.9 57.4 59.6	69.0 51.2 52.6
Eye & Orbit	0.8	1.0	0.7	0.1	0.1	0.1	83.8	82.1	85.9
Brain & Nervous System: <sup>e</sup> Brain Cranial nerves & other nervous system	6.4 6.0 0.4	7.6 7.2 0.4	5.4 5.0 0.4	4.3 - -	5.3 - -	3.5 - -	34.8 31.5 79.5	32.9 30.2 76.0	37.1 33.1 82.7
Endocrine System: Thyroid Other endocrine & thymus	10.3 9.6 0.7	5.7 4.9 0.8	14.8 14.2 0.6	0.8 0.5 0.3	0.8 0.5 0.3	0.8 0.5 0.3	94.8 97.3 62.4	89.6 94.7 62.7	96.5 98.0 62.1
Lymphoma: Hodgkin lymphoma Non-Hodgkin lymphoma	22.3 2.8 19.5	26.6 3.1 23.5	18.9 2.5 16.4	7.5 0.4 7.1	9.5 0.5 9.0	6.1 0.4 5.7	69.9 84.7 67.2	68.0 83.0 65.2	72.1 86.7 69.4
Myeloma	5.6	7.1	4.6	3.6	4.5	3.0	37.1	38.3	35.7
Leukemia: Lymphocytic: Acute lymphocytic Chronic lymphocytic Other lymphocytic Myeloid & Monocytic: Acute myeloid Chronic myeloid Acute monocytic Other myeloid & monocytic Other leukemia: Other acute leukemia Aleukemic, subleukemic & NOS	12.2 6.1 1.6 4.1 0.4 5.4 3.5 1.5 0.3 0.2 0.7 0.3 0.4	15.8 8.1 1.9 5.6 6.8 4.3 1.9 0.3 0.2 0.9 0.4	9.5 4.5 1.4 2.9 0.2 4.4 2.9 1.1 0.3 0.1 0.6 0.2	7.3 2.1 0.5 1.5 0.1 3.4 2.8 0.4 0.0 0.2 1.8 0.8	9.8 3.0 0.6 2.2 0.2 4.5 3.6 0.5 0.1 2.4 1.0	5.5 1.5 0.4 1.0 0.1 2.7 2.2 0.3 0.0 0.1 1.4 0.6 0.8	53.1 73.7 65.3 77.5 83.5 32.7 22.8 56.1 24.0 30.2 23.3 14.3 31.5	53.5 73.3 64.7 76.3 87.0 31.9 21.5 55.1 23.1 28.8 23.5 14.4 31.1	52.6 74.1 66.0 79.3 72.9 33.6 24.3 57.4 24.6 30.9 23.1 13.9 31.6
Kaposi Sarcoma <sup>f</sup> Mesothelioma <sup>f</sup>	0.6 1.1	1.2	0.1	- -	- -	- -	61.4 7.9	61.2 6.0	65.2 13.9
Ill-defined & unspecified	10.0	11.4	9.0	14.3	18.0	11.6	16.6	20.0	13.4

Note: Incidence and death rates are per 100,000 and are age-adjusted to the 2000 US Std

Population (19 age groups - Census P25-1130).

- d

SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey).

US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

SEER 17 areas. California excluding SF/SJM/LA, Kentucky, Louisiana, and New Jersey contribute cases for diagnosis years 2000-2005. The remaining 13 SEER Areas contribute cases for the entire period 1999-2005.

Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.

Due to coding changes, Brain & Nervous System mortality are no longer shown separately.

Rate not shown for mortality. Category did not exist in mortality coding until 1999.

Statistic could not be calculated due to less than 16 cases in the time interval.

#### Whites

		ncidence 2002-200			US Mortality <sup>b</sup> (2002-2006)			Survival <sup>c</sup> (1999-2005)		
Site	Total	Males	Females	Total	Males	Females	Total	Males	Females	
All Sites	470.6	544.3	420.5	185.4	226.7	157.3	66.9	67.0	66.9	
Oral Cavity & Pharynx:	10.5	15.6	6.1	2.5	3.7	1.4	62.8	62.4	63.8	
Lip	0.9	1.5	0.4	0.0	0.0	0.0	91.2	90.8	92.0	
Tongue	3.0	4.4	1.7	0.6	0.9	0.4	62.0	62.0	62.2	
Salivary gland	1.2	1.7	0.9	0.2	0.4	0.1	72.9	67.9	79.9	
Floor of mouth	0.7	1.0	0.4	0.0	0.1	0.0	54.1	53.0	56.7	
Gum & other oral cavity	1.5	1.8	1.2	0.4	0.5	0.3	60.1	57.8	62.9	
Nasopharynx	0.4	0.6	0.2	0.2	0.2	0.1	53.5	55.0	49.5	
Tonsil	1.6	2.7	0.6	0.2	0.3	0.1	69.2	70.7	63.0	
Oropharynx	0.3	0.5	0.2	0.2	0.3	0.1	43.1	43.2	42.9	
Hypopharynx	0.7	1.1	0.3	0.1	0.2	0.0	30.5	30.6	30.3	
Other oral cavity & pharynx	0.2	0.3	0.1	0.5	0.8	0.2	37.3	39.7	31.8	
Digestive System:	85.3	103.9	70.4	43.0	55.1	33.4	46.5	44.8	48.5	
Esophagus	4.6	7.9	1.9	4.4	7.9	1.6	17.6	17.6	17.6	
Stomach	6.9	9.8	4.7	3.5	4.8	2.4	24.1	22.5	26.7	
Small intestine	1.9	2.2	1.6	0.3	0.4	0.3	63.9	63.7	63.9	
Colon & Rectum:	48.6	56.9	42.1	17.7	21.4	14.9	66.1	66.3	65.9	
Colon	35.1	39.7	31.5	-	_	-	65.6	66.0	65.1	
Rectum	13.5	17.1	10.6	_	_	-	67.2	66.7	67.8	
Anus, anal canal & anorectum	1.7	1.4	1.9	0.2	0.2	0.2	67.0	61.8	70.3	
Liver & Intrahep. bile duct:	5.6	8.6	3.0	4.7	6.8	2.9	12.8	12.4	13.6	
Liver	5.1	8.0	2.5	3.6	5.5	1.9	13.6	13.0	15.2	
Intrahepatic bile duct	0.6	0.6	0.5	1.1	1.3	1.0	5.7	5.3	6.0	
Gallbladder	1.1	0.8	1.4	0.6	0.5	0.8	15.0	12.6	15.8	
Other biliary	1.7	2.1	1.5	0.5	0.6	0.4	17.5	19.3	15.5	
Pancreas	11.5	13.1	10.2	10.5	12.2	9.1	5.5	5.5	5.5	
Retroperitoneum	0.4	0.5	0.4	0.1	0.1	0.1	53.4	50.3	56.8	
Peritoneum, omentum & mesentery	0.7	0.1	1.3	0.3	0.1	0.4	29.5	43.6	28.5	
Other digestive system	0.5	0.6	0.4	0.3	0.3	0.2	10.1	9.4	10.8	
Respiratory System:	68.8	85.0	56.8	55.3	72.5	42.6	19.2	18.6	19.9	
Nose, nasal cavity & middle ear	0.7	0.8	0.5	0.2	0.2	0.1	55.6	53.0	59.1	
Larynx	3.5	6.2	1.3	1.2	2.1	0.5	63.1	64.0	59.6	
Lung & bronchus	64.4	77.6	54.8	53.8	69.9	41.9	15.9	13.7	18.3	
Pleura <sup>d</sup>	0.0	0.1	0.0	0.1	0.2	0.0	33.0	26.9	43.9	
Trachea & other	0.2	0.3	0.1	0.1	0.1	0.1	48.5	50.4	44.2	
respiratory organs										
Bones & joints	0.9	1.1	0.8	0.4	0.5	0.4	68.2	64.4	72.9	
Soft tissue (including heart)	3.2	3.8	2.7	1.3	1.4	1.1	67.8	67.5	68.2	
Skin (excl. basal & squamous):	24.8	31.5	20.1	3.9	5.9	2.4	90.9	88.6	93.7	
Melanoma of the skin	22.9	28.9	18.7	3.0	4.4	2.0	91.2	89.0	93.9	
Other non-epithelial skin	1.9	2.6	1.4	0.9	1.5	0.4	86.5	83.2	90.1	
Breast	68.7	1.2	127.8	13.4	0.3	23.9	90.3	88.3	90.3	
Breast (in situ)	16.0	0.1	30.3	=	=	-	100.0	100.0	100.0	

Note: Incidence and death rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey).

US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

SEER 17 areas. California excluding SF/SJM/LA, Kentucky, Louisiana, and New Jersey contribute cases for diagnosis years 2000-2005. The remaining 13 SEER Areas contribute cases for the entire period 1999-2005.

d Mesotheliomas of the Pleura are included in the separate group Mesothelioma for incidence but are included in the Pleura grouping for mortality.

<sup>-</sup> Statistic could not be calculated due to less than 16 cases in the time interval.

## Table 1.5 - continued Age-Adjusted SEER Incidence and U.S. Death Rates and 5-Year Relative Survival Rates By Primary Cancer Site, Sex and Time Period

#### Whites

	( )	Incidence <sup>a</sup> (2002-2006)		US Mortality <sup>b</sup> (2002-2006)			Survival <sup>c</sup> (1999-2005)		
Site	Total	Males	Females	Total	Males	Females	Total	Males	Females
Female Genital System: Cervix uteri Corpus uteri	26.5 4.1 12.6	- - -	49.8 8.1 23.7	9.0 1.2 1.0	- - -	16.1 2.2 1.8	70.8 72.0 85.7	- - -	70.8 72.0 85.7
Uterus, NOS Ovary <sup>d</sup> Vagina Vulva	0.3 7.4 0.4 1.3	- - -	0.5 13.8 0.7 2.3	1.2 5.1 0.1 0.3	- - -	2.0 9.1 0.2 0.5	29.7 45.8 54.8 76.5	- - -	29.7 45.8 54.8 76.5
Other female genital system	0.4	-	0.7	0.1	-	0.2	64.3	-	64.3
Male Genital System: Prostate Testis Penis Other male genital system	72.1 68.5 3.2 0.4 0.1	160.4 153.0 6.3 0.8 0.2	- - - -	9.3 9.0 0.1 0.1	24.1 23.6 0.3 0.2	- - - -	99.7 99.9 95.6 67.2 86.3	99.7 99.9 95.6 67.2 86.3	- - - -
Urinary System: Urinary bladder Kidney & renal pelvis Ureter Other urinary system	37.7 22.8 14.1 0.6 0.3	60.7 40.3 19.2 0.9 0.4	20.3 9.9 9.9 0.4 0.1	8.9 4.5 4.2 0.1	14.3 7.9 6.1 0.2 0.2	5.2 2.2 2.8 0.1 0.1	75.4 80.5 68.5 54.9 57.5	76.6 81.7 68.1 57.6 58.4	72.6 77.0 69.1 50.4 55.5
Eye & Orbit	0.9	1.1	0.8	0.1	0.1	0.1	83.4	81.6	85.5
Brain & Nervous System: <sup>e</sup> Brain Cranial nerves & other nervous system	7.1 6.7 0.4	8.4 8.0 0.4	5.9 5.5 0.4	4.7 - -	5.7 - -	3.8 - -	34.0 30.9 79.9	32.4 29.8 77.4	36.1 32.3 82.2
Endocrine System: Thyroid Other endocrine & thymus	10.8 10.1 0.7	6.0 5.2 0.8	15.6 15.0 0.6	0.8 0.5 0.3	0.8 0.5 0.3	0.7 0.5 0.3	95.1 97.5 61.4	90.1 94.8 62.4	96.8 98.2 60.0
Lymphoma: Hodgkin lymphoma Non-Hodgkin lymphoma	23.4 3.0 20.4	27.7 3.3 24.4	19.8 2.7 17.2	7.9 0.5 7.4	9.9 0.6 9.3	6.3 0.4 5.9	70.7 85.1 68.0	69.0 83.6 66.3	72.6 86.7 70.0
Myeloma	5.2	6.6	4.1	3.4	4.3	2.7	36.9	38.6	34.9
Leukemia: Lymphocytic: Acute lymphocytic Chronic lymphocytic Other lymphocytic Myeloid & Monocytic: Acute myeloid Chronic myeloid Acute monocytic Other myeloid & monocytic Other leukemia: Other acute leukemia	12.8 6.5 1.7 4.3 0.4 5.6 3.6 1.5 0.3 0.2 0.7	16.5 8.7 2.0 6.0 0.7 7.0 4.5 1.9 0.4 0.2	9.9 4.8 1.5 3.1 0.2 4.5 3.0 1.2 0.3 0.1 0.6	7.5 2.2 0.5 1.5 0.1 3.5 2.9 0.4 0.0 0.2 1.8	10.1 3.1 0.6 2.2 0.2 4.6 3.7 0.5 0.1 0.3 2.4	5.7 1.5 0.4 1.0 0.1 2.7 2.3 0.3 0.0 0.2 1.4	53.4 74.0 65.6 77.8 83.8 31.7 22.2 54.5 24.1 29.5 22.7 13.1	53.8 73.8 65.2 76.5 87.6 30.7 20.9 53.2 21.6 28.5 23.4	53.0 74.4 66.0 79.6 72.6 33.0 23.9 56.3 26.7 29.6 21.8 12.3
Aleukemic, subleukemic & NOS  Kaposi Sarcoma <sup>f</sup>	0.4	0.5	0.3	1.0	1.4	0.8	32.1 65.0	32.7 64.2	30.8 76.0
Mesothelioma <sup>f</sup>	1.2	2.2	0.5	-	-	_	7.4	5.6	13.3
Ill-defined & unspecified	10.1	11.5	9.1	14.2	17.9	11.5	17.4	21.5	13.6

Note: Incidence and death rates are per 100,000 and are age-adjusted to the 2000 US Std

Population (19 age groups - Census P25-1130).

US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

d

SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey).

SEER 17 areas. California excluding SF/SJM/LA, Kentucky, Louisiana, and New Jersey contribute cases for diagnosis years 2000-2005. The remaining 13 SEER Areas contribute cases for the entire period 1999-2005.

Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.

Due to coding changes, Brain & Nervous System mortality are no longer shown separately.

Rate not shown for mortality. Category did not exist in mortality coding until 1999. Statistic could not be calculated due to less than 16 cases in the time interval.

## Blacks

		Incidence <sup>a</sup> (2002-2006)			Mortali 2002-200		Survival <sup>c</sup> (1999-2005)		
Site	Total	Males	Females	Total	Males	Females	Total	Males	Females
All Sites	493.6	633.7	398.9	229.0	304.2	183.7	58.0	60.6	55.2
Oral Cavity & Pharynx:	10.5	16.7	5.8	3.6	6.5	1.6	42.6	38.2	53.2
Lip	0.1	0.2	_	-	-	-	86.1	85.9	81.4
Tongue	2.3	3.8	1.2	0.7	1.2	0.3	33.1	32.4	34.3
Salivary gland	1.0	1.2	1.0	0.2	0.2	0.1	74.5	65.7	81.6
Floor of mouth	0.7	1.2	0.4	0.1	0.1	0.0	41.9	37.3	56.2
Gum & other oral cavity	1.7	2.3	1.3	0.4	0.7	0.3	54.0	46.7	64.5
Nasopharynx	0.7	1.2	0.4	0.3	0.5	0.2	51.2	48.9	54.4
Tonsil	1.6	2.9	0.6	0.3	0.6	0.1	43.2	41.4	50.3
Oropharynx	0.6	1.1	0.3	0.4	0.7	0.2	20.8	21.0	21.1
Hypopharynx	1.2	2.2	0.4	0.2	0.4	0.0	22.3	20.9	27.7
Other oral cavity & pharynx	0.4	0.6	0.2	1.0	2.0	0.4	19.5	19.9	18.1
Digestive System:	110.5	134.6	93.2	61.5	80.3	48.4	38.5	35.3	41.7
Esophagus	5.6	9.3	3.0	5.4	9.2	2.7	10.8	9.8	13.4
Stomach	12.1	16.8	9.0	7.6	11.0	5.3	25.3	22.6	28.4
Small intestine	3.1	3.6	2.7	0.6	0.7	0.5	53.0	50.3	55.3
Colon & Rectum:	59.9	69.3	53.5	25.4	31.4	21.6	56.1	55.5	56.7
Colon	46.0	52.3	41.8	-	_	-	55.5	55.5	55.6
Rectum	13.9	17.0	11.7	-	-	-	57.9	55.5	60.4
Anus, anal canal & anorectum	1.7	1.6	1.6	0.2	0.2	0.2	59.8	53.7	65.7
Liver & Intrahep. bile duct:	8.2	13.4	4.2	6.8	10.8	3.9	8.8	8.3	10.0
Liver	7.7	12.9	3.7	5.8	9.5	3.0	9.0	8.5	10.0
Intrahepatic bile duct	0.5	0.4	0.5	1.0	1.2	0.9	5.5	3.1	7.8
Gallbladder	1.4	1.1	1.7	0.8	0.6	1.0	14.4	21.5	13.0
Other biliary	1.6	1.8	1.4	0.4	0.5	0.4	12.6	14.3	11.2
Pancreas	15.6	16.6	14.6	13.7	15.4	12.4	5.4	4.5	6.2
Retroperitoneum	0.4	0.3	0.4	0.1	0.1	0.1	42.3	42.8	42.0
Peritoneum, omentum & mesentery	0.4	0.1	0.6	0.2	0.1	0.2	29.3	46.7	24.8
Other digestive system	0.6	0.7	0.6	0.4	0.5	0.3	13.2	12.5	13.5
Respiratory System:	81.1	115.9	57.3	62.5	95.2	40.9	16.0	15.7	16.3
Nose, nasal cavity & middle ear	0.6	0.9	0.4	0.2	0.3	0.1	51.5	48.0	56.2
Larynx	5.6	10.5	2.0	2.3	4.7	0.7	50.5	51.6	46.1
Lung & bronchus	74.7	104.3	54.7	59.9	90.1	40.0	12.4	10.8	14.5
Pleurad	-	_	_	0.0	0.1	0.0		_	-
Trachea & other	0.2	0.2	0.2	0.1	0.1	0.1	37.6	32.7	48.4
respiratory organs									
Bones & joints	0.8	0.8	0.7	0.5	0.6	0.4	66.4	65.2	67.3
Soft tissue (including heart)	3.3	3.7	3.0	1.4	1.4	1.4	60.9	61.4	60.5
Skin (excl. basal & squamous):	2.1	2.1	2.1	0.9	1.4	0.6	88.9	86.2	91.1
Melanoma of the skin	1.0	1.1	1.0	0.4	0.5	0.4	77.3	73.3	80.4
Other non-epithelial skin	1.1	1.0	1.1	0.5	0.9	0.2	96.4	94.1	97.5
Breast	67.4	1.6	117.7	19.5	0.5	33.0	77.9	77.0	77.9
				17.5	-	_			
Breast (in situ)	15.1	0.2	26.6	-	_	_	100.0	99.1	100.0

Note: Incidence and death rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey).

US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

SEER 17 areas. California excluding SF/SJM/LA, Kentucky, Louisiana, and New Jersey contribute cases for diagnosis years 2000-2005. The remaining 13 SEER Areas contribute cases for the entire period 1999-2005.

d Mesotheliomas of the Pleura are included in the separate group Mesothelioma for incidence but are included in the Pleura grouping for mortality.

<sup>-</sup> Statistic could not be calculated due to less than 16 cases in the time interval.

## Table 1.6 - continued Age-Adjusted SEER Incidence and U.S. Death Rates and 5-Year Relative Survival Rates By Primary Cancer Site, Sex and Time Period

#### Blacks

		ncidenc 2002-200			Mortali 2002-2006			Survival (1999-20	
Site	Total	Males	Females	Total	Males	Females	Total	Males	Females
Female Genital System:	25.3	_	44.3	11.8	_	19.9	56.3	-	56.3
Cervix uteri	5.8	-	10.4	2.6	-	4.6	61.4	_	61.4
Corpus uteri	11.0	-	19.2	1.9	_	3.1	63.1	_	63.1
Uterus, NOS	0.6	-	1.1	2.4	_	4.0	26.2	_	26.2
Ovary <sup>d</sup>	5.8	-	10.1	4.4	=	7.3	37.4	-	37.4
Vagina	0.6	-	1.1	0.2	=	0.3	42.8	-	42.8
Vulva Other female genital system	1.0 0.4	-	1.8 0.7	0.2 0.1	-	0.3 0.2	70.1 67.4	-	70.1 67.4
Male Genital System:	100.7	242.2	_	20.2	56.8	_	96.3	96.3	_
Prostate	99.6	239.8	_	20.0	56.3	_	96.5	96.5	_
Testis	0.6	1.3	_	0.1	0.2	-	88.4	88.4	-
Penis	0.4	1.0	_	0.1	0.3	-	67.9	67.9	-
Other male genital system	0.1	0.2	-	0.0	0.0	<del>-</del>	79.4	79.4	-
Urinary System:	28.4	42.2	18.8	8.0	11.6	5.6	65.5	67.0	63.1
Urinary bladder	12.8	20.0	7.9	3.7	5.5	2.8	66.5	71.5	57.3
Kidney & renal pelvis	15.0	21.3	10.3	4.0	6.0	2.7	65.9	64.7	67.4
Ureter	0.3	0.4	0.3	0.0	0.1	0.1	51.4	43.6	58.7
Other urinary system	0.4	0.5	0.3	0.1	0.1	0.2	36.4	39.8	33.5
Eye & Orbit	0.2	0.3	0.2	0.0	0.0	0.0	83.5	83.3	84.1
Brain & Nervous System:	4.0	4.7	3.4	2.5	3.2	2.1	38.6	33.9	43.7
Brain	3.6	4.3	3.0	_	_	_	33.9	30.3	37.9
Cranial nerves & other nervous system	0.4	0.3	0.4	_	_	-	76.5	69.5	80.3
Endocrine System:	6.6	3.6	9.1	0.8	0.7	0.8	91.3	84.0	93.4
Thyroid	5.8	2.7	8.4	0.5	0.3	0.5	95.0	91.4	95.5
Other endocrine & thymus	0.8	0.9	0.7	0.3	0.3	0.3	64.8	62.4	67.1
Lymphoma:	17.4	21.2	14.5	5.4	6.8	4.4	63.1	58.4	68.6
Hodgkin lymphoma	2.6	2.9	2.3	0.4	0.5	0.3	82.1	77.3	87.4
Non-Hodgkin lymphoma	14.8	18.3	12.2	5.0	6.3	4.1	58.4	54.0	63.8
Myeloma	11.7	14.3	10.0	6.8	8.2	5.8	36.6	36.0	37.2
Leukemia:	9.8	12.7	7.8	6.4	8.5	5.1	45.8	45.5	46.1
Lymphocytic:	4.2	5.9	3.0	1.9	2.7	1.3	63.1	59.1	68.1
Acute lymphocytic	0.9	1.1	0.8	0.3	0.4	0.3	60.7	55.1	66.7
Chronic lymphocytic	3.0	4.4	2.1	1.4	2.1	1.0	64.5	60.5	69.7
Other lymphocytic	0.3	0.5	0.1	0.1	0.2	0.1	66.1	68.3	58.4
Myeloid & Monocytic:	4.7	5.8	4.0	2.8	3.6	2.4	34.6	36.5	31.8
Acute myeloid	3.0	3.6	2.6	2.2	2.7	1.9	24.5	26.4	21.5
Chronic myeloid	1.4	1.8	1.1	0.5	0.7	0.4	56.2	55.2	56.7
Acute monocytic	0.2	0.2	0.2	0.0	-	- 0 1	19.3	26.7	10.9
Other myeloid & monocytic	0.2	0.2	0.1	0.2	0.2	0.1	29.0	20.2	33.1
Other leukemia: Other acute leukemia	0.9	1.0	0.8 0.2	1.7	2.2 0.8	1.4 0.5	20.7 20.6	16.7 18.3	24.5
Aleukemic, subleukemic & NOS	0.3	0.3 0.7	0.2	0.6 1.1	1.5	0.5	19.5	18.3	20.1 23.8
Kaposi Sarcoma <sup>f</sup>	1.3	2.5	0.2	_	_	-	45.6	46.6	24.1
Mesothelioma <sup>f</sup>	0.6	1.2	0.3	-	-	-	12.2	8.6	17.9
Ill-defined & unspecified	11.7	13.4	10.4	17.3	22.6	13.7	10.8	11.2	10.4

Note: Incidence and death rates are per 100,000 and are age-adjusted to the 2000 US Std

Population (19 age groups - Census P25-1130).

d

SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey).

US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

SEER 17 areas. California excluding SF/SJM/LA, Kentucky, Louisiana, and New Jersey contribute cases for diagnosis years 2000-2005. The remaining 13 SEER Areas contribute contribute cases for diagnosis years 2000-2003. The remaining is seek Areas contribute cases for the entire period 1999-2005.

Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.

Due to coding changes, Brain & Nervous System mortality are no longer shown separately. Rate not shown for mortality. Category did not exist in mortality coding until 1999. Statistic could not be calculated due to less than 16 cases in the time interval.

Table 1.7 SEER Incidence and U.S. Mortality Trends by Primary Cancer Site and Sex All Races, 1997-2006

		Incidence	a	US Mortality <sup>b</sup>			
Site	Total APC	Males APC	Females APC	Total APC	Males APC	Females APC	
All Sites	-1.0*	-1.2*	-0.8*	-1.3*	-1.7*	-1.1*	
Oral Cavity & Pharynx:	-1.5*	-1.7*	-1.4*	-1.9*	-1.8*	-2.4*	
Lip	-6.7*	-7.3*	-5.1*	-5.4*	-5.8*	-5.2	
Tongue	1.3*	1.2	1.3*	-0.8*	-0.9*	-1.1*	
Salivary gland	0.1	-0.1	0.2	-1.2*	-0.6	-2.7*	
Floor of mouth	-6.5*	-6.0*	-7.6*	-8.6*	-8.0*	-10.1*	
Gum & other oral cavity	-2.3*	-2.3*	-2.3*	-4.0*	-4.3*	-3.7*	
<del>-</del>	-1.5	-1.6	-1.3	-2.8*	-2.8*	-3.1*	
Nasopharynx							
Tonsil	1.8*	1.9*	0.0	0.1	0.6	-1.7	
Oropharynx	-0.4	0.2	-2.3	-0.1	-0.1	-0.6	
Hypopharynx	-5.3*	-5.7*	-4.5*	-5.3*	-5.2*	-6.7*	
Other oral cavity & pharynx	-7.8*	-9.0*	-5.4*	-1.2*	-1.3*	-1.6*	
Digestive System:	-1.2*	-1.5*	-1.1*	-1.2*	-1.2*	-1.3*	
Esophagus	-0.6	-0.5	-1.1	0.3*	0.4*	-0.9*	
Stomach	-1.7*	-2.1*	-1.3*	-3.2*	-3.7*	-2.8*	
Small intestine	1.3*	1.6*	0.7	-1.4*	-2.1*	-0.8	
Colon & Rectum:	-2.4*	-2.9*	-2.1*	-2.7*	-2.8*	-2.7*	
Colon	-2.4*	-2.9*	-2.0*	_	_	-	
Rectum	-2.5*	-2.7*	-2.4*	-	<del>-</del>	<del>-</del>	
Anus, anal canal & anorectum	2.2*	1.9*	2.5*	2.5*	2.3*	2.9*	
Liver & intrahep. bile duct:	2.3*	2.4*	1.5*	2.0*	2.1*	1.3*	
Liver	3.3*	3.4*	2.5*	1.6*	1.8*	0.3	
Intrahepatic bile duct	-5.2*	-6.7*	-3.5*	3.7*	3.6*	3.8*	
Gallbladder	-0.7	-0.2	-0.9	-2.2*	-2.3*	-2.0*	
Other biliary	2.2*	1.9	2.5*	-2.9*	-3.1*	-2.8*	
Pancreas	0.5	0.3	0.6*	0.3*	0.1	0.4*	
Retroperitoneum	-0.3	-1.8	1.2	-4.8*	-5.1*	-4.8*	
Peritoneum, omentum &	3.8*	2.1	3.9*	4.7*	0.7	5.5*	
	3.0	2.1	3.9	4.7	0.7	3.3	
mesentery	г 14	F 74	F 0+	0 1	0 1	0 1	
Other digestive system	5.4*	5.7*	5.0*	0.1	-0.1	0.1	
Respiratory System:	-1.6*	-2.4*	-0.7*	-1.1*	-2.0*	-0.1	
Nose, nasal cavity &	-2.0	-2.6	-1.5	-2.6*	-3.4*	-1.6	
middle ear							
Larynx	-3.3*	-3.1*	-4.4*	-2.0*	-2.2*	-1.9*	
Lung & bronchus	-1.5*	-2.3*	-0.6*	-1.1*	-2.0*	-0.1	
Pleura	= .		_	-7.9*	-8.4*	-6.3*	
Trachea & other	-0.4	0.6	-3.0	-4.9*	-5.2*	-4.8*	
respiratory organs	0.1	0.0	3.0	1.5	3.2	1.0	
Bones & joints	-0.1	-0.4	0.4	0.0	-0.6	0.3	
Soft tissue (including heart)	1.2*	1.4*	0.8	-2.0*	-1.6*	-2.4*	
Skin (excl. basal & squamous):	1.5*	1.6*	1.5*	0.1	0.3	-0.5	
Melanoma of the skin	1.6*	1.7*	1.6*	0.0	0.2	-0.4	
Other non-epithelial skin	0.2	0.2	0.3	0.3	0.5	-0.6	
ocher hon-epitherrar skill	0.2	0.2	0.5	0.5	0.5	-0.0	
Breast	-1.9*	0.7	-1.8*	-2.1*	-2.0*	-1.9*	
Breast (in situ)	0.3	0.8	0.5	-	-	-	

The APC is the Annual Percent Change over the time interval.

SEER 13 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry and Rural Georgia). Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups -Census P25-1130).

US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups -Census P25-1130).

The APC is significantly different from zero (p<.05). Statistic could not be calculated. Trend based on less than 10 cases for at least one year within the time interval.

## Table 1.7 - continued SEER Incidence and U.S. Mortality Trends by Primary Cancer Site and Sex All Races, 1997-2006

		Incidence	a	US Mortality <sup>b</sup>			
	Total	Males	Females	Total	Males	Females	
<u>Site</u>	APC	APC	APC	APC	APC	APC	
Female Genital System:	-1.6*	_	-1.4*	-0.8*	_	-0.6*	
Cervix uteri	-3.4*	_	-3.3*	-3.2*	_	-3.0*	
Corpus uteri	-1.1*	_	-0.8*	-0.9*	_	-0.6*	
Uterus, NOS	1.2	_	1.5	0.7*	_	1.1*	
Ovary <sup>c</sup>	-1.8*	_	-1.6*	-0.5*	_	-0.3	
Vagina	-0.7	_	-0.5	-2.4*	_	-2.1*	
Vulva	-1.7*	_	-1.5*	0.0	_	0.5	
Other female genital system	1.2	-	1.4	-1.4	-	-1.2	
Male Genital System:	-1.1	-1.5*	_	-3.3*	-4.0*	_	
Prostate	-1.2	-1.6*	_	-3.4*	-4.0*	_	
Testis	0.9*	0.7	_	-0.6	-0.7	_	
Penis	-1.5	-1.7	_	0.0	-0.8	_	
Other male genital system	-2.9	-3.2	-	-3.8*	-4.2*	-	
Urinary System:	0.6*	0.3	1.0*	-0.3*	-0.3*	-0.6*	
Urinary bladder	-0.4	-0.4	-0.6*	-0.1	-0.3	-0.8*	
Kidney & renal pelvis	2.3*	1.8*	2.8*	-0.5*	-0.6*	-0.6*	
Ureter	1.0	0.4	1.7	-1.0	-1.6	-0.5	
Other urinary system	-2.1	-2.3	-1.5	4.1	5.9	1.9	
Eye & Orbit	-0.4	-0.8	0.1	-3.2*	-2.8	-3.8*	
Descin C Name of Contact d	0.7+	0.7*	0.6	1 0+	1 1+	1 1+	
Brain & Nervous System:	-0.7*	-0.7*	-0.6	-1.2*	-1.1*	-1.4*	
Brain Cranial nerves & other nervous system	-0.6 -1.2	-0.7 -1.4	-0.6 -1.3	-	-	-	
Endocrine System:	5.5*	4.4*	5.9*	-0.2	-0.4	0.0	
Thyroid	5.9*	5.1*	6.2*	0.7	0.9	0.7	
Other endocrine & thymus	0.9	0.7	1.1	-1.6*	-2.1*	-1.2*	
Lymphoma:	0.2	0.0	0.4	-3.1*	-2.9*	-3.4*	
Hodgkin lymphoma	0.4	0.3	0.5	-2.1*	-1.9*	-2.4*	
Non-Hodgkin lymphoma	0.1	-0.1	0.4	-3.2*	-3.0*	-3.5*	
Myeloma	-0.7	-0.8	-0.8	-1.2*	-1.1*	-1.5*	
Leukemia:	-0.9*	-1.4*	-0.5	-0.9*	-0.8*	-1.2*	
Lymphocytic:	0.3	0.0	0.4	-1.2*	-1.3*	-1.4*	
Acute lymphocytic	0.9	1.5	0.1	-1.0*	-1.4*	-0.7	
Chronic lymphocytic	0.5	0.0	1.0	-1.2*	-1.2*	-1.5*	
Other lymphocytic	-4.0*	-3.7*	-5.4*	-2.5*	-2.4*	-3.1*	
Myeloid & Monocytic:	-1.6*	-2.4*	-0.9	-0.4	-0.2	-0.7*	
Acute myeloid	-1.6*	-2.3*	-1.0	1.6*	1.8*	1.2*	
Chronic myeloid	-1.9*	-2.4*	-1.7*	-10.8*	-10.9*	-10.8*	
Acute monocytic	1.2	-1.8	4.6*	-6.8*	-5.7*	-8.3*	
Other myeloid & monocytic	-3.3*	-4.5*	-2.1	4.2	4.3	3.4	
Other leukemia:	-4.8*	-6.4*	-3.9*	-1.5*	-1.4*	-1.8*	
Other acute leukemia	-9.8*	-10.3*	-9.5*	-4.3*	-4.2*	-4.6*	
Aleukemic, subleukemic & NOS	-0.6	-3.0	0.6	1.0*	1.0*	0.6*	
Kaposi Sarcoma <sup>e</sup>	-5.2*	-5.1*	-6.5*	_	_	_	
Mesothelioma <sup>e</sup>	-1.3*	-1.9*	0.4	-	-	-	
Ill-defined & unspecified	-3.3*	-3.8*	-3.1*	-0.7	-0.4	-1.0	

The APC is the Annual Percent Change over the time interval.

SEER 13 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry and Rural Georgia). Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups -Census P25-1130).

b US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention. Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups -

Census P25-1130).

Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.

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Due to coding changes, Brain & Nervous System mortality are no longer shown separately. Trend not shown for mortality. Category did not exist in mortality coding until 1999. The APC is significantly different from zero (p<.05).

Statistic could not be calculated. Trend based on less than 10 cases for at least one year within the time interval.

Table 1.8 SEER Incidence and U.S. Mortality Trends by Primary Cancer Site and Sex Whites, 1997-2006

		Incidence	a	US Mortality <sup>b</sup>			
Sito	Total APC	Males APC	Females APC	Total APC	Males APC	Females APC	
Site	APC	APC	APC	APC	APC	APC	
All Sites	-0.9*	-1.1*	-0.8*	-1.2*	-1.6*	-1.0*	
Oral Cavity & Pharynx:	-1.3*	-1.4*	-1.5*	-1.6*	-1.5*	-2.2*	
Lip	-6.6*	-7.1*	-4.8*	-5.3*	-5.8*	-4.3	
Tongue	1.8*	1.7*	1.8*	-0.3	-0.3	-0.6	
Salivary gland	-0.2	-0.3	-0.5	-1.1*	-0.4	-3.0*	
Floor of mouth	-6.0*	-5.2*	-7.7*	-8.2*	-7.7*	-9.2*	
Gum & other oral cavity	-2.4*	-2.0*	-2.9*	-3.7*	-4.1*	-3.4*	
Nasopharynx	-1.8*	-2.0	-1.2	-3.2*	-3.5*	-3.2*	
Tonsil	3.0*	3.2*	0.8	0.8	1.4	-1.2	
Oropharynx	-0.9	-0.1	-2.8	0.2	0.2	-0.6	
Hypopharynx	-5.5*	-6.0*	-4.4	-5.3*	-5.4*	-5.8*	
Other oral cavity & pharynx	-7.5*	-8.9*	-5.3*	-1.0	-1.1	-1.4*	
Digestive System:	-1.3*	-1.5*	-1.2*	-1.1*	-1.2*	-1.3*	
Esophagus	0.1	0.1	-0.4	1.1*	1.2*	-0.2	
Stomach	-1.5*	-2.1*	-1.0	-3.3*	-3.8*	-2.8*	
Small intestine	1.9*	2.1*	1.4*	-1.4*	-2.2*	-0.7	
Colon & Rectum:	-2.6*	-3.1*	-2.3*	-2.7*	-2.9*	-2.7*	
Colon	-2.6*	-3.1*	-2.2*			_ `	
Rectum	-2.8*	-2.9*	-2.8*	_	_	_	
Anus, anal canal & anorectum	2.4*	2.3*	2.8*	2.7*	2.6*	3.0*	
Liver & intrahep. bile duct:	2.3*	2.7*	0.7	2.1*	2.2*	1.4*	
	2.3" 3.7*	4.0*	2.1*	1.6*	1.8*	0.2	
Liver							
Intrahepatic bile duct	-5.9*	-7.1*	-4.6*	3.8*	3.7*	3.8*	
Gallbladder	-0.6	-0.3	-0.7	-2.4*	-2.5*	-2.3*	
Other biliary	1.9*	1.6	2.2*	-3.0*	-3.2*	-2.9*	
Pancreas	0.6*	0.4	0.8*	0.4*	0.3*	0.5*	
Retroperitoneum	-0.4	-1.5	0.8	-4.8*	-4.7*	-5.3*	
Peritoneum, omentum & mesentery	3.6*	-	3.7*	5.0*	0.8	5.8*	
Other digestive system	5.5*	6.2*	4.6*	0.2	-0.1	0.2	
Other digestive system	5.5	0.2	4.0	0.2	-0.1	0.2	
Respiratory System:	-1.5*	-2.3*	-0.7*	-1.0*	-1.9*	0.0	
Nose, nasal cavity &	-1.7	-2.6	-1.0	-2.1*	-3.2*	-1.0	
middle ear							
Larynx	-3.0*	-2.9*	-3.7*	-1.6*	-1.9*	-1.5*	
Lung & bronchus	-1.5*	-2.3*	-0.7*	-0.9*	-1.8*	0.0	
Pleura	-	-	-	-7.7*	-8.2*	-6.1*	
Trachea & other	-0.9	0.1	-3.9	-4.5*	-4.6*	-4.8*	
respiratory organs							
Bones & joints	-0.2	-0.2	0.1	-0.1	-0.5	0.1	
-							
Soft tissue (including heart)	1.4*	1.9*	0.6	-1.8*	-1.3*	-2.2*	
Skin (excl. basal & squamous):	2.0*	2.1*	1.9*	0.3*	0.5*	-0.2	
Melanoma of the skin	2.1*	2.2*	2.1*	0.2	0.4	-0.2	
Other non-epithelial skin	0.5	0.9	-0.1	0.7	0.9	-0.2	
The first of the first							
Breast	-2.1*	1.3	-1.9*	-2.2*	-1.8*	-2.0*	
Breast (in situ)	0.1	0.1	0.3	-	-	-	

The APC is the Annual Percent Change over the time interval.

SEER 13 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry and Rural Georgia). Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups -Census P25-1130).

US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups -Census P25-1130).

The APC is significantly different from zero (p<.05). Statistic could not be calculated. Trend based on less than 10 cases for at least one year within the time interval.

## Table 1.8 - continued SEER Incidence and U.S. Mortality Trends by Primary Cancer Site and Sex Whites, 1997-2006

		Incidence	a	US Mortality <sup>b</sup>			
	Total	Males	Females	Total	Males	Females	
<u>Site</u>	APC	APC	APC	APC	APC	APC	
Female Genital System:	-1.7*	_	-1.4*	-0.8*		-0.5*	
Cervix uteri	-3.0*	_	-2.8*	-2.9*	_	-2.7*	
Corpus uteri	-1.3*	_	-1.0*	-1.0*	_	-0.7*	
Uterus, NOS	0.7	_	1.0	0.6	_	1.0*	
Ovary <sup>c</sup>	-1.9*	_	-1.7*	-0.5*	_	-0.2	
Vagina	-0.1	_	0.0	-2.5*	_	-2.2*	
Vulva	-1.8*	_	-1.6*	0.3	_	0.8*	
Other female genital system	1.4	-	1.7	-1.3	-	-1.1	
Male Genital System:	-1.0	-1.5*	_	-3.2*	-3.9*	_	
Prostate	-1.1	-1.6*	=	-3.2*	-3.9*	_	
Testis	1.1*	1.0*	=	-0.6	-0.7	_	
Penis	-1.2	-1.3	_	0.5	-0.4	_	
Other male genital system	-2.5	-2.8	-	-3.2	-3.7	-	
Urinary System:	0.6*	0.3	1.1*	-0.1	-0.2	-0.5*	
Urinary bladder	-0.3	-0.4	-0.6	0.1	0.0	-0.7*	
Kidney & renal pelvis	2.4*	1.9*	2.9*	-0.4	-0.5	-0.5	
Ureter	1.1	0.5	1.8	-0.9	-1.6	-0.2	
Other urinary system	-1.8	-2.1	-0.7	4.5	6.5	2.0	
Eye & Orbit	-0.4	-0.7	0.1	-2.9*	-2.4	-3.4*	
Brain & Nervous System:d	-0.6	-0.6	-0.7	-1.1*	-1.1*	-1.2*	
Brain	-0.5	-0.5	-0.6	-	-	_	
Cranial nerves & other nervous system	-1.5	-1.5	-1.8	-	-	-	
Endocrine System:	5.8*	4.8*	6.2*	-0.2	-0.2	-0.1	
Thyroid	6.2*	5.6*	6.5*	0.9*	1.3	0.8*	
Other endocrine & thymus	0.4	0.2	0.8	-1.8*	-2.2*	-1.4*	
Lymphoma:	0.2	0.0	0.4	-3.1*	-2.9*	-3.5*	
Hodgkin lymphoma	0.0	0.0	0.0	-2.2*	-1.9*	-2.4*	
Non-Hodgkin lymphoma	0.2	0.0	0.5	-3.2*	-2.9*	-3.5*	
Myeloma	-0.8	-0.8	-0.9*	-1.0*	-1.0*	-1.3*	
Leukemia:	-1.0*	-1.4*	-0.6	-0.8*	-0.7*	-1.0*	
Lymphocytic:	0.2	0.1	0.2	-1.1*	-1.3*	-1.2*	
Acute lymphocytic	0.7	1.7	-0.5	-1.0*	-1.5*	-0.5	
Chronic lymphocytic	0.5	0.1	0.9	-1.1*	-1.1*	-1.3*	
Other lymphocytic	-4.1*	-3.7*	-5.5*	-2.3*	-2.3*	-3.1*	
Myeloid & Monocytic:	-1.7*	-2.3*	-1.0	-0.2	0.0	-0.6	
Acute myeloid	-1.8*	-2.4*	-1.2	1.7*	1.9*	1.3*	
Chronic myeloid	-1.5*	-1.9	-1.6*	-11.0*	-11.2*	-10.8*	
Acute monocytic	1.0	-2.3	4.4*	-6.4*	-5.5*	-7.8*	
Other myeloid & monocytic	-2.7	-4.6	-0.3	4.3	4.4	3.4	
Other leukemia:	-5.4*	-7.2*	-4.2*	-1.4*	-1.3*	-1.7*	
Other acute leukemia	-9.6*	-10.4*	-9.1*	-4.1*	-4.1*	-4.2*	
Aleukemic, subleukemic & NOS	-1.8	-4.5*	-0.1	1.1*	1.2*	0.7	
Kaposi Sarcoma <sup>e</sup>	-5.2*	-5.1*	_	_	_	_	
Mesothelioma <sup>e</sup>	-0.6	-1.5	1.2	-	-	-	
Ill-defined & unspecified	-3.0*	-3.5*	-2.7*	-0.4	-0.2	-0.8	

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Census P25-1130).

Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.

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Due to coding changes, Brain & Nervous System mortality are no longer shown separately. Trend not shown for mortality. Category did not exist in mortality coding until 1999. The APC is significantly different from zero (p<.05).

Statistic could not be calculated. Trend based on less than 10 cases for at least one year within the time interval.

Table 1.9 SEER Incidence and U.S. Mortality Trends by Primary Cancer Site and Sex Blacks, 1997-2006

		Incidence	а	US Mortality <sup>b</sup>			
Site	Total APC	Males APC	Females APC	Total APC	Males APC	Females APC	
All Sites	-1.4*	-2.4*	-0.4*	-2.0*	-2.6*	-1.4*	
Oral Cavity & Pharynx:	-2.7*	-3.6*	-1.1	-3.5*	-3.0*	-4.7*	
Lip	_	_	_	_	_	_	
Tongue	-2.2	-3.0*	-0.7	-4.5*	-4.3*	-4.4*	
Salivary gland	1.3	-1.0	3.1	-2.2	-2.5	-2.8	
Floor of mouth	-9.1*	-10.0*	-	-11.1*	-9.3*	-	
Gum & other oral cavity	-2.3	-4.9*	1.8	-6.2*	-6.1*	-6.8*	
Nasopharynx	-0.6	- 4.5	-	-2.3	-0.9	-4.6	
			_ _				
Tonsil	-3.4	-3.5	_	-3.1*	-3.0*	-3.3	
Oropharynx	0.9	1.9	-	-1.2	-0.7	-1.8	
Hypopharynx	-2.5	-3.2	_	-5.2*	-4.0	-	
Other oral cavity & pharynx	-	_	-	-2.0	-1.6	-3.2	
Digestive System:	-1.1*	-1.4*	-0.9*	-1.7*	-1.7*	-1.8*	
Esophagus	-4.3*	-4.1*	-4.7*	-4.4*	-4.6*	-4.1*	
Stomach	-3.3*	-3.2*	-3.1*	-3.7*	-3.9*	-3.5*	
Small intestine	-0.6	-2.1	0.2	-1.2	-1.2	-1.1	
Colon & Rectum:	-1.5*	-1.8*	-1.3*	-2.0*	-1.7*	-2.4*	
Colon	-1.6*	-1.9*	-1.3*				
Rectum	-1.4*	-1.6	-1.3	_	_	_	
Anus, anal canal & anorectum	3.0	1.5	4.1*	1.0	-0.3	2.4	
					2.6*		
Liver & intrahep. bile duct:	3.3*	3.4*	2.4	2.0*		0.4	
Liver	3.9*	4.3*	2.3	1.6*	2.5*	-0.6	
Intrahepatic bile duct	-3.8	_	-	4.2*	4.0*	4.2*	
Gallbladder	1.6	_	0.6	-0.3	0.6	-0.5	
Other biliary	4.2*	3.9	4.0*	-1.9	-2.6	-1.6	
Pancreas	-0.2	-0.8	0.2	-0.7*	-1.0*	-0.6*	
Retroperitoneum	-	-	-	-4.0	-	-	
Peritoneum, omentum &	-	-	-	2.3	-	2.4	
mesentery							
Other digestive system	6.1	_	-	-0.5	0.5	-1.4	
Respiratory System:	-1.9*	-3.3*	0.0	-1.9*	-2.9*	-0.3	
Nose, nasal cavity &	-3.7	-	_	-5.7*	-4.7	-6.1	
middle ear	3.7			J.,		0.1	
Larynx	-3.8*	-3.2*	-5.8*	-3.3*	-3.2*	-3.2*	
Lung & bronchus	-1.8*	-3.3*	0.3	-1.8*	-2.9*	-0.2	
Pleura	-1.0	-3.3	-	-7.7*	-2.9	-0.2	
	_	_	_		_	_	
Trachea & other respiratory organs	-	-	-	-8.1*	-	-	
Banan C dadaha	0.5	-2.3	4.1	0.0	0 0	2.5	
Bones & joints	0.5	-2.3	4.1	0.8	-0.8	2.5	
Soft tissue (including heart)	-0.9	-2.8	0.6	-3.7*	-3.6*	-3.6*	
Skin (excl. basal & squamous):	-3.0	-7.3*	0.8	-2.9*	-1.9	-4.1*	
Melanoma of the skin	-4.4*	-8.8*	_	-2.1	1.2	-4.3*	
Other non-epithelial skin	-2.0	-5.4	1.5	-3.7*	-3.5*	-3.5	
Breast	-0.7*	-	-0.6*	-1.6*	-3.5*	-1.5*	
Breast (in situ)	1.5*		1.4*	-	_		

The APC is the Annual Percent Change over the time interval.

SEER 13 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry and Rural Georgia). Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups -Census P25-1130).

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## Table 1.9 - continued SEER Incidence and U.S. Mortality Trends by Primary Cancer Site and Sex Blacks, 1997-2006

		Incidence	a	US Mortality <sup>b</sup>			
	Total	Males	Females	Total	Males	Females	
Site	APC	APC	APC	APC	APC	APC_	
Female Genital System:	-1.1	=	-1.0	-1.3*	_	-1.2*	
Cervix uteri	-5.3*	_	-5.2*	-4.4*	_	-4.3*	
Corpus uteri	0.9	_	1.0	-0.2	_	0.0	
Uterus, NOS	_	_	_	1.1*	_	1.3*	
Ovary <sup>c</sup> .	-1.2	_	-1.0	-0.7	_	-0.7	
Vagina	-1.1	_	-0.7	-1.5	_	-1.6	
Vulva	-0.2	_	0.0	-2.4	_	-2.1	
Other female genital system	-1.6	-	-1.7	-2.8	-	-2.6	
Male Genital System:	-2.7*	-3.0*	_	-3.8*	-4.2*	_	
Prostate	-2.7*	-3.0*	_	-3.9*	-4.2*	_	
Testis	-1.8	-2.3	_	-0.2	-0.6	_	
Penis		_	_	-1.0	-1.5	_	
Other male genital system	_	_	_	-	-	-	
Urinary System:	0.6	0.2	0.9	-0.8*	-0.7*	-1.0*	
Urinary bladder	-0.1	-0.6	0.3	-0.9*	-0.6	-1.3*	
Kidney & renal pelvis	1.5	1.4	1.6	-0.8*	-0.9*	-0.7	
Ureter	-	_	-	-	-	-	
Other urinary system	_	_	_	0.5	_	0.8	
Erro C Orchit							
Eye & Orbit	_	_	_	_	_	-	
Brain & Nervous System:d	-0.4	-1.0	0.1	-1.7*	-0.9	-2.4*	
Brain	-0.4	-1.3	0.5	-	-	-	
Cranial nerves & other nervous system	=	=	=	-	_	-	
Endocrine System:	6.1*	5.4*	6.4*	-0.4	-1.3	0.0	
Thyroid	6.4*	5.3*	6.8*	0.0	-1.7	0.7	
Other endocrine & thymus	4.3*	_	=	-0.9	-0.9	-1.1	
Lymphoma:	0.5	0.1	0.9	-2.8*	-3.2*	-2.4*	
Hodgkin lymphoma	2.0	1.9	2.3	-2.2	-2.1	-2.3	
Non-Hodgkin lymphoma	0.3	-0.2	0.7	-2.8*	-3.3*	-2.4*	
Myeloma	-0.2	0.0	-0.4	-1.9*	-1.7*	-2.3*	
Leukemia:	-0.7	-1.1	-0.3	-1.2*	-1.1*	-1.4*	
Lymphocytic:	-0.1	-0.3	0.2	-1.4*	-0.8	-2.3*	
Acute lymphocytic	1.0	-0.7	2.7	-0.8	-1.5	-0.5	
Chronic lymphocytic	-0.5	-0.6	-0.1	-1.3*	-0.4	-2.8*	
Other lymphocytic	-		_	-2.6	-2.6	=-	
Myeloid & Monocytic:	-1.5	-2.6*	-0.6	-1.0*	-1.1	-0.7	
Acute myeloid	-0.7	-1.9	0.0	1.2	1.2	1.4*	
Chronic myeloid	-2.8*	-4.4*	-0.7	-9.0*	-8.6*	-9.3*	
Acute monocytic	_	_	=	_	_	=	
Other myeloid & monocytic	_	=	=	4.2	1.3	=	
Other leukemia:	1.2	_	-	-1.3*	-1.2	-1.7	
Other acute leukemia	-	=	=	-4.5*	-3.4*	-6.0*	
Aleukemic, subleukemic & NOS	6.7	-	-	0.5	0.1	0.9	
Kaposi Sarcoma <sup>e</sup>	-5.7*	-5.5*	-	_	=	_	
Mesothelioma <sup>e</sup>	-5.9*	-	-	-	-	-	
Ill-defined & unspecified	-4.6*	-5.7*	-4.0*	-1.8*	-1.6	-2.0*	

The APC is the Annual Percent Change over the time interval.

SEER 13 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry and Rural Georgia). Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups -Census P25-1130).

US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention. Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups -

Census P25-1130). Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.

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Due to coding changes, Brain & Nervous System mortality are no longer shown separately. Trend not shown for mortality. Category did not exist in mortality coding until 1999. The APC is significantly different from zero (p<.05).

Statistic could not be calculated. Trend based on less than 10 cases for at least one

year within the time interval.

 $\label{eq:Table 1.10} \mbox{Age Distribution (%) of Incidence Cases by Site, 2002-2006}$ 

All Races, Both Sexes

Age at Diagnosis

			nge ac .	DIAGIIOSI	.5				All	
Site	<20	20-34	35-44	45-54	55-64	65-74	75-84	85+	Ages	Cases
All Sites	1.1	2.7	5.8	13.9	21.8	24.9	22.2	7.6	100.0%	1,692,617
Oral Cavity & Pharynx:	0.6	2.4	6.8	20.9	26.2	21.3	16.1	5.8	100.0%	38,632
Lip	0.0	1.8	6.7	13.7	18.7	22.6	25.4	11.0	100.0%	2,822
Tongue	0.1	2.0	6.7	22.1	28.9	21.7	14.0	4.4	100.0%	10,605
Salivary gland	1.9	7.0	8.1	15.1	18.3	18.7	20.9	9.9	100.0%	4,520
Floor of mouth	0.2	0.2	4.2	20.8	30.2	24.7	15.3	4.3	100.0%	2,355
Gum & other oral cavity	0.6	1.9	5.4	14.6	22.1	22.9	22.5	9.9	100.0%	5,459
Nasopharynx	3.2	6.8	14.4	24.9	22.7	16.3	8.6	3.0	100.0%	2,492
Tonsil	0.1	0.8	7.8	33.0	32.5	17.0	7.6	1.3	100.0%	5,832
Oropharynx	0.0	0.3	4.6	21.4	30.8	23.5	14.6	4.8	100.0%	1,251
Hypopharynx	0.0	0.1	2.2	16.7	27.9	29.8	19.0	4.2	100.0%	2,516
Other oral cavity & pharynx	0.6	1.0	3.1	17.4	29.0	23.8	18.6	6.4	100.0%	780
Digestive System:	0.2	1.0	3.8	12.5	19.5	24.9	26.9	11.3	100.0%	319,364
Esophagus	0.0	0.4	2.4	12.2	24.0	28.1	24.8	8.1	100.0%	16,427
Stomach	0.1	1.5	4.8	11.6	17.7	24.6	27.7	12.0	100.0%	28,709
Small intestine	0.2	1.8	6.0	14.9	21.9	24.8	22.2	8.1	100.0%	6,926
Colon & Rectum:	0.1	1.1	3.8	12.0	18.7	24.7	27.7	12.1	100.0%	178,384
Colon	0.1	0.9	3.2	10.2	17.2	24.9	29.9	13.6	100.0%	128,387
Rectum	0.0	1.4	5.3	16.5	22.4	24.0	22.0	8.3	100.0%	49,997
Colon & Rectum (Male)	0.0	1.1	3.9	12.9	21.1	26.8	25.6	8.5	100.0%	90,408
Colon & Rectum (Female)	0.1	1.1	3.6	11.0	16.2	22.5	29.8	15.8	100.0%	87,976
Anus, anal canal & anorectum	0.0	1.2	10.5	23.6	23.0	19.0	16.2	6.4	100.0%	5,812
Liver & intrahep. bile duct:	1.1	1.0	3.7	20.3	24.6	23.5	19.8	5.9	100.0%	24,526
Liver	1.2	1.0	3.7	21.1	25.2	23.3	19.1	5.4	100.0%	22,435
Intrahepatic bile duct	0.0	1.2	3.8	12.2	17.8	25.7	27.2	12.0	100.0%	2,091
Gallbladder	0.0	0.5 0.6	2.6 3.0	9.1 8.8	17.3 17.1	25.7 25.5	30.7 30.2	14.0 14.8	100.0%	4,271
Other biliary Pancreas	0.0	0.6	2.4	9.6	19.2	25.5	29.4	12.8	100.0%	6,394 42,126
Retroperitoneum	8.4	5.0	8.7	16.4	19.2	19.3	17.4	5.6	100.0%	1,515
Peritoneum, omentum &	0.5	1.0	4.0	11.2	24.5	29.3	24.6	4.9	100.0%	2,421
mesentery	0.5	1.0	1.0	11.2	21.3	27.3	21.0	1.5	100.00	2,121
Other digestive system	0.1	1.3	3.2	10.7	17.5	23.4	29.5	14.3	100.0%	1,853
Respiratory System:	0.1	0.4	2.0	9.2	21.3	31.1	28.3	7.5	100.0%	242,400
Nose, nasal cavity &	2.6	5.1	8.6	15.9	19.8	21.5	19.5	7.0	100.0%	2,473
middle ear										
Larynx	0.0	0.5	3.4	15.5	28.7	29.0	18.1	4.7	100.0%	12,815
Lung & bronchus	0.0	0.2	1.8	8.8	21.0	31.4	29.1	7.7	100.0%	226,241
Lung & bronchus (Male)	0.0	0.2	1.6	8.8	21.8	32.1	28.7	6.8	100.0%	120,932
Lung & bronchus (Female)	0.0	0.3	2.0	8.8	20.0	30.7	29.5	8.7	100.0%	105,309
Pleura	4.0	4.0	4.8	4.8	26.2	19.8	29.4	7.1	100.0%	126
Trachea & other	17.3	20.4	10.2	12.6	11.9	11.5	10.1	5.9	100.0%	745
respiratory organs										
Bones & joints	29.4	16.1	10.7	12.8	10.3	8.8	8.2	3.8	100.0%	3,396
Soft tissue (including heart)	9.9	9.8	11.2	14.9	15.7	15.5	16.3	6.7	100.0%	11,687
Skin (excl. basal & squamous):	0.9	7.7	12.0	18.3	19.4	17.8	17.6	6.3	100.0%	79,398
Melanoma of the skin	0.9	7.8	12.4	18.9	19.8	17.7	16.8	5.7	100.0%	72,796
Other non-epithelial skin	1.5	6.8	7.9	11.6	14.4	18.5	26.2	13.1	100.0%	6,602
Breast (Female)	0.0	1.9	10.5	22.5	23.7	19.6	16.2	5.5	100.0%	247,782
Breast (Female -in situ)	0.0	0.8	11.2	28.5	25.9	19.2	12.2	2.3	100.0%	58,980

Source: SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey).

Percents may not sum to 100 due to rounding.

## Table 1.10 - continued

## Age Distribution (%) of Incidence Cases by Site, 2002-2006

# All Races, Both Sexes

# Age at Diagnosis

			Age at I	Jiagnosi	.5				All	
Site	<20	20-34	35-44	45-54	55-64	65-74	75-84	85+	Ages	Cases
Female Genital System:	0.4	4.4	10.1	19.5	24.6	19.4	15.6	5.9	100.0%	96,539
Cervix uteri	0.2	14.9	26.2	23.5	15.8	10.4	6.6	2.5	100.0%	16,058
Corpus uteri	0.0	1.5	6.4	19.2	30.2	22.5	15.5	4.7	100.0%	45,601
Uterus, NOS	0.5	2.9	5.3	13.8	19.9	18.2	21.0	18.3	100.0%	1,157
Ovary <sup>a</sup>	1.3	3.5	7.4	18.9	22.3	19.9	19.0	7.6	100.0%	26,372
Vagina	1.0	0.8	5.5	15.5	20.9	21.3	22.1	12.8	100.0%	1,442
Vulva	0.2	2.3	8.3	16.1	16.8	17.1	24.7	14.4	100.0%	4,459
Other female genital system	0.9	8.2	8.7	16.8	22.5	19.8	17.4	5.8	100.0%	1,450
Male Genital System:	0.2	1.8	1.7	8.9	27.9	34.2	20.7	4.5	100.0%	267,411
Prostate	0.0	0.0	0.6	8.7	29.0	35.6	21.4	4.7	100.0%	255,343
Testis	5.5	46.6	28.9	13.5	3.5	1.1	0.6	0.2	100.0%	10,415
Penis	0.1	1.8	7.1	12.1	19.7	24.3	24.1	10.8	100.0%	1,253
Other male genital system	2.8	1.8	4.3	13.5	21.5	24.3	25.3	6.8	100.0%	400
Urinary System:	0.6	0.9	3.6	11.0	20.4	26.3	27.5	9.9	100.0%	128,472
Urinary bladder	0.1	0.5	2.0	7.5	17.8	27.5	32.1	12.5	100.0%	75,455
Kidney & renal pelvis	1.3	1.5	6.1	16.4	24.6	24.3	20.0	5.7	100.0%	49,970
Ureter	0.0	0.1	0.8	4.6	14.6	30.4	37.5	12.0	100.0%	2,049
Other urinary system	0.3	0.6	2.5	9.8	17.1	24.0	29.9	15.7	100.0%	998
Eye & Orbit	13.9	3.6	7.3	14.1	19.6	18.9	17.0	5.5	100.0%	3,019
Brain & Nervous System:	13.2	9.3	10.1	15.0	17.6	16.4	14.2	4.2	100.0%	23,973
Brain	12.5	9.2	10.0	14.9	17.8	16.7	14.5	4.2	100.0%	22,456
Cranial nerves & other	23.4	11.5	11.3	15.8	14.4	11.1	9.4	3.2	100.0%	1,517
nervous system										
Endocrine System:	3.2	16.2	21.3	23.1	16.9	11.3	6.4	1.5	100.0%	39,088
Thyroid	1.8	16.9	22.0	23.8	16.9	11.1	6.2	1.4	100.0%	36,479
Other endocrine & thymus	22.7	7.6	10.4	14.7	17.3	14.6	10.1	2.5	100.0%	2,609
Lymphoma:	3.0	7.5	8.4	13.7	17.8	20.4	21.4	7.8	100.0%	81,986
Hodgkin lymphoma	11.9	32.1	16.9	12.3	9.2	8.5	7.0	2.1	100.0%	10,522
Non-Hodgkin lymphoma	1.7	3.9	7.2	13.9	19.0	22.2	23.6	8.6	100.0%	71,464
Myeloma	0.0	0.5	3.3	11.9	20.7	26.5	27.6	9.5	100.0%	20,399
Leukemia:	11.1	4.7	5.5	10.1	15.0	19.8	23.3	10.5	100.0%	44,690
Lymphocytic:	16.8	3.1	3.7	9.1	15.6	20.1	22.0	9.6	100.0%	22,263
Acute lymphocytic	60.8	10.1	6.5	6.4	5.8	5.1	3.8	1.5	100.0%	6,116
Chronic lymphocytic	0.0	0.2	1.7	9.1	19.3	26.5	30.0	13.2	100.0%	14,653
Other lymphocytic	0.5	2.6	11.8	20.3	19.9	18.7	18.1	8.0	100.0%	1,494
Myeloid & Monocytic:	5.5	6.6	7.8	11.6	14.8	19.7	24.1	9.8	100.0%	19,868
Acute myeloid	6.4	6.4	6.8	11.1	14.9	20.1	24.6	9.8	100.0%	12,797
Chronic myeloid	2.4	7.1	10.2	12.7	14.6	19.3	23.7	9.9	100.0%	5,407
Acute monocytic	11.1	6.8	7.9	13.3	16.9	17.6	18.7	7.8	100.0%	1,065
Other myeloid & monocytic	4.0	5.7	8.5	9.7	12.7	19.2	27.0	13.2	100.0%	599
Other leukemia:	4.9	3.9	3.9	6.9	10.5	18.1	28.4	23.3	100.0%	2,559
Other acute leukemia	7.8	4.0	3.5	5.7	8.8	17.4	30.3	22.6	100.0%	1,031
Aleukemic, subleukemic & NOS	2.9	3.9	4.3	7.7	11.6	18.7	27.2	23.8	100.0%	1,528
Kaposi Sarcoma	0.1	17.9	35.6	18.2	7.2	6.2	9.2	5.6	100.0%	2,357
Mesothelioma	0.1	0.8	2.1	6.6	16.9	27.2	35.9	10.4	100.0%	3,829
Ill-defined & unspecified	0.5	1.0	2.8	9.8	16.8	22.5	29.8	16.8	100.0%	36,355

Source: SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey).

Percents may not sum to 100 due to rounding.

Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.

Table 1.11 Median Age of Cancer Patients at Diagnosis<sup>a</sup>, 2002-2006 By Primary Cancer Site, Race and Sex

	I	All Races	5		Whites			Blacks	
Site	Total		Females	Total	Males	Females	Total	Males	Females
All Sites	66.0	67.0	65.0	67.0	68.0	66.0	63.0	64.0	62.0
Oral Cavity & Pharynx:	62.0	60.0	65.0	63.0	61.0	67.0	58.0	58.0	57.0
Lip	69.0	67.0	74.0	70.0	68.0	75.0	61.5	63.0	-
Tongue	61.0	60.0	64.0	61.0	60.0	65.0	58.0	59.0	56.0
Salivary gland	64.0	67.0	60.0	66.0	68.0	63.0	55.0	56.0	52.0
Floor of mouth	63.0	61.0	67.0	64.0	62.0	69.0	57.0	57.0	61.0
Gum & other oral cavity	67.0	64.0	72.0	68.0	65.0	72.0	59.0	59.0	61.0
Nasopharynx	55.0	54.0	55.0	58.0	57.0	62.0	49.0	49.0	48.0
Tonsil	56.0	56.0	60.0	56.0	56.0	60.0	56.0	56.0	55.0
Oropharynx	62.0	61.0	67.0	63.0	61.0	67.0	60.0	59.0	62.0
Hypopharynx	66.0	65.0	66.0	66.0	66.0	67.0	62.0	62.0	61.0
Other oral cavity & pharynx	64.0	63.0	68.0	65.0	63.0	70.0	59.0	60.0	55.0
Digestive System:	70.0	68.0	73.0	71.0	69.0	73.0	66.0	64.0	68.0
Esophagus	68.0	67.0	73.0	69.0	68.0	74.0	64.0	63.0	65.0
Stomach	71.0	69.0	73.0	71.0	70.0	74.0	68.0	67.0	71.0
Small intestine	67.0	65.0	68.0	67.0	66.0	69.0	63.0	63.0	63.0
Colon & Rectum:	71.0	69.0	73.0	72.0	70.0	74.0	66.0	65.0	67.0
Colon	72.0	70.0	74.0	73.0	71.0	75.0	67.0	66.0	68.0
Rectum	66.0	65.0	68.0	67.0	66.0	69.0	63.0	61.0	63.0
Anus, anal canal & anorectum	61.0	58.0	62.0	61.0	60.0	62.0	54.0	49.0	59.0
Liver & intrahep. bile duct:	64.0	61.0	70.0	65.0	62.0	71.0	58.0	57.0	64.0
Liver	64.0	61.0	70.0	64.0	62.0	71.0	58.0	57.0	63.0
Intrahepatic bile duct	70.0	68.0	73.0	71.0	69.0	74.0	65.5	59.0	70.0
Gallbladder	73.0	72.0	73.0	73.0	73.0	74.0	69.0	69.0	69.0
Other biliary	73.0	71.0	74.0	73.0	72.0	75.0	67.0	65.0	68.0
Pancreas .	72.0	69.0	74.0	72.0	70.0	75.0	68.0	66.0	71.0
Retroperitoneum	60.0	61.0	60.0	61.0	61.0	61.0	56.0	58.0	54.0
Peritoneum, omentum & mesentery	68.0	62.0	68.0	68.0	63.0	68.0	64.0	57.0	66.0
Other digestive system	72.0	71.0	74.0	73.0	71.0	75.0	67.0	64.0	69.0
Respiratory System:	70.0	70.0	71.0	71.0	70.0	71.0	66.0	65.0	67.0
Nose, nasal cavity & middle ear	63.0	62.0	65.0	65.0	63.0	66.0	56.0	56.0	59.0
Larynx	65.0	65.0	65.0	66.0	66.0	65.0	62.0	62.0	61.0
Lung & bronchus	71.0	70.0	71.0	71.0	71.0	71.0	66.0	66.0	67.0
Pleura	68.0	72.5	62.5	69.0	73.0	62.0	-	-	_
Trachea & other	47.0	39.0	59.0	48.0	39.0	63.0	45.0	43.0	49.0
respiratory organs									
Bones & joints	39.0	38.0	41.0	40.0	40.0	42.0	31.0	28.0	33.0
Soft tissue (including heart)	57.0	57.0	57.0	59.0	59.0	58.0	48.0	46.0	50.0
Skin (excl. basal & squamous):	60.0	63.0	55.0	60.0	63.0	56.0	53.5	55.0	51.0
Melanoma of the skin	59.0	62.0	55.0	60.0	63.0	55.0	63.0	64.0	62.0
Other non-epithelial skin	69.0	71.0	67.0	71.0	72.0	69.0	47.0	47.0	47.0
Breast	61.0	68.0	61.0	62.0	68.0	62.0	57.0	63.0	57.0
Breast (in situ)	58.0	59.0	58.0	58.0	60.0	58.0	58.0	63.0	58.0

SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey). Statistic could not be calculated. Less than 16 cases were diagnosed during the time

interval.

Table 1.11 - continued Median Age of Cancer Patients at  $Diagnosis^a$ , 2002-2006By Primary Cancer Site, Race and Sex

	į.	All Race	s		Whites			Blacks	
Site	Total	Males	Females	Total	Males	Females	Total	Males	Females
Female Genital System:	61.0	_	61.0	61.0	_	61.0	60.0	_	60.0
Cervix uteri	48.0	_	48.0	47.0	_	47.0	49.0	_	49.0
Corpus uteri	62.0	_	62.0	62.0	_	62.0	63.0	_	63.0
Uterus, NOS	69.0	_	69.0	70.0	_	70.0	65.0	_	65.0
Ovary <sup>b</sup>	63.0	_	63.0	64.0	_	64.0	61.0	_	61.0
Vagina	68.0	_	68.0	69.0	_	69.0	62.0	_	62.0
Vulva	68.0	_	68.0	70.0	_	70.0	54.0	_	54.0
Other female genital system	61.0	-	61.0	63.0	-	63.0	51.0	-	51.0
Male Genital System:	67.0	67.0	_	67.0	67.0	_	65.0	65.0	_
Prostate	68.0	68.0	_	68.0	68.0	_	65.0	65.0	_
Testis	34.0	34.0	_	34.0	34.0	_	35.0	35.0	_
Penis	68.0	68.0	_	69.0	69.0	_	65.0	65.0	_
Other male genital system	68.0	68.0	=	67.5	67.5	_	57.0	57.0	_
Urinary System:	70.0	70.0	70.0	70.0	70.0	71.0	65.0	64.0	67.0
Urinary bladder	73.0	72.0	74.0	73.0	73.0	74.0	70.0	68.0	72.0
Kidney & renal pelvis	64.0	64.0	66.0	65.0	64.0	67.0	61.0	60.0	62.0
Ureter	74.0	74.0	76.0	75.0	74.0	76.0	70.0	69.0	73.0
Other urinary system	73.0	73.0	73.0	74.0	74.0	74.0	66.5	69.0	64.0
Eye & Orbit	60.0	60.0	60.0	61.0	61.0	61.0	4.0	6.0	2.5
Brain & Nervous System:	56.0	55.0	57.0	57.0	56.0	58.0	50.0	50.0	50.0
Brain	56.0	56.0	58.0	57.0	56.0	59.0	50.0	50.0	50.0
Cranial nerves & other nervous system	47.0	44.0	49.0	46.0	44.0	49.0	49.5	49.5	49.5
Endocrine System:	48.0	53.0	47.0	48.0	53.0	47.0	49.0	52.0	49.0
Thyroid	48.0	53.0	47.0	48.0	53.0	47.0	50.0	53.0	49.0
Other endocrine & thymus	51.0	50.0	52.0	52.0	51.0	53.0	48.0	43.5	49.0
Lymphoma:	64.0	62.0	67.0	65.0	63.0	68.0	53.0	52.0	55.0
Hodgkin lymphoma	38.0	40.0	36.0	39.0	40.0	37.0	37.0	39.0	34.5
Non-Hodgkin lymphoma	67.0	65.0	69.0	68.0	66.0	70.0	56.0	54.0	58.0
Myeloma	70.0	69.0	71.0	71.0	70.0	72.0	66.0	65.5	67.0
Leukemia:	66.0	66.0	68.0	68.0	67.0	69.0	60.0	59.0	62.0
Lymphocytic:	65.0	64.0	68.0	66.0	65.0	68.0	62.0	61.0	65.0
Acute lymphocytic	13.0	13.0	12.0	13.0	14.0	12.0	14.0	12.0	15.0
Chronic lymphocytic	72.0	71.0	74.0	73.0	71.0	75.0	69.0	67.0	71.0
Other lymphocytic	61.0	59.0	66.0	62.0	60.0	67.5	61.0	62.0	57.5
Myeloid & Monocytic:	67.0	66.0	67.0	68.0	68.0	68.0	58.0	57.0	58.0
Acute myeloid	67.0	67.0	67.0	68.0	68.0	68.0	59.0	58.0	59.0
Chronic myeloid	66.0	65.0	68.0	68.0	67.0	70.0	57.0	57.0	57.0
Acute monocytic	61.0	63.0	60.0	63.0	63.0	61.0	49.0	46.0	49.5
Other myeloid & monocytic	69.5	69.0	71.5	71.0	69.0	73.0	62.0	61.0	63.0
Other leukemia:	75.0	74.0	77.0	77.0	75.0	79.0	65.0	60.0	71.0
Other acute leukemia	76.0	74.0	77.0	77.0	75.0	78.0	70.0	61.5	74.5
Aleukemic, subleukemic & NOS	75.0	73.0	77.0	77.0	75.0	79.0	62.0	58.0	67.0
Kaposi Sarcoma	43.0	42.0	79.0	45.0	44.0	80.0	39.0	38.0	44.5
Mesothelioma	73.0	74.0	72.0	74.0	74.0	73.0	70.0	70.0	70.0
Ill-defined & unspecified	73.0	71.0	76.0	74.0	71.0	76.0	67.0	64.0	70.0

SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey).

Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.

Statistic could not be calculated. Less than 16 cases were diagnosed during the time

interval.

 $\label{eq:Table 1.12} \mbox{Age Distribution (%) of Deaths by Site, 2002-2006}$ 

# All Races, Both Sexes

Age at Death

									All	
Site	<20	20-34	35-44	45-54	55-64	65-74	75-84	85+	Ages	Deaths
All Sites	0.4	0.8	2.7	9.0	17.5	25.2	29.9	14.6	100.0%	2,787,217
Oral Cavity & Pharynx:	0.2	0.8	3.4	14.6	23.6	23.9	22.2	11.2	100.0%	38,833
Lip	0.3	0.9	2.4	6.9	11.5	18.1	32.0	27.8	100.0%	331
Tongue	0.0	1.2	4.2	15.5	24.1	23.9	21.0	10.0	100.0%	9,497
Salivary gland	0.2	0.9	3.5	9.6	16.9	22.3	28.1	18.6	100.0%	3,515
Floor of mouth	0.0	0.4	2.5	18.6	29.1	23.8	17.5	7.9	100.0%	667
Gum & other oral cavity	0.5	0.5	2.1	9.8	18.5	21.5	26.6	20.4	100.0%	5,722
Nasopharynx	1.1	3.5	7.2	18.5	23.9	22.8	16.6	6.5	100.0%	3,111
Tonsil	0.0	0.4	4.3	24.1	29.0	21.9	15.9	4.6	100.0%	3,139
Oropharynx	0.1	0.2	2.5	15.2	26.9	24.2	21.3	9.5	100.0%	3,195
Hypopharynx	0.0	0.3	1.9	15.0	28.7	27.0	21.7	5.3	100.0%	1,591
Other oral cavity & pharynx	0.0	0.1	2.3	13.6	25.3	27.2	22.9	8.6	100.0%	8,065
Digestive System:	0.1	0.5	2.4	9.3	17.3	24.2	29.8	16.4	100.0%	666,908
Esophagus	0.0	0.3	2.3	11.0	22.9	27.7	26.4	9.4	100.0%	65,767
Stomach	0.0	1.2	3.9	9.7	15.7	22.8	29.5	17.2	100.0%	59,026
Small intestine	0.0	0.9	4.1	10.5	18.3	24.1	28.9	13.3	100.0%	5,410
Colon & Rectum:	0.0	0.6	2.4	8.0	15.2	22.6	30.8	20.4	100.0%	272,167
Colon & Rectum (Male)	0.0	0.7	2.6	8.9	17.8	25.7	30.1	14.3	100.0%	136,924
Colon & Rectum (Female)	0.0	0.6	2.2	7.0	12.5	19.6	31.5	26.6	100.0%	135,243
Anus, anal canal & anorectum	0.0	1.0	7.5	18.5	22.1	19.3	20.7	10.9	100.0%	2,889
Liver & intrahep. bile duct:	0.3	0.7	2.5	15.0	20.5	24.1	26.2	10.7	100.0%	76,674
Liver	0.4	0.7	2.5	16.5	21.1	23.9	25.0	9.8	100.0%	59,678
Intrahepatic bile duct	0.0	0.7	2.6	9.5	18.6	24.6	30.2	13.8	100.0%	16,996
Gallbladder	0.0	0.3	1.7	7.4	15.9	25.0	32.7	16.9	100.0%	9,747
Other biliary	0.0	0.2	1.3	5.7	13.2	22.5	34.2	22.8	100.0%	7,344
Pancreas	0.0	0.2	1.7	8.2	17.9	25.9	31.1	14.9	100.0%	159,024
Retroperitoneum	0.5	2.0	4.2	10.3	18.8	23.7	28.7	11.8	100.0%	1,057
Peritoneum, omentum & mesentery	0.1	0.6	2.5	7.8	19.6	29.9	30.8	8.6	100.0%	3,690
Other digestive system	0.1	0.6	1.9	6.3	13.8	22.0	31.6	23.7	100.0%	4,113
Respiratory System:	0.0	0.1	1.5	8.0	19.7	30.9	30.5	9.3	100.0%	814,945
Nose, nasal cavity &	0.2	1.4	6.1	13.5	18.6	21.3	25.3	13.5	100.0%	2,269
middle ear										
Larynx	0.0	0.1	1.8	11.5	24.9	29.2	24.3	8.1	100.0%	18,798
Lung & bronchus	0.0	0.1	1.5	7.9	19.6	30.9	30.7	9.3	100.0%	791,442
Lung & bronchus (Male)	0.0	0.1	1.4	8.1	20.6	31.8	30.1	8.0	100.0%	448,984
Lung & bronchus (Female)	0.0	0.1	1.7	7.5	18.4	29.8	31.5	11.0	100.0%	342,458
Pleura	0.0	0.1	1.8	4.4	15.3	28.5	36.8	13.1	100.0%	1,281
Trachea & other respiratory organs	1.2	5.4	4.7	11.7	17.3	22.6	25.8	11.3	100.0%	1,155
Bones & joints	14.5	14.4	7.0	9.9	11.9	13.7	17.9	10.8	100.0%	6,488
Soft tissue (including heart)	4.1	6.5	7.3	13.5	17.5	19.2	21.7	10.2	100.0%	18,749
Skin (excl. basal & squamous):	0.1	2.3	5.7	13.0	18.3	20.7	25.1	14.8	100.0%	52,530
Melanoma of the skin Other non-epithelial skin	0.2	2.9 0.5	6.8 2.1	14.6 8.0	19.1 15.5	21.1 19.5	24.0 28.6	11.4 25.6	100.0% 100.0%	40,069 12,461
Breast (Female)	0.0	1.0	6.2	15.1	20.3	19.8	22.8	14.9	100.0%	206,023

Source: US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

Percents may not sum to 100 due to rounding.

Table 1.12 - continued

## Age Distribution (%) of Deaths by Site, 2002-2006

All Races, Both Sexes

Age at Death

			_						All	
Site	<20	20-34	35-44	45-54	55-64	65-74	75-84	85+	Ages	Deaths
Female Genital System:	0.0	1.3	4.7	12.0	19.3	23.3	26.1	13.4	100.0%	136,258
Cervix uteri	0.0	5.3	16.2	23.2	20.1	15.2	13.1	6.9	100.0%	19,621
Corpus uteri	0.0	0.3	1.9	6.9	19.7	28.3	28.4	14.5	100.0%	16,428
Uterus, NOS	0.0	0.5	2.4	9.0	18.9	24.4	28.0	16.8	100.0%	18,794
Ovary	0.1	0.7	3.0	11.3	19.7	24.4	28.1	12.7	100.0%	73,699
Vagina	0.0	0.8	3.8	8.8	13.9	17.9	27.3	27.4	100.0%	1,963
Vulva	0.0	0.7	2.3	6.5	10.9	17.4	32.7	29.4	100.0%	4,046
Other female genital system	0.1	1.9	4.3	11.1	17.0	25.5	26.7	13.5	100.0%	1,707
Male Genital System:	0.0	0.4	0.4	1.7	7.3	20.0	40.3	29.8	100.0%	149,423
Prostate	0.0	0.0	0.1	1.4	7.2	20.1	40.9	30.3	100.0%	146,279
Testis	2.9	32.0	25.4	18.4	8.9	5.2	4.3	2.8	100.0%	1,811
Penis	0.0	1.0	4.6	11.9	19.9	24.4	26.0	12.3	100.0%	1,152
Other male genital system	0.6	2.2	2.8	8.3	13.8	19.3	32.6	20.4	100.0%	181
Urinary System:	0.2	0.3	1.6	7.0	15.4	23.4	32.7	19.5	100.0%	129,846
Urinary bladder	0.0	0.1	0.9	4.0	11.1	21.5	36.9	25.4	100.0%	64,867
Kidney & renal pelvis	0.5	0.5	2.4	10.2	20.0	25.4	27.9	13.2	100.0%	61,660
Ureter	0.0	0.2	0.5	3.7	10.2	24.2	38.9	22.4	100.0%	1,662
Other urinary system	0.0	0.2	1.0	7.3	13.2	20.9	35.8	21.5	100.0%	1,657
Eye & Orbit	3.7	1.5	4.5	11.6	19.4	21.8	24.4	13.0	100.0%	1,150
Brain & Nervous System:	4.3	3.8	7.4	15.2	21.3	22.3	19.5	6.1	100.0%	64,598
Endocrine System:	8.2	2.6	4.4	10.5	16.3	21.2	24.3	12.5	100.0%	11,416
Thyroid	0.1	0.9	2.6	8.5	17.0	24.0	30.3	16.6	100.0%	7,068
Other endocrine & thymus	21.4	5.5	7.2	13.6	15.2	16.7	14.6	5.7	100.0%	4,348
Lymphoma:	0.6	2.3	3.2	7.4	14.0	22.5	33.0	17.0	100.0%	112,363
Hodgkin lymphoma	1.9	14.6	10.7	12.4	14.3	16.4	20.8	8.9	100.0%	6,574
Non-Hodgkin lymphoma	0.5	1.6	2.8	7.1	13.9	22.8	33.7	17.6	100.0%	105,789
Myeloma	0.0	0.1	1.3	6.4	15.7	26.8	34.9	14.9	100.0%	53,770
Myelona	0.0	0.1	1.5	0.4	13.7	20.0	34.9	14.9	100.0%	33,770
Leukemia:	3.0	3.2	3.4	6.5	12.4	21.9	31.6	17.9	100.0%	108,393
Lymphocytic:	4.9	3.8	2.7	5.2	10.7	19.4	30.4	23.0	100.0%	31,154
Acute lymphocytic	20.9	16.0	9.6	11.3	12.2	12.7	11.6	5.8	100.0%	7,085
Chronic lymphocytic	0.0	0.1	0.5	3.1	10.3	21.6	36.1	28.3	100.0%	22,150
Other lymphocytic	1.6	1.4	1.6	5.7	10.7	19.1	33.7	26.2	100.0%	1,919
Myeloid & Monocytic:	2.3	3.2	4.3	8.1	14.5	24.0	30.9	12.7	100.0%	50,722
Acute myeloid	2.5	3.3	4.2	8.2	15.1	24.8	30.6	11.3	100.0%	41,060
Chronic myeloid	1.2	3.6	5.9	9.3	13.3	20.2	28.2	18.3	100.0%	5,908
Acute monocytic	2.5	1.7	3.2	5.1	11.2	19.4	36.7	20.2	100.0%	526
Other myeloid & monocytic	1.6	1.3	2.0	4.9	10.1	22.2	38.4	19.5	100.0%	3,228
Other leukemia:	2.3	2.3	2.6	5.2	10.4	20.7	34.6	21.9	100.0%	26,517
Other acute leukemia	1.2	2.5	2.8	5.4	10.6	22.1	35.8	19.5	100.0%	11,244
Aleukemic, subleukemic & NOS	3.1	2.2	2.4	5.0	10.2	19.8	33.7	23.7	100.0%	15,273
Ill-defined & unspecified	0.2	0.7	2.4	8.3	16.3	23.7	30.9	17.4	100.0%	213,650

Source: US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

Percents may not sum to 100 due to rounding.

Table 1.13 Median Age of Cancer Patients at Death  $^{a}$ , 2002-2006 By Primary Cancer Site, Race and Sex

	j	All Race	s		Whites			Blacks	
Site	Total	Males	Females	Total	Males	Females	Total	Males	Females
All Sites	73.0	72.0	73.0	73.0	73.0	74.0	68.0	68.0	68.0
Oral Cavity & Pharynx:	68.0	65.0	74.0	69.0	66.0	75.0	61.0	60.0	63.0
Lip	77.0	75.0	84.0	78.0	75.0	84.0	_	-	_
Tongue	67.0	64.0	73.0	67.0	64.0	74.0	60.0	61.0	60.0
Salivary gland	73.0	72.0	75.0	74.0	73.0	76.0	64.0	63.5	64.5
Floor of mouth	64.0	62.0	73.0	65.0	62.0	74.0	61.0	61.0	67.0
Gum & other oral cavity	73.0	67.0	80.0	75.0	69.0	80.0	62.0	60.0	70.0
Nasopharynx	63.0	61.0	66.5	65.0	63.0	69.0	57.0	56.0	60.0
Tonsil	61.0	60.0	68.0	62.0	60.0	69.0	57.0	57.0	62.0
	67.0		74.0	68.0	65.0	75.0	62.0		63.5
Oropharynx		64.0						61.0	
Hypopharynx	66.0	65.0	71.0	67.0	66.0	72.0	61.0	60.0	63.5
Other oral cavity & pharynx	68.0	67.0	72.0	69.0	68.0	72.0	62.0	61.0	64.0
Digestive System:	73.0	71.0	76.0	74.0	71.0	77.0	68.0	66.0	72.0
Esophagus	70.0	68.0	74.0	70.0	69.0	75.0	65.0	64.0	67.0
Stomach	73.0	72.0	76.0	74.0	72.0	77.0	71.0	68.0	74.0
Small intestine	71.0	70.0	73.0	72.0	71.0	75.0	65.0	65.0	65.0
Colon & Rectum	75.0	73.0	77.0	76.0	73.0	78.0	70.0	68.0	72.0
Anus, anal canal & anorectum	65.0	62.0	67.0	66.0	63.0	68.0	57.0	50.0	63.0
Liver & intrahep. bile duct:	70.0	66.0	74.0	71.0	68.0	75.0	62.0	59.0	69.0
Liver	69.0	65.0	75.0	70.0	67.0	76.0	61.0	58.0	69.0
Intrahepatic bile duct	72.0	71.0	74.0	73.0	72.0	74.0	68.0	67.0	70.0
Gallbladder	74.0	73.0	75.0	75.0	74.0	75.0	71.0	70.0	71.0
Other biliary	77.0	75.0	79.0	77.0	75.0	79.0	74.0	71.0	76.0
Pancreas	73.0	71.0	76.0	74.0	71.0	76.0	69.0	66.0	72.0
Retroperitoneum	71.0	68.0	73.0	72.0	69.0	74.0	62.0	59.0	65.0
Peritoneum, omentum & mesentery	71.0	68.0	72.0	72.0	68.0	72.0	67.0	63.0	68.0
Other digestive system	76.0	73.0	79.0	77.0	74.0	80.0	70.0	69.0	71.0
Respiratory System:	72.0	71.0	72.0	72.0	72.0	73.0	67.0	67.0	68.0
Nose, nasal cavity &	70.0	67.0	74.0	71.0	68.0	75.0	63.0	64.0	62.0
middle ear									
Larynx	69.0	68.0	70.0	69.0	69.0	71.0	64.0	64.0	65.0
Lung & bronchus	72.0	71.0	72.0	72.0	72.0	73.0	67.0	67.0	69.0
Pleura	74.0	75.0	74.0	75.0	75.0	74.0	69.0	68.0	71.0
Trachea & other	69.0	66.0	73.0	70.0	67.0	74.0	66.0	64.5	66.0
respiratory organs									
Bones & joints	58.0	54.0	64.0	60.0	56.0	67.0	50.0	46.0	55.5
Soft tissue (including heart)	65.0	65.0	66.0	67.0	66.0	67.0	56.0	53.0	57.5
Skin (excl. basal & squamous):	70.0	69.0	72.0	70.0	69.0	72.0	64.0	61.0	71.0
Melanoma of the skin	68.0	67.0	69.0	68.0	67.0	69.0	69.0	64.0	72.0
Other non-epithelial skin	76.0	74.0	81.0	77.0	75.0	81.0	61.0	60.0	70.0
Breast	68.0	72.0	68.0	70.0	73.0	70.0	61.0	66.0	61.0

US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.
Statistic could not be calculated. Less than 16 deaths occurred during the time interval.

## Table 1.13 - continued Median Age of Cancer Patients at Death $^{a}$ , 2002-2006 By Primary Cancer Site, Race and Sex

	1	All Race	s		Whites			Blacks	<b>.</b>
Site	Total	Males	Females	Total	Males	Females	Total	Males	Females
Female Conital Content	70 0	_	70.0	71 0		71 0	67.0		67.0
Female Genital System:	70.0	_	70.0 57.0	71.0 57.0	_	71.0	67.0 57.0	-	67.0 57.0
Cervix uteri	57.0					57.0		_	
Corpus uteri	72.0	-	72.0	73.0	_	73.0	70.0	_	70.0
Uterus, NOS	73.0		73.0	74.0		74.0	69.0	_	69.0
Ovary	71.0	-	71.0	71.0	_	71.0	68.0	_	68.0
Vagina	77.0	-	77.0	77.0	-	77.0	73.0	-	73.0
Vulva	79.0	-	79.0	79.0	-	79.0	66.0	-	66.0
Other female genital system	71.0	-	71.0	72.0	-	72.0	64.0	-	64.0
Male Genital System:	80.0	80.0	=	80.0	80.0	-	77.0	77.0	=
Prostate	80.0	80.0	-	81.0	81.0	_	77.0	77.0	_
Testis	40.0	40.0	_	41.0	41.0	_	38.5	38.5	_
Penis	70.0	70.0	_	71.0	71.0	_	65.5	65.5	_
Other male genital system	76.0	76.0	-	77.0	77.0	-	66.5	66.5	-
Urinary System:	75.0	74.0	77.0	76.0	75.0	78.0	71.0	69.0	74.0
Urinary bladder	78.0	77.0	80.0	78.0	78.0	80.0	76.0	74.0	77.0
Kidney & renal pelvis	71.0	69.0	74.0	72.0	70.0	75.0	67.0	64.0	77.0
		76.0	79.0	78.0	76.0	79.0	73.0	80.0	70.0
Ureter	77.0		79.0	78.0	77.0	79.0	64.0	69.0	64.0
Other urinary system	77.0	76.0	77.0	78.0	77.0	79.0	64.0	69.0	64.0
Eye & Orbit	69.0	67.5	70.0	70.0	68.0	71.0	52.0	50.0	52.5
Brain & Nervous System	64.0	62.0	66.0	64.0	62.0	66.0	57.0	56.0	59.0
Endocrine System:	69.0	65.0	72.0	69.0	66.0	73.0	62.0	54.0	66.0
Thyroid	73.0	71.0	76.0	74.0	71.0	76.0	71.0	67.0	73.0
Other endocrine & thymus	56.0	54.0	58.0	57.0	56.0	60.0	45.5	40.0	50.0
Lymphoma:	75.0	72.0	77.0	75.0	73.0	77.0	63.0	61.0	68.0
Hodgkin lymphoma	62.0	60.0	65.0	64.0	61.5	67.0	47.0	48.0	44.0
Non-Hodgkin lymphoma	75.0	73.0	77.0	75.0	73.0	78.0	65.0	62.0	69.0
Myeloma	74.0	73.0	76.0	75.0	74.0	77.0	71.0	69.0	72.0
Leukemia:	74.0	73.0	76.0	75.0	74.0	77.0	68.0	66.0	70.0
Lymphocytic:	76.0	74.0	79.0	76.0	74.0	77.0	70.0	68.0	73.0
Acute lymphocytic	48.0	43.0	53.0	49.0	45.0	54.0	40.0	34.0	48.0
Chronic lymphocytic	79.0	77.0	82.0	79.0	77.0	82.0	73.0	71.0	76.0
			81.0	79.0	77.0	81.0	73.0	71.5	
Other lymphocytic	78.0	76.0					64.0	64.0	74.0 65.0
Myeloid & Monocytic:	72.0	72.0	73.0	73.0	72.0	74.0			
Acute myeloid	72.0	71.0	72.0	72.0	72.0	73.0	64.0	64.0	64.5
Chronic myeloid	73.0	71.0 76.0	76.0	75.0	72.0 76.5	77.0 78.0	62.0 69.0	58.0	65.5 -
Acute monocytic	76.0		77.5	77.0					
Other myeloid & monocytic	77.0	76.0	78.0	77.0	76.0	78.0	71.0	69.0	72.0
Other leukemia:	77.0	75.0	79.0	77.0	76.0	79.0	71.5	70.0	74.0
Other acute leukemia	76.0	75.0	78.0	77.0	76.0	78.0	72.0	70.0	74.0
Aleukemic, subleukemic & NOS	77.0	75.0	79.0	78.0	76.0	80.0	71.0	69.0	74.0
Ill-defined & unspecified	74.0	72.0	76.0	75.0	73.0	76.0	68.0	66.0	71.0

US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

Statistic could not be calculated. Less than 16 deaths occurred during the time interval.

Table 1.14 Lifetime Risk (Percent) of Being Diagnosed with Cancer by Site and Race/Ethnicity

Both Sexes, 17 SEER Areas, 2004-2006

	All Races	Whites	Blacks
Site	Percent ( 95% C.I. )	Percent ( 95% C.I. )	Percent ( 95% C.I. )
All Sites	40.58 (40.48, 40.67)	41.09 (40.99, 41.20)	36.49 (36.20, 36.78)
Invasive and In Situ	43.37 (43.27, 43.47)	43.97 (43.86, 44.08)	38.17 (37.88, 38.47)
Oral Cavity and Pharynx	1.02 ( 1.00, 1.03)	1.04 ( 1.03, 1.06)	0.83 ( 0.79, 0.87)
Esophagus	0.51 ( 0.50, 0.52)	0.53 ( 0.51, 0.54)	0.47 ( 0.44, 0.51)
Stomach	0.89 ( 0.87, 0.90 )	0.78 ( 0.76, 0.79)	1.09 ( 1.04, 1.15 )
Colon and Rectum	5.20 ( 5.16, 5.23 )	5.18 ( 5.14, 5.21 )	5.07 ( 4.96, 5.18)
Invasive and In Situ	5.46 ( 5.43, 5.50 )	5.43 ( 5.40, 5.47)	5.37 ( 5.26, 5.49 )
Liver and Intrahepatic Bile Duct	0.73 ( 0.71, 0.74)	0.62 ( 0.61, 0.63)	0.75 ( 0.71, 0.79 )
Pancreas	1.38 ( 1.37, 1.40 )	1.37 ( 1.35, 1.39)	1.49 ( 1.43, 1.55)
Larynx	0.37 ( 0.36, 0.37 )	0.37 ( 0.36, 0.38)	0.47 ( 0.44, 0.50 )
Invasive and In Situ	0.39 ( 0.38, 0.40 )	0.40 ( 0.39, 0.41)	0.49 ( 0.46, 0.52)
Lung and Bronchus	6.96 ( 6.92, 7.00 )	7.15 ( 7.10, 7.19)	6.59 ( 6.47, 6.71 )
Melanoma of the Skin	1.88 ( 1.86, 1.90 )	2.20 ( 2.17, 2.22)	0.08 ( 0.07, 0.10 )
Invasive and In Situ	2.99 ( 2.96, 3.01)	3.44 ( 3.41, 3.47)	0.10 ( 0.09, 0.12)
Breast	6.26 ( 6.23, 6.30 )	6.46 ( 6.42, 6.49 )	5.32 ( 5.22, 5.43 )
Invasive and In Situ	7.49 ( 7.46, 7.53)	7.70 ( 7.66, 7.74)	6.41 ( 6.30, 6.52)
Urinary Bladder (Invasive and In Situ)	2.41 ( 2.39, 2.43)	2.61 ( 2.58, 2.64)	1.19 ( 1.13, 1.24)
Kidney and Renal Pelvis	1.43 ( 1.42, 1.45 )	1.50 ( 1.48, 1.51)	1.28 ( 1.23, 1.33)
Brain and Other Nervous System	0.60 ( 0.59, 0.61)	0.66 ( 0.65, 0.68)	0.31 ( 0.29, 0.34)
Thyroid	0.84 ( 0.83, 0.85)	0.88 ( 0.87, 0.89)	0.48 ( 0.46, 0.51 )
Hodgkin Lymphoma	0.23 ( 0.22, 0.24)	0.25 ( 0.24, 0.25)	0.20 ( 0.18, 0.22)
Non-Hodgkin Lymphoma	2.09 ( 2.07, 2.11 )	2.20 ( 2.17, 2.22)	1.25 ( 1.20, 1.30 )
Myeloma	0.63 ( 0.62, 0.65)	0.59 ( 0.58, 0.60 )	1.08 ( 1.03, 1.13 )
Leukemia	1.28 ( 1.27, 1.30 )	1.34 ( 1.33, 1.36)	0.84 ( 0.80, 0.88)
Acute Lymphocytic Leukemia	0.12 ( 0.12, 0.13)	0.13 ( 0.13, 0.14)	0.07 ( 0.06, 0.08)
Chronic Lymphocytic Leukemia	0.47 ( 0.46, 0.48)	0.50 ( 0.49, 0.51)	0.27 ( 0.25, 0.30 )
Acute Myeloid Leukemia	0.37 ( 0.36, 0.38)	0.38 ( 0.37, 0.39 )	0.25 ( 0.23, 0.28)
Chronic Myeloid Leukemia	0.16 ( 0.15, 0.16)	0.16 ( 0.15, 0.17)	0.12 ( 0.10, 0.13)
Kaposi Sarcoma	0.05 ( 0.05, 0.05)	0.05 ( 0.04, 0.05 )	0.09 ( 0.08, 0.10 )
Mesothelioma	0.13 ( 0.12, 0.13 )	0.14 ( 0.13, 0.14)	0.07 ( 0.06, 0.08)

Devcan Version 6.4.0, April 2009, National Cancer Institute (<a href="http://srab.cancer.gov/devcan">http://srab.cancer.gov/devcan</a>).

Source: SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey).

Note: Invasive cancer only unless specified otherwise.

A percent or confidence interval value of 0.00 represents a value that is below 0.005.

#### Table 1.14 - continued

## Lifetime Risk (Percent) of Being Diagnosed with Cancer by Site and Race/Ethnicity

## Both Sexes, 17 SEER Areas, 2004-2006

	Asian/Pacific Islanders	American Indian/ Alaska Natives <sup>a</sup>	Hispanics <sup>b</sup>
Site	Percent ( 95% C.I. )	Percent ( 95% C.I. )	Percent ( 95% C.I. )
All Sites	34.97 (34.59, 35.37)	28.06 (26.87, 29.38)	36.64 (36.30, 37.00)
Invasive and In Situ	36.89 (36.49, 37.29)	29.22 (28.00, 30.58)	38.34 (37.98, 38.70)
Oral Cavity and Pharynx	0.87 ( 0.82, 0.93 )	0.64 ( 0.51, 0.99 )	0.69 ( 0.64, 0.74 )
Esophagus	0.39 ( 0.35, 0.44 )	0.51 ( 0.36, 0.87)	0.38 ( 0.35, 0.42 )
Stomach	1.99 ( 1.89, 2.09)	1.24 ( 0.96, 1.70 )	1.49 ( 1.42, 1.57)
Colon and Rectum	5.27 ( 5.11, 5.44 )	4.36 ( 3.88, 4.98)	4.79 ( 4.65, 4.93 )
Invasive and In Situ	5.49 ( 5.33, 5.66 )	4.56 ( 4.08, 5.19)	4.99 ( 4.86, 5.14 )
Liver and Intrahepatic Bile Duct	1.84 ( 1.76, 1.94)	1.04 ( 0.85, 1.43)	1.26 ( 1.20, 1.33 )
Pancreas	1.48 ( 1.39, 1.58)	1.13 ( 0.91, 1.55 )	1.48 ( 1.40, 1.56)
Larynx	0.17 ( 0.14, 0.20 )	0.15 ( 0.09, 0.48)	0.28 ( 0.26, 0.32 )
Invasive and In Situ	0.18 ( 0.16, 0.22 )	0.16 ( 0.09, 0.49)	0.30 ( 0.28, 0.34 )
Lung and Bronchus	5.52 ( 5.36, 5.69 )	4.82 ( 4.33, 5.46)	4.24 ( 4.11, 4.37)
Melanoma of the Skin	0.16 ( 0.14, 0.20 )	0.33 ( 0.22, 0.67)	0.52 ( 0.48, 0.57 )
Invasive and In Situ	0.24 ( 0.21, 0.29 )	0.40 ( 0.29, 0.75 )	0.71 ( 0.66, 0.77 )
Breast	5.00 ( 4.88, 5.13 )	3.68 ( 3.31, 4.21 )	4.84 ( 4.73, 4.96)
Invasive and In Situ	6.19 ( 6.06, 6.33 )	4.24 ( 3.84, 4.79)	5.72 ( 5.60, 5.85)
Urinary Bladder(Invasive and In Situ)	1.40 ( 1.31, 1.49 )	0.85 ( 0.67, 1.24 )	1.53 ( 1.46, 1.61 )
Kidney and Renal Pelvis	0.88 ( 0.82, 0.94 )	1.71 ( 1.46, 2.14)	1.54 ( 1.48, 1.61 )
Brain and Other Nervous System	0.38 ( 0.34, 0.43 )	0.29 ( 0.21, 0.62)	0.53 ( 0.49, 0.57 )
Thyroid	0.89 ( 0.85, 0.94 )	0.44 ( 0.34, 0.77)	0.80 ( 0.76, 0.85 )
Hodgkin Lymphoma	0.11 ( 0.10, 0.14)	0.06 ( 0.04, 0.39 )	0.23 ( 0.21, 0.26 )
Non-Hodgkin Lymphoma	1.69 ( 1.61, 1.79 )	1.20 ( 0.97, 1.62)	2.03 ( 1.95, 2.12 )
Myeloma	0.47 ( 0.42, 0.52)	0.47 ( 0.34, 0.82)	0.66 ( 0.62, 0.71 )
Leukemia	0.88 ( 0.82, 0.95 )	0.84 ( 0.60, 1.27 )	1.10 ( 1.04, 1.17)
Acute Lymphocytic Leukemia	0.11 ( 0.10, 0.14 )	0.09 ( 0.05, 0.42 )	0.19 ( 0.17, 0.21 )
Chronic Lymphocytic Leukemia	0.16 ( 0.12, 0.20 )	0.27 ( 0.11, 0.70 )	0.28 ( 0.24, 0.32 )
Acute Myeloid Leukemia	0.38 ( 0.34, 0.43)	0.22 ( 0.14, 0.55)	0.33 ( 0.30, 0.37 )
Chronic Myeloid Leukemia	0.11 ( 0.09, 0.14)	0.15 ( 0.08, 0.48 )	0.16 ( 0.13, 0.19 )
Kaposi Sarcoma	0.02 ( 0.01, 0.05)	0.04 ( 0.01, 0.39 )	0.09 ( 0.08, 0.12 )
Mesothelioma	0.05 ( 0.04, 0.07)	0.10 ( 0.04, 0.44)	0.13 ( 0.11, 0.16)

Devcan Version 6.4.0, April 2009, National Cancer Institute (<a href="http://srab.cancer.gov/devcan">http://srab.cancer.gov/devcan</a>).

Source: SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey).

Note: Invasive cancer only unless specified otherwise. Underlying incidence data for American Indian/Alaska Native are based on the CHSDA(Contract Health Service Delivery Area)

Hispanic is not mutually exclusive from whites, blacks, Asian Pacific Islanders, and American Indians/Alaska Natives. Underlying incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry. A percent or confidence interval value of 0.00 represents a value that is below 0.005.

Table 1.15 Lifetime Risk (Percent) of Being Diagnosed with Cancer by Site and Race/Ethnicity

Males, 17 SEER Areas, 2004-2006

Kidney and Renal Pelvis       1.80 ( 1.78,  1.83 )       1.88 ( 1.85,  1.91 )       1.58 ( 1.50,  1.66 )         Brain and Other Nervous System       0.67 ( 0.66,  0.69 )       0.74 ( 0.72,  0.76 )       0.33 ( 0.29,  0.37 )         Thyroid       0.44 ( 0.43,  0.45 )       0.47 ( 0.45,  0.48 )       0.22 ( 0.20,  0.26 )         Hodgkin Lymphoma       0.25 ( 0.24,  0.25 )       0.26 ( 0.25,  0.27 )       0.21 ( 0.19,  0.24 )         Non-Hodgkin Lymphoma       2.28 ( 2.24,  2.31 )       2.39 ( 2.35,  2.42 )       1.34 ( 1.27,  1.42 )         Myeloma       0.72 ( 0.70,  0.74 )       0.68 ( 0.66,  0.70 )       1.09 ( 1.02,  1.17 )         Leukemia       1.51 ( 1.48,  1.53 )       1.59 ( 1.56,  1.62 )       0.94 ( 0.87,  1.02 )         Acute Lymphocytic Leukemia       0.14 ( 0.13,  0.14 )       0.15 ( 0.14,  0.16 )       0.07 ( 0.06,  0.10 )         Acute Myeloid Leukemia       0.42 ( 0.40,  0.43 )       0.44 ( 0.42,  0.45 )       0.25 ( 0.22,  0.22 )		All Races	Whites	Blacks
Invasive and In Situ	Site	Percent ( 95% C.I. )	Percent ( 95% C.I. )	Percent ( 95% C.I. )
Invasive and In Situ 45.93 (45.78, 46.08) 46.13 (45.96, 46.29) 41.15 (40.70, 41.65) Cral Cavity and Pharynx 1.40 (1.37, 1.42) 1.43 (1.41, 1.46) 1.18 (1.11, 1.25) Scophagus 0.79 (0.77, 0.81) 0.82 (0.80, 0.84) 0.66 (0.63, 0.75) Stomach 1.11 (1.09, 1.14) 0.99 (0.97, 1.01) 1.27 (1.20, 1.35) Stomach 1.11 (1.09, 1.14) 0.99 (0.97, 1.01) 1.27 (1.20, 1.35) Tavasive and In Situ 5.39 (5.34, 5.44) 5.40 (5.34, 5.45) 4.97 (4.81, 5.12) Invasive and In Situ 5.69 (5.64, 5.74) 5.70 (5.64, 5.75) 5.28 (5.12, 5.45) Liver and Intrahepatic Bile Duct 1.01 (0.99, 1.03) 0.87 (0.85, 0.89) 1.08 (1.01, 1.15) Invasive and In Situ 1.03 (0.59, 0.63) 0.87 (0.85, 0.89) 1.08 (1.01, 1.15) Invasive and In Situ 1.06 (0.69, 0.63) 0.62 (0.60, 0.63) 0.79 (0.74, 0.86) Invasive and In Situ 1.06 (0.64, 0.67) 0.63 (0.65, 0.68) 0.83 (0.77, 0.86) Invasive and In Situ 1.06 (0.64, 0.67) 0.67 (0.65, 0.68) 0.83 (0.77, 0.86) Invasive and In Situ 1.06 (0.64, 0.67) 0.67 (0.65, 0.68) 0.83 (0.77, 0.86) Invasive and In Situ 1.06 (0.64, 0.67) 0.67 (0.65, 0.68) 0.83 (0.77, 0.86) Invasive and In Situ 1.06 (0.64, 0.67) 0.67 (0.65, 0.68) 0.83 (0.77, 0.86) Invasive and In Situ 1.06 (0.64, 0.67) 0.67 (0.65, 0.68) 0.83 (0.77, 0.86) Invasive and In Situ 1.06 (0.12 (0.11, 0.14) 0.14 (0.12, 0.14) 0.14 (0.11, 0.15) 0.15 (0.12 (0.11) 0.15 (0.12) 0.15	All Sites	44 05 (43 91 44 20 )	44 16 (44 00 44 33 )	40 50 (40 05 40 95)
Oral Cavity and Pharynx		, , , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , , ,	·
Esophagus				
Stomach				
Colon and Rectum 5.39 (5.34, 5.44) 5.40 (5.34, 5.45) 4.97 (4.81, 5.12) Invasive and In Situ 5.69 (5.64, 5.74) 5.70 (5.64, 5.75) 5.28 (5.12, 5.44) Liver and Intrahepatic Bile Duct 1.01 (0.99, 1.03) 0.87 (0.85, 0.89) 1.08 (1.01, 1.12) Pancreas 1.38 (1.35, 1.40) 1.38 (1.35, 1.41) 1.33 (1.25, 1.42) Larynx 0.61 (0.59, 0.63) 0.62 (0.60, 0.63) 0.79 (0.74, 0.84) Invasive and In Situ 0.66 (0.64, 0.67) 0.67 (0.65, 0.68) 0.83 (0.77, 0.85) Lung and Bronchus 7.73 (7.67, 7.79) 7.81 (7.75, 7.88) 7.74 (7.55, 7.94) Melanoma of the Skin 2.30 (2.27, 2.33) 2.67 (2.63, 2.71) 0.08 (0.06, 0.12) Invasive and In Situ 3.63 (3.59, 3.67) 4.16 (4.12, 4.21) 0.11 (0.09, 0.14) Breast 0.12 (0.11, 0.13) 0.12 (0.12, 0.13) 0.12 (0.10, 0.12) Invasive and In Situ 0.13 (0.12, 0.14) 0.14 (0.13, 0.14) 0.14 (0.11, 0.17) Prostate 15.90 (15.81, 15.98) 15.39 (15.30, 15.88) 18.32 (18.03, 18.62) Testis 0.37 (0.36, 0.38) 0.44 (0.43, 0.45) 0.08 (0.07, 0.16) Brain and Other Nervous System 0.67 (0.66, 0.69) 0.74 (0.72, 0.76) 0.33 (0.29, 0.37) Thyroid 0.44 (0.43, 0.45) 0.46 (0.25, 0.27) 0.21 (0.19, 0.25) Non-Hodgkin Lymphoma 0.25 (0.24, 0.25) 0.26 (0.25, 0.27) 0.21 (0.19, 0.26) Non-Hodgkin Lymphoma 0.72 (0.70, 0.74) 0.68 (0.66, 0.70) 1.09 (1.02, 1.17) Leukemia 0.14 (0.13, 0.14) 0.15 (0.14, 0.16) 0.07 (0.06, 0.14) Acute Myelooid Leukemia 0.14 (0.13, 0.14) 0.16 (0.64, 0.64) 0.34 (0.30, 0.33) Acute Myeloid Leukemia 0.42 (0.40, 0.43) 0.44 (0.42, 0.45) 0.44 (0.42, 0.45) 0.25 (0.22, 0.22)		, , , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , , ,	
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Liver and Intrahepatic Bile Duct		, , , , , , , , , , , , , , , , , , , ,		·
Pancreas 1.38 (1.35, 1.40) 1.38 (1.35, 1.41) 1.33 (1.25, 1.41) 1.37 (1.25, 1.41) 1.37 (1.25, 1.41) 1.37 (1.25, 1.41) 1.37 (1.25, 1.41) 1.37 (1.25, 1.41) 1.37 (1.25, 1.41) 1.37 (1.25, 1.41) 1.33 (1.25, 1.41) 1.37 (1.25, 1.41) 1.37 (1.25, 1.41) 1.38 (1.25, 1.41) 1.3		, , , , , , , , , , , , , , , , , , , ,	• • • • • • • • • • • • • • • • • • • •	
Larynx	<u>-</u>			
Invasive and In Situ				
Lung and Bronchus 7.73 (7.67, 7.79) 7.81 (7.75, 7.88) 7.74 (7.55, 7.94) Melanoma of the Skin 2.30 (2.27, 2.33) 2.67 (2.63, 2.71) 0.08 (0.06, 0.12) Invasive and In Situ 3.63 (3.59, 3.67) 4.16 (4.12, 4.21) 0.11 (0.09, 0.14) Invasive and In Situ 0.13 (0.12 (0.11, 0.13) 0.12 (0.12, 0.13) 0.12 (0.10, 0.14) Invasive and In Situ 0.13 (0.12, 0.14) 0.14 (0.13, 0.14) 0.14 (0.13, 0.14) 0.14 (0.11, 0.17) Prostate 15.90 (15.81, 15.98) 15.39 (15.30, 15.48) 18.32 (18.03, 18.66) Testis 0.37 (0.36, 0.38) 0.44 (0.43, 0.45) 0.08 (0.07, 0.14) Nriary Bladder(Invasive and In Situ) 3.81 (3.76, 3.85) 4.14 (4.09, 4.19) 1.56 (1.47, 1.66) Nriary Bladder Nervous System 0.67 (0.66, 0.69) 0.74 (0.72, 0.76) 0.33 (0.29, 0.37) Thyroid 0.44 (0.43, 0.45) 0.45 (0.47 (0.45, 0.48) 0.22 (0.20, 0.24) Non-Hodgkin Lymphoma 0.25 (0.24, 0.25) 0.26 (0.25, 0.27) 0.21 (0.19, 0.24) Non-Hodgkin Lymphoma 0.28 (2.24, 2.31) 2.39 (2.35, 2.42) 1.34 (1.27, 1.46) Nriary Bladter Lymphocytic Leukemia 0.14 (0.13, 0.14) 0.15 (0.14, 0.16) 0.07 (0.06, 0.37, 0.37) Acute Myeloid Leukemia 0.42 (0.40, 0.43) 0.43 (0.43) 0.44 (0.42, 0.45) 0.66 (0.60) 0.35 (0.24, 0.35) 0.36 (0.66) 0.69 (0.66) 0.69 (0.66, 0.70) 0.66 (0.87, 0.94) 0.87 (0.66, 0.67) 0.68 (0.66, 0.70) 0.94 (0.87, 1.05) 0.9	•	, , , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , , ,
Melanoma of the Skin         2.30 ( 2.27, 2.33 )         2.67 ( 2.63, 2.71 )         0.08 ( 0.06, 0.12 Invasive and In Situ           Breast         0.12 ( 0.11, 0.13 )         0.12 ( 0.12, 0.13 )         0.12 ( 0.10, 0.13 )         0.12 ( 0.13, 0.14 )         0.14 ( 0.13, 0.14 )         0.14 ( 0.11, 0.17 )         0.15 ( 0.16, 0.18 )         0.12 ( 0.10, 0.18 )         0.14 ( 0.13, 0.14 )         0.14 ( 0.13, 0.14 )         0.14 ( 0.11, 0.17 )         0.15 ( 0.16, 0.18 )         0.15 ( 0.16, 0.18 )         0.15 ( 0.16, 0.18 )         0.15 ( 0.16, 0.18 )         0.15 ( 0.16, 0.18 )         0.15 ( 0.16, 0.18 )         0.15 ( 0.16, 0.18 )         0.15 ( 0.16, 0.18 )         0.15 ( 0.16, 0.18 )         0.15 ( 0.16, 0.18 )         0.15 ( 0.16, 0.18 )         0.15 ( 0.16, 0.18 )         0.14 ( 0.13, 0.14 )         0.14 ( 0.11, 0.17 )         0.15 ( 0.18 )				
Invasive and In Situ 3.63 (3.59, 3.67) 4.16 (4.12, 4.21) 0.11 (0.09, 0.14 Breast 0.12 (0.11, 0.13) 0.12 (0.12, 0.13) 0.12 (0.10, 0.15 Invasive and In Situ 0.13 (0.12, 0.14) 0.14 (0.13, 0.14) 0.14 (0.13, 0.14) 0.14 (0.11, 0.15 Prostate 15.90 (15.81, 15.98) 15.39 (15.30, 15.48) 18.32 (18.03, 18.65 Invasive and In Situ 0.37 (0.36, 0.38) 0.44 (0.43, 0.45) 0.08 (0.07, 0.16 Invasive and In Situ 0.37 (0.36, 0.38) 0.44 (0.43, 0.45) 0.08 (0.07, 0.16 Invasive and In Situ 0.381 (3.76, 3.85) 0.44 (0.43, 0.45) 0.45 (0.47, 1.65 Invasive and In Situ 0.40 (0.40, 0.40) 0.40 (0.40, 0.40) 0.40 (0.40, 0.40) 0.40 (0.40, 0.40) 0.40 (0.40, 0.40) 0.40 (0.40, 0.40) 0.40 (0.40, 0.40) 0.40 (0.40, 0.40) 0.40 (0.40, 0.40) 0.40 (0.40, 0.40) 0.40 (0.40, 0.40) 0.40 (0.40, 0.40) 0.40 (0.45, 0.48) 0.22 (0.20, 0.20, 0.20 (0.20, 0.20 (0.20, 0.20 (0.20, 0.20 (0.20, 0.20 (0.20, 0.20 (0.20, 0.20 (0.20, 0.20 (0.20, 0.20 (0.20, 0.20 (0.20, 0.20 (0.20, 0.20 (0.20 (0.20, 0.20 (0.20	3			
Breast 0.12 ( 0.11,  0.13 ) 0.12 ( 0.12,  0.13 ) 0.12 ( 0.10,  0.15			, , , , , , , , , , , , , , , , , , , ,	
Invasive and In Situ 0.13 (0.12, 0.14) 0.14 (0.13, 0.14) 0.14 (0.11, 0.12)  Prostate 15.90 (15.81, 15.98) 15.39 (15.30, 15.48) 18.32 (18.03, 18.66)  Testis 0.37 (0.36, 0.38) 0.44 (0.43, 0.45) 0.08 (0.07, 0.16)  Urinary Bladder(Invasive and In Situ) 3.81 (3.76, 3.85) 4.14 (4.09, 4.19) 1.56 (1.47, 1.69)  Kidney and Renal Pelvis 1.80 (1.78, 1.83) 1.88 (1.85, 1.91) 1.58 (1.50, 1.66)  Brain and Other Nervous System 0.67 (0.66, 0.69) 0.74 (0.72, 0.76) 0.33 (0.29, 0.37)  Thyroid 0.44 (0.43, 0.45) 0.47 (0.45, 0.48) 0.22 (0.20, 0.26)  Hodgkin Lymphoma 0.25 (0.24, 0.25) 0.26 (0.25, 0.27) 0.21 (0.19, 0.24)  Myeloma 1.51 (1.48, 1.53) 1.59 (1.56, 1.62) 0.94 (0.87, 1.02)  Acute Lymphocytic Leukemia 0.14 (0.13, 0.14) 0.15 (0.14, 0.16) 0.07 (0.06, 0.10)  Chronic Lymphocytic Leukemia 0.58 (0.56, 0.60) 0.43 (0.42 (0.42, 0.45) 0.44 (0.42, 0.45) 0.25 (0.22, 0.22)				
Prostate 15.90 (15.81, 15.98) 15.39 (15.30, 15.48) 18.32 (18.03, 18.62)  Testis 0.37 (0.36, 0.38) 0.44 (0.43, 0.45) 0.08 (0.07, 0.10)  Urinary Bladder(Invasive and In Situ) 3.81 (3.76, 3.85) 4.14 (4.09, 4.19) 1.56 (1.47, 1.65)  Kidney and Renal Pelvis 1.80 (1.78, 1.83) 1.88 (1.85, 1.91) 1.58 (1.50, 1.67)  Brain and Other Nervous System 0.67 (0.66, 0.69) 0.74 (0.72, 0.76) 0.33 (0.29, 0.37)  Thyroid 0.44 (0.43, 0.45) 0.47 (0.45, 0.48) 0.22 (0.20, 0.26)  Hodgkin Lymphoma 0.25 (0.24, 0.25) 0.26 (0.25, 0.27) 0.21 (0.19, 0.24)  Non-Hodgkin Lymphoma 0.72 (0.70, 0.74) 0.68 (0.66, 0.70) 1.09 (1.02, 1.17)  Leukemia 0.72 (0.70, 0.74) 0.68 (0.66, 0.70) 1.09 (1.02, 1.17)  Acute Lymphocytic Leukemia 0.14 (0.13, 0.14) 0.15 (0.14, 0.16) 0.07 (0.06, 0.10)  Chronic Lymphocytic Leukemia 0.58 (0.56, 0.60) 0.62 (0.60, 0.64) 0.34 (0.30, 0.33)  Acute Myeloid Leukemia 0.42 (0.40, 0.43) 0.44 (0.42, 0.45) 0.25 (0.22, 0.22)		, , , , , , , , , , , , , , , , , , , ,		· · · · · · · · · · · · · · · · · · ·
Testis 0.37 ( 0.36,  0.38) 0.44 ( 0.43,  0.45) 0.08 ( 0.07,  0.10 Urinary Bladder(Invasive and In Situ) 3.81 ( 3.76,  3.85) 4.14 ( 4.09,  4.19) 1.56 ( 1.47,  1.69 Nidney and Renal Pelvis 1.80 ( 1.78,  1.83) 1.88 ( 1.85,  1.91) 1.58 ( 1.50,  1.67 Nidney and Other Nervous System 0.67 ( 0.66,  0.69) 0.74 ( 0.72,  0.76) 0.33 ( 0.29,  0.37 Nidney Alberta		, , , , , , , , , , , , , , , , , , , ,		
Urinary Bladder(Invasive and In Situ) 3.81 ( 3.76,  3.85 ) 4.14 ( 4.09,  4.19 ) 1.56 ( 1.47,  1.65 ) Kidney and Renal Pelvis 1.80 ( 1.78,  1.83 ) 1.88 ( 1.85,  1.91 ) 1.58 ( 1.50,  1.65 ) Brain and Other Nervous System 0.67 ( 0.66,  0.69 ) 0.74 ( 0.72,  0.76 ) 0.33 ( 0.29,  0.37 ) Thyroid 0.44 ( 0.43,  0.45 ) 0.45 ) 0.47 ( 0.45,  0.48 ) 0.22 ( 0.20,  0.26 ) Brain Lymphoma 0.25 ( 0.24,  0.25 ) 0.26 ( 0.25,  0.27 ) 0.21 ( 0.19,  0.24 ) Non-Hodgkin Lymphoma 0.72 ( 0.70,  0.74 ) 0.74 ) 0.68 ( 0.66,  0.70 ) 1.09 ( 1.02,  1.15 ) Brain and Other Nervous System 0.72 ( 0.70,  0.74 ) 0.74 ) 0.68 ( 0.66,  0.70 ) 1.09 ( 1.02,  1.15 ) Brain and Other Nervous System 0.72 ( 0.70,  0.25 ) 0.25 ) 0.26 ( 0.25,  0.27 ) 0.26 ) 0.21 ( 0.19,  0.24 ) 0.25 ) 0.26 ( 0.25,  0.27 ) 0.21 ( 0.19,  0.24 ) 0.25 ) 0.26 ( 0.25,  0.27 ) 0.21 ( 0.19,  0.24 ) 0.25 ) 0.26 ( 0.25,  0.27 ) 0.21 ( 0.19,  0.24 ) 0.25 ) 0.26 ( 0.25,  0.27 ) 0.21 ( 0.19,  0.24 ) 0.25 ) 0.26 ( 0.25,  0.27 ) 0.21 ( 0.19,  0.24 ) 0.25 ) 0.26 ( 0.25,  0.27 ) 0.21 ( 0.19,  0.24 ) 0.25 ( 0.29,  0.24 ) 0.25 ( 0.29,  0.25 ) 0.25 ( 0.20,  0.25 ) 0.25 ( 0.20,  0.25 ) 0.25 ( 0.20,  0.25 ) 0.25 ( 0.22,  0.25 ) 0.25 (	Testis			
Kidney and Renal Pelvis       1.80 ( 1.78,  1.83)       1.88 ( 1.85,  1.91)       1.58 ( 1.50,  1.66)         Brain and Other Nervous System       0.67 ( 0.66,  0.69)       0.74 ( 0.72,  0.76)       0.73 ( 0.29,  0.37)         Thyroid       0.44 ( 0.43,  0.45)       0.45)       0.47 ( 0.45,  0.48)       0.22 ( 0.20,  0.24)         Hodgkin Lymphoma       0.25 ( 0.24,  0.25)       0.26 ( 0.25,  0.27)       0.21 ( 0.19,  0.24)         Non-Hodgkin Lymphoma       2.28 ( 2.24,  2.31)       2.39 ( 2.35,  2.42)       1.34 ( 1.27,  1.42)         Myeloma       0.72 ( 0.70,  0.74)       0.68 ( 0.66,  0.70)       1.09 ( 1.02,  1.12)         Leukemia       1.51 ( 1.48,  1.53)       1.53 ( 0.14)       0.15 ( 0.14,  0.16)       0.07 ( 0.06,  0.10)         Acute Lymphocytic Leukemia       0.14 ( 0.13,  0.14)       0.15 ( 0.14,  0.16)       0.07 ( 0.06,  0.10)         Acute Myeloid Leukemia       0.42 ( 0.40,  0.43)       0.43 ( 0.42,  0.45)       0.45 ( 0.42,  0.45)       0.25 ( 0.22,  0.22,  0.22)	Urinary Bladder(Invasive and In Situ)			1.56 ( 1.47, 1.65 )
Brain and Other Nervous System       0.67 ( 0.66, 0.69)       0.74 ( 0.72, 0.76)       0.33 ( 0.29, 0.37)         Thyroid       0.44 ( 0.43, 0.45)       0.47 ( 0.45, 0.48)       0.22 ( 0.20, 0.26)         Hodgkin Lymphoma       0.25 ( 0.24, 0.25)       0.26 ( 0.25, 0.27)       0.21 ( 0.19, 0.24)         Non-Hodgkin Lymphoma       2.28 ( 2.24, 2.31)       2.39 ( 2.35, 2.42)       1.34 ( 1.27, 1.42)         Myeloma       0.72 ( 0.70, 0.74)       0.68 ( 0.66, 0.70)       1.09 ( 1.02, 1.17)         Leukemia       1.51 ( 1.48, 1.53)       1.59 ( 1.56, 1.62)       0.94 ( 0.87, 1.02)         Acute Lymphocytic Leukemia       0.14 ( 0.13, 0.14)       0.15 ( 0.14, 0.16)       0.07 ( 0.06, 0.16)         Chronic Lymphocytic Leukemia       0.58 ( 0.56, 0.60)       0.62 ( 0.60, 0.64)       0.34 ( 0.30, 0.38)         Acute Myeloid Leukemia       0.42 ( 0.40, 0.43)       0.44 ( 0.42, 0.45)       0.45)       0.25 ( 0.22, 0.22)		, , , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , , ,	1.58 ( 1.50, 1.67 )
Hodgkin Lymphoma       0.25 ( 0.24, 0.25)       0.26 ( 0.25, 0.27)       0.21 ( 0.19, 0.24)       0.24         Non-Hodgkin Lymphoma       2.28 ( 2.24, 2.31)       2.39 ( 2.35, 2.42)       1.34 ( 1.27, 1.42)         Myeloma       0.72 ( 0.70, 0.74)       0.68 ( 0.66, 0.70)       1.09 ( 1.02, 1.12)         Leukemia       1.51 ( 1.48, 1.53)       1.59 ( 1.56, 1.62)       0.94 ( 0.87, 1.02)         Acute Lymphocytic Leukemia       0.14 ( 0.13, 0.14)       0.15 ( 0.14, 0.16)       0.07 ( 0.06, 0.16)         Chronic Lymphocytic Leukemia       0.58 ( 0.56, 0.60)       0.62 ( 0.60, 0.64)       0.34 ( 0.30, 0.34)         Acute Myeloid Leukemia       0.42 ( 0.40, 0.43)       0.43 ( 0.42, 0.45)       0.45)       0.25 ( 0.22, 0.22)	-			0.33 ( 0.29, 0.37 )
Non-Hodgkin Lymphoma 2.28 ( 2.24, 2.31) 2.39 ( 2.35, 2.42) 1.34 ( 1.27, 1.42) Myeloma 0.72 ( 0.70, 0.74) 0.68 ( 0.66, 0.70) 1.09 ( 1.02, 1.15) Leukemia 1.51 ( 1.48, 1.53) 1.59 ( 1.56, 1.62) 0.94 ( 0.87, 1.05) Acute Lymphocytic Leukemia 0.14 ( 0.13, 0.14) 0.15 ( 0.14, 0.16) 0.07 ( 0.06, 0.16) Chronic Lymphocytic Leukemia 0.58 ( 0.56, 0.60) 0.62 ( 0.60, 0.64) 0.34 ( 0.30, 0.34) Acute Myeloid Leukemia 0.42 ( 0.40, 0.43) 0.43 ( 0.42, 0.45) 0.25 ( 0.22, 0.25)	Thyroid	0.44 ( 0.43, 0.45 )	0.47 ( 0.45, 0.48 )	0.22 ( 0.20, 0.26 )
Non-Hodgkin Lymphoma       2.28 ( 2.24, 2.31 )       2.39 ( 2.35, 2.42 )       1.34 ( 1.27, 1.42 )         Myeloma       0.72 ( 0.70, 0.74 )       0.68 ( 0.66, 0.70 )       1.09 ( 1.02, 1.12 )         Leukemia       1.51 ( 1.48, 1.53 )       1.59 ( 1.56, 1.62 )       0.94 ( 0.87, 1.02 )         Acute Lymphocytic Leukemia       0.14 ( 0.13, 0.14 )       0.14 )       0.15 ( 0.14, 0.16 )       0.07 ( 0.06, 0.16 )         Chronic Lymphocytic Leukemia       0.58 ( 0.56, 0.60 )       0.62 ( 0.60, 0.64 )       0.64 )       0.34 ( 0.30, 0.38 )         Acute Myeloid Leukemia       0.42 ( 0.40, 0.43 )       0.43 ( 0.42, 0.45 )       0.45 )       0.25 ( 0.22, 0.22 )	Hodgkin Lymphoma	0.25 ( 0.24, 0.25 )	0.26 ( 0.25, 0.27 )	0.21 ( 0.19, 0.24 )
Leukemia       1.51 ( 1.48, 1.53 )       1.59 ( 1.56, 1.62 )       0.94 ( 0.87, 1.02 )         Acute Lymphocytic Leukemia       0.14 ( 0.13, 0.14 )       0.15 ( 0.14, 0.16 )       0.07 ( 0.06, 0.10 )         Chronic Lymphocytic Leukemia       0.58 ( 0.56, 0.60 )       0.62 ( 0.60, 0.64 )       0.34 ( 0.30, 0.39 )         Acute Myeloid Leukemia       0.42 ( 0.40, 0.43 )       0.44 ( 0.42, 0.45 )       0.25 ( 0.22, 0.29 )		2.28 ( 2.24, 2.31 )	2.39 ( 2.35, 2.42 )	1.34 ( 1.27, 1.42 )
Acute Lymphocytic Leukemia       0.14 ( 0.13,  0.14 )       0.15 ( 0.14,  0.16 )       0.07 ( 0.06,  0.10 )         Chronic Lymphocytic Leukemia       0.58 ( 0.56,  0.60 )       0.62 ( 0.60,  0.64 )       0.34 ( 0.30,  0.39 )         Acute Myeloid Leukemia       0.42 ( 0.40,  0.43 )       0.44 ( 0.42,  0.45 )       0.25 ( 0.22,  0.29 )	Myeloma	0.72 ( 0.70, 0.74)	0.68 ( 0.66, 0.70 )	1.09 ( 1.02, 1.17)
Chronic Lymphocytic Leukemia       0.58 ( 0.56,  0.60 )       0.62 ( 0.60,  0.64 )       0.34 ( 0.30,  0.39 )         Acute Myeloid Leukemia       0.42 ( 0.40,  0.43 )       0.44 ( 0.42,  0.45 )       0.25 ( 0.22,  0.29 )	Leukemia	1.51 ( 1.48, 1.53)	1.59 ( 1.56, 1.62)	0.94 ( 0.87, 1.01)
Acute Myeloid Leukemia 0.42 ( 0.40,  0.43 ) 0.44 ( 0.42,  0.45 ) 0.25 ( 0.22,  0.29	Acute Lymphocytic Leukemia	0.14 ( 0.13, 0.14)		0.07 ( 0.06, 0.10 )
Acute Myeloid Leukemia 0.42 (0.40, 0.43) 0.44 (0.42, 0.45) 0.25 (0.22, 0.25)				0.34 ( 0.30, 0.39 )
Chronic Myeloid Leukemia 0.18 ( 0.17, 0.19 ) 0.19 ( 0.18, 0.20 ) 0.14 ( 0.11, 0.13		0.42 ( 0.40, 0.43)	0.44 ( 0.42, 0.45)	0.25 ( 0.22, 0.29 )
	Chronic Myeloid Leukemia	0.18 ( 0.17, 0.19 )	0.19 ( 0.18, 0.20 )	0.14 ( 0.11, 0.17)
Kaposi Sarcoma 0.09 ( 0.08, 0.09 ) 0.08 ( 0.07, 0.09 ) 0.16 ( 0.14, 0.19	Kaposi Sarcoma	0.09 ( 0.08, 0.09)	0.08 ( 0.07, 0.09)	0.16 ( 0.14, 0.19 )
Mesothelioma 0.21 (0.20, 0.22) 0.23 (0.22, 0.24) 0.11 (0.09, 0.14)	Mesothelioma	0.21 ( 0.20, 0.22)	0.23 ( 0.22, 0.24 )	0.11 ( 0.09, 0.14 )

Devcan Version 6.4.0, April 2009, National Cancer Institute (<a href="http://srab.cancer.gov/devcan">http://srab.cancer.gov/devcan</a>).

Source: SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey).

Note: Invasive cancer only unless specified otherwise.

A percent or confidence interval value of 0.00 represents a value that is below 0.005.

#### Table 1.15 - continued

## Lifetime Risk (Percent) of Being Diagnosed with Cancer by Site and Race/Ethnicity

Males, 17 SEER Areas, 2004-2006

	Asian/Pacific Islanders	American Indian/ Alaska Natives <sup>a</sup>	Hispanics <sup>b</sup>
Site	Percent ( 95% C.I. )	Percent ( 95% C.I. )	Percent ( 95% C.I. )
All Sites	38.15 (37.56, 38.75)	27.02 (25.35, 29.09)	40.58 (40.02, 41.15)
Invasive and In Situ	39.12 (38.52, 39.73)	27.97 (26.19, 30.14)	41.46 (40.90, 42.04)
Oral Cavity and Pharynx	1.08 ( 1.01, 1.18 )	0.64 ( 0.47, 1.51 )	0.96 ( 0.88, 1.07)
Esophagus	0.57 ( 0.50, 0.66)	0.58 ( 0.38, 1.48)	0.62 ( 0.56, 0.70 )
Stomach	2.43 ( 2.28, 2.59)	1.67 ( 1.10, 2.82)	1.74 ( 1.62, 1.87)
Colon and Rectum	5.54 ( 5.31, 5.79 )	3.73 ( 3.17, 4.79 )	5.21 ( 5.01, 5.44 )
Invasive and In Situ	5.79 ( 5.56, 6.04)	3.93 ( 3.36, 5.00 )	5.46 ( 5.25, 5.70 )
Liver and Intrahepatic Bile Duct	2.44 ( 2.31, 2.58)	1.23 ( 0.95, 2.12)	1.67 ( 1.58, 1.78)
Pancreas	1.49 ( 1.36, 1.63)	1.01 ( 0.70, 1.95)	1.34 ( 1.25, 1.46 )
Larynx	0.31 ( 0.26, 0.38)	0.18 ( 0.08, 1.08)	0.52 ( 0.47, 0.59 )
Invasive and In Situ	0.34 ( 0.29, 0.42)	0.19 ( 0.09, 1.09)	0.55 ( 0.50, 0.63 )
Lung and Bronchus	6.92 ( 6.67, 7.18)	4.99 ( 4.19, 6.28)	5.17 ( 4.96, 5.41 )
Melanoma of the Skin	0.17 ( 0.14, 0.23)	0.35 ( 0.19, 1.25 )	0.55 ( 0.48, 0.66 )
Invasive and In Situ	0.23 ( 0.19, 0.30 )	0.44 ( 0.26, 1.34)	0.76 ( 0.68, 0.87)
Breast	0.06 ( 0.04, 0.11 )	0.01 ( 0.00, 0.96)	0.08 ( 0.06, 0.13 )
Invasive and In Situ	0.07 ( 0.05, 0.12)	0.01 ( 0.00, 0.96)	0.08 ( 0.06, 0.14 )
Prostate	11.68 (11.36, 12.01)	7.45 ( 6.58, 8.76 )	15.06 (14.76, 15.39)
Testis	0.14 ( 0.12, 0.18 )	0.26 ( 0.19, 1.14 )	0.29 ( 0.27, 0.34 )
Urinary Bladder(Invasive and In Situ)	2.24 ( 2.09, 2.40 )	1.26 ( 0.95, 2.18 )	2.43 ( 2.29, 2.59)
Kidney and Renal Pelvis	1.12 ( 1.03, 1.23)	1.86 ( 1.50, 2.81)	1.94 ( 1.83, 2.07)
Brain and Other Nervous System	0.41 ( 0.35, 0.49 )	0.27 ( 0.16, 1.16)	0.60 ( 0.55, 0.68)
Thyroid	0.43 ( 0.38, 0.51 )	0.27 ( 0.14, 1.17)	0.37 ( 0.32, 0.44)
Hodgkin Lymphoma	0.13 ( 0.10, 0.17 )	0.08 ( 0.04, 1.00)	0.24 ( 0.22, 0.30 )
Non-Hodgkin Lymphoma	1.96 ( 1.82, 2.11 )	1.17 ( 0.85, 2.10 )	2.10 ( 1.98, 2.25 )
Myeloma	0.53 ( 0.47, 0.62 )	0.50 ( 0.31, 1.40 )	0.71 ( 0.64, 0.80 )
Leukemia	1.00 ( 0.91, 1.11 )	0.83 ( 0.60, 1.73 )	1.27 ( 1.16, 1.39)
Acute Lymphocytic Leukemia	0.13 ( 0.11, 0.18 )	0.10 ( 0.04, 1.02)	0.19 ( 0.17, 0.24 )
Chronic Lymphocytic Leukemia	0.18 ( 0.13, 0.25 )	0.26 ( 0.13, 1.16)	0.32 ( 0.26, 0.41 )
Acute Myeloid Leukemia	0.41 ( 0.36, 0.49 )	0.18 ( 0.08, 1.09)	0.38 ( 0.34, 0.45 )
Chronic Myeloid Leukemia	0.14 ( 0.11, 0.19 )	0.17 ( 0.06, 1.08)	0.20 ( 0.15, 0.28 )
Kaposi Sarcoma	0.04 ( 0.03, 0.08 )	0.05 ( 0.02, 0.98 )	0.16 ( 0.13, 0.22 )
Mesothelioma	0.09 ( 0.06, 0.14 )	0.13 ( 0.05, 1.05 )	0.21 ( 0.17, 0.27)

Devcan Version 6.4.0, April 2009, National Cancer Institute (<a href="http://srab.cancer.gov/devcan">http://srab.cancer.gov/devcan</a>).

Source: SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey).

Note: Invasive cancer only unless specified otherwise. Underlying incidence data for American Indian/Alaska Native are based on the CHSDA(Contract Health Service Delivery Area)

Hispanic is not mutually exclusive from whites, blacks, Asian Pacific Islanders, and American Indians/Alaska Natives. Underlying incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry. A percent or confidence interval value of 0.00 represents a value that is below 0.005.

Table 1.16 Lifetime Risk (Percent) of Being Diagnosed with Cancer by Site and Race/Ethnicity

Females, 17 SEER Areas, 2004-2006

	All Races	Whites	Blacks
Site	Percent ( 95% C.I. )	Percent ( 95% C.I. )	Percent ( 95% C.I. )
All Sites	37.63 (37.51, 37.75)	38.52 (38.38, 38.66)	32.92 (32.55, 33.30)
Invasive and In Situ	41.34 (41.21, 41.47)	42.33 (42.19, 42.48)	35.56 (35.17, 35.95)
Oral Cavity and Pharynx	0.66 ( 0.65, 0.68)	0.67 ( 0.65, 0.68)	0.51 ( 0.47, 0.56)
Esophagus	0.25 ( 0.24, 0.26 )	0.25 ( 0.24, 0.26)	0.28 ( 0.25, 0.32 )
Stomach	0.68 ( 0.67, 0.70 )	0.58 ( 0.57, 0.60 )	0.93 ( 0.87, 1.00 )
Colon and Rectum	5.03 ( 4.99, 5.08)	4.98 ( 4.93, 5.03)	5.18 ( 5.03, 5.33 )
Invasive and In Situ	5.27 ( 5.22, 5.31 )	5.20 ( 5.15, 5.25 )	5.48 ( 5.33, 5.64)
Liver and Intrahepatic Bile Duct	0.46 ( 0.44, 0.47)	0.38 ( 0.37, 0.40 )	0.44 ( 0.40, 0.49)
Pancreas	1.39 ( 1.37, 1.42)	1.36 ( 1.34, 1.39)	1.63 ( 1.55, 1.72 )
Larynx	0.14 ( 0.13, 0.15 )	0.15 ( 0.14, 0.16)	0.18 ( 0.15, 0.21 )
Invasive and In Situ	0.15 ( 0.14, 0.16 )	0.16 ( 0.15, 0.17)	0.19 ( 0.16, 0.22)
Lung and Bronchus	6.31 ( 6.25, 6.36 )	6.60 ( 6.54, 6.66)	5.57 ( 5.42, 5.73)
Melanoma of the Skin	1.52 ( 1.50, 1.55)	1.79 ( 1.76, 1.82)	0.09 ( 0.07, 0.11 )
Invasive and In Situ	2.44 ( 2.41, 2.47)	2.82 ( 2.79, 2.86)	0.10 ( 0.08, 0.13)
Breast	12.08 (12.01, 12.15)	12.54 (12.46, 12.61)	10.07 ( 9.88, 10.27)
Invasive and In Situ	14.49 (14.41, 14.56)	14.99 (14.91, 15.07)	12.14 (11.93, 12.35)
Cervix Uteri	0.69 ( 0.67, 0.70 )	0.67 ( 0.65, 0.68)	0.82 ( 0.77, 0.88)
Corpus and Uterus, NOS	2.53 ( 2.50, 2.56 )	2.65 ( 2.62, 2.69)	1.97 ( 1.88, 2.06)
Invasive and In Situ	2.56 ( 2.52, 2.59)	2.68 ( 2.65, 2.72)	2.00 ( 1.91, 2.09)
Ovary <sup>a</sup>	1.40 ( 1.38, 1.42)	1.48 ( 1.46, 1.51)	0.93 ( 0.88, 1.00 )
Urinary Bladder(Invasive and In Situ)	1.18 ( 1.16, 1.21 )	1.26 ( 1.23, 1.28)	0.86 ( 0.80, 0.93 )
Kidney and Renal Pelvis	1.09 ( 1.07, 1.11 )	1.14 ( 1.11, 1.16)	1.00 ( 0.94, 1.07)
Brain and Other Nervous System	0.54 ( 0.53, 0.55)	0.59 ( 0.57, 0.61)	0.30 ( 0.27, 0.34)
Thyroid	1.25 ( 1.23, 1.27 )	1.31 ( 1.29, 1.33 )	0.73 ( 0.68, 0.78)
Hodgkin Lymphoma	0.21 ( 0.21, 0.22)	0.23 ( 0.22, 0.24)	0.19 ( 0.17, 0.21 )
Non-Hodgkin Lymphoma	1.92 ( 1.89, 1.95)	2.02 ( 1.99, 2.06)	1.17 ( 1.10, 1.24)
Myeloma	0.56 ( 0.55, 0.58)	0.51 ( 0.49, 0.52)	1.08 ( 1.01, 1.15 )
Leukemia	1.08 ( 1.06, 1.10 )	1.13 ( 1.10, 1.15)	0.76 ( 0.70, 0.82)
Acute Lymphocytic Leukemia	0.11 ( 0.10, 0.11 )	0.12 ( 0.11, 0.12)	0.07 ( 0.05, 0.09)
Chronic Lymphocytic Leukemia	0.38 ( 0.37, 0.39 )	0.40 ( 0.39, 0.42)	0.22 ( 0.19, 0.26)
Acute Myeloid Leukemia	0.33 ( 0.32, 0.34)	0.33 ( 0.32, 0.35 )	0.26 ( 0.23, 0.29)
Chronic Myeloid Leukemia	0.13 ( 0.12, 0.14)	0.14 ( 0.13, 0.14 )	0.10 ( 0.08, 0.12)
Kaposi Sarcoma	0.01 ( 0.01, 0.02)	0.01 ( 0.01, 0.01)	0.02 ( 0.01, 0.03)
Mesothelioma	0.05 ( 0.05, 0.06 )	0.06 ( 0.05, 0.06 )	0.03 ( 0.02, 0.05)

Devcan Version 6.4.0, April 2009, National Cancer Institute (<a href="http://srab.cancer.gov/devcan">http://srab.cancer.gov/devcan</a>).

Source: SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey). Note: Invasive cancer only unless specified otherwise.

Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.

A percent or confidence interval value of 0.00 represents a value that is below 0.005.

#### Table 1.16 - continued

## Lifetime Risk (Percent) of Being Diagnosed with Cancer by Site and Race/Ethnicity

## Females, 17 SEER Areas, 2004-2006

	Asian/Pacific Islanders	American Indian/ Alaska Natives <sup>a</sup>	Hispanics <sup>b</sup>		
Site	Percent ( 95% C.I. )	Percent ( 95% C.I. )	Percent ( 95% C.I. )		
All Sites	32.43 (31.92, 32.97)	29.15 (27.48, 31.07)	33.64 (33.19, 34.11)		
Invasive and In Situ	35.19 (34.66, 35.74)	30.60 (28.90, 32.56)	36.12 (35.65, 36.60)		
Oral Cavity and Pharynx	0.68 ( 0.61, 0.78)	0.64 ( 0.44, 1.23)	0.44 ( 0.39, 0.51)		
Esophagus	0.23 ( 0.18, 0.31 )	0.42 ( 0.24, 1.02)	0.17 ( 0.14, 0.22)		
Stomach	1.62 ( 1.48, 1.77)	0.89 ( 0.62, 1.52)	1.29 ( 1.19, 1.40 )		
Colon and Rectum	5.03 ( 4.82, 5.27)	4.90 ( 4.19, 5.90 )	4.43 ( 4.25, 4.62)		
Invasive and In Situ	5.23 ( 5.01, 5.46 )	5.10 ( 4.38, 6.11)	4.60 ( 4.42, 4.80 )		
Liver and Intrahepatic Bile Duct	1.33 ( 1.21, 1.47 )	0.86 ( 0.61, 1.48)	0.87 ( 0.80, 0.96 )		
Pancreas	1.48 ( 1.35, 1.63)	1.26 ( 0.93, 1.93)	1.58 ( 1.47, 1.71 )		
Larynx	0.04 ( 0.03, 0.09 )	0.12 ( 0.05, 0.70 )	0.08 ( 0.06, 0.11 )		
Invasive and In Situ	0.05 ( 0.03, 0.10 )	0.12 ( 0.05, 0.70 )	0.08 ( 0.07, 0.12)		
Lung and Bronchus	4.34 ( 4.14, 4.56 )	4.73 ( 4.10, 5.64)	3.49 ( 3.34, 3.65)		
Melanoma of the Skin	0.16 ( 0.13, 0.21 )	0.32 ( 0.19, 0.89)	0.51 ( 0.46, 0.58)		
Invasive and In Situ	0.25 ( 0.20, 0.33 )	0.38 ( 0.23, 0.95)	0.70 ( 0.64, 0.77 )		
Breast	9.36 ( 9.13, 9.60 )	7.21 ( 6.50, 8.19)	9.29 ( 9.08, 9.50 )		
Invasive and In Situ	11.59 (11.34, 11.85)	8.30 ( 7.53, 9.32)	11.00 (10.78, 11.23)		
Cervix Uteri	0.76 ( 0.70, 0.85)	0.66 ( 0.47, 1.25)	1.16 ( 1.10, 1.24)		
Corpus and Uterus, NOS	1.87 ( 1.76, 1.98)	1.77 ( 1.33, 2.53)	2.03 ( 1.94, 2.14 )		
Invasive and In Situ	1.88 ( 1.78, 2.00 )	1.78 ( 1.35, 2.55)	2.05 ( 1.96, 2.16 )		
Ovary <sup>c</sup>	1.11 ( 1.03, 1.21)	1.20 ( 0.91, 1.83)	1.33 ( 1.25, 1.43 )		
Urinary Bladder(Invasive and In Situ)	0.67 ( 0.60, 0.77 )	0.47 ( 0.28, 1.06)	0.77 ( 0.70, 0.85 )		
Kidney and Renal Pelvis	0.66 ( 0.59, 0.76 )	1.56 ( 1.24, 2.22)	1.20 ( 1.12, 1.29 )		
Brain and Other Nervous System	0.36 ( 0.31, 0.44)	0.31 ( 0.19,  0.87)	0.46 ( 0.42, 0.52)		
Thyroid	1.31 ( 1.24, 1.40 )	0.61 ( 0.46, 1.17)	1.24 ( 1.18, 1.32)		
Hodgkin Lymphoma	0.10 ( 0.08, 0.15 )	0.05 ( 0.02, 0.63)	0.21 ( 0.18, 0.26 )		
Non-Hodgkin Lymphoma	1.47 ( 1.35, 1.60 )	1.24 ( 0.92, 1.91)	1.98 ( 1.86, 2.10 )		
Myeloma	0.41 ( 0.35, 0.49)	0.45 ( 0.28, 1.03)	0.62 ( 0.56, 0.69)		
Leukemia	0.78 ( 0.69, 0.88)	0.81 ( 0.47, 1.54)	0.96 ( 0.89, 1.05)		
Acute Lymphocytic Leukemia	0.10 ( 0.08, 0.15 )	0.08 ( 0.04, 0.65)	0.19 ( 0.17, 0.22 )		
Chronic Lymphocytic Leukemia	0.14 ( 0.09, 0.21)	0.26 ( 0.04, 0.99)	0.25 ( 0.20, 0.30 )		
Acute Myeloid Leukemia	0.35 ( 0.30, 0.42 )	0.25 ( 0.14, 0.82)	0.28 ( 0.25, 0.34 )		
Chronic Myeloid Leukemia	0.08 ( 0.06, 0.13 )	0.13 ( 0.05, 0.70 )	0.12 ( 0.10, 0.16 )		
Kaposi Sarcoma	0.01 ( 0.00, 0.05)	0.04 ( 0.00, 0.63 )	0.03 ( 0.01, 0.06 )		
Mesothelioma	0.01 ( 0.01, 0.06)	0.07 ( 0.01, 0.65)	0.07 ( 0.05, 0.11 )		

Devcan Version 6.4.0, April 2009, National Cancer Institute (http://srab.cancer.gov/devcan/).

Source: SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey,
Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey).
Note: Invasive cancer only unless specified otherwise.

Note: Invasive cancer only unless specified otherwise.

Underlying incidence data for American Indian/Alaska Native are based on the CHSDA(Contract Health Service Delivery Area) counties.

Hispanic is not mutually exclusive from whites, blacks, Asian Pacific Islanders, and American Indians/Alaska Natives.
Underlying incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

onderlying incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Region Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.

A percent or confidence interval value of 0.00 represents a value that is below 0.005.

Table 1.17

Lifetime Risk (Percent) of Dying from Cancer by Site and Race/Ethnicity

Both Sexes, Total U.S., 2004-2006

	All Races	Whites	Blacks
Site	Percent ( 95% C.I. )	Percent ( 95% C.I. )	Percent ( 95% C.I. )
All Sites	21.20 (21.17, 21.23)	21.38 (21.35, 21.41)	21.12 (21.03, 21.21)
Oral Cavity and Pharynx	0.28 ( 0.27, 0.28)	0.27 ( 0.27, 0.28)	0.31 ( 0.30, 0.33)
Esophagus	0.49 ( 0.48, 0.49)	0.50 ( 0.49, 0.50)	0.47 ( 0.45, 0.48)
Stomach	0.44 ( 0.44, 0.45)	0.39 ( 0.39, 0.40)	0.69 ( 0.67, 0.71 )
Colon and Rectum	2.11 ( 2.10, 2.12)	2.08 ( 2.07, 2.09)	2.39 ( 2.35, 2.42)
Liver and Intrahepatic Bile Duct	0.57 ( 0.57, 0.58)	0.54 ( 0.53, 0.54)	0.63 ( 0.61, 0.65 )
Pancreas	1.25 ( 1.25, 1.26 )	1.25 ( 1.24, 1.26)	1.31 ( 1.28, 1.34)
Larynx	0.14 ( 0.13, 0.14)	0.13 ( 0.13, 0.13)	0.20 ( 0.19, 0.21 )
Lung and Bronchus	5.97 ( 5.95, 5.99 )	6.11 ( 6.10, 6.13)	5.46 ( 5.41, 5.51)
Melanoma of the Skin	0.29 ( 0.29, 0.30 )	0.33 ( 0.33, 0.34)	0.04 ( 0.04, 0.05 )
Breast	1.50 ( 1.49, 1.51)	1.49 ( 1.48, 1.49)	1.72 ( 1.69, 1.75 )
Urinary Bladder	0.55 ( 0.55, 0.56 )	0.58 ( 0.58, 0.59)	0.38 ( 0.36, 0.39 )
Kidney and Renal Pelvis	0.47 ( 0.46, 0.47)	0.48 ( 0.48, 0.49)	0.37 ( 0.36, 0.39 )
Brain and Other Nervous System	0.43 ( 0.43, 0.44)	0.47 ( 0.46, 0.47)	0.21 ( 0.20, 0.22)
Thyroid	0.06 ( 0.06, 0.06)	0.06 ( 0.06, 0.06)	0.05 ( 0.04, 0.05 )
Hodgkin Lymphoma	0.04 ( 0.04, 0.04)	0.04 ( 0.04, 0.05)	0.03 ( 0.03, 0.04)
Non-Hodgkin Lymphoma	0.81 ( 0.80, 0.82)	0.86 ( 0.85, 0.86)	0.45 ( 0.43, 0.46 )
Myeloma	0.42 ( 0.41, 0.42)	0.39 ( 0.39, 0.40 )	0.63 ( 0.62, 0.65 )
Leukemia	0.84 ( 0.83, 0.85)	0.88 ( 0.87, 0.88)	0.60 ( 0.58, 0.61 )
Acute Lymphocytic Leukemia	0.04 ( 0.04, 0.04)	0.05 ( 0.04, 0.05)	0.03 ( 0.02, 0.03 )
Chronic Lymphocytic Leukemia	0.19 ( 0.19, 0.19 )	0.20 ( 0.19, 0.20 )	0.14 ( 0.13, 0.15)
Acute Myeloid Leukemia	0.31 ( 0.30, 0.31 )	0.32 ( 0.32, 0.33 )	0.20 ( 0.19, 0.21 )
Chronic Myeloid Leukemia	0.04 ( 0.04, 0.04)	0.04 ( 0.04, 0.04)	0.04 ( 0.04, 0.04)

Table 1.17 - continued

## Lifetime Risk (Percent) of Dying from Cancer by Site and Race/Ethnicity

Both Sexes, Total U.S., 2004-2006

	Asian/Pacific Islanders	American Indian/ Alaska Natives <sup>a</sup>	Hispanics <sup>b</sup>
Site	Percent ( 95% C.I. )	Percent ( 95% C.I. )	Percent ( 95% C.I. )
All Sites	18.24 (17.97, 18.51)	16.74 (16.21, 17.29)	17.27 (17.12, 17.43)
Oral Cavity and Pharynx	0.31 ( 0.27, 0.35)	0.25 ( 0.19, 0.36)	0.20 ( 0.19, 0.22)
Esophagus	0.32 ( 0.29, 0.37)	0.40 ( 0.33, 0.52)	0.31 ( 0.29, 0.34)
Stomach	1.20 ( 1.12, 1.28)	0.69 ( 0.56, 0.86)	0.84 ( 0.81, 0.88)
Colon and Rectum	2.03 ( 1.93, 2.14)	1.68 ( 1.50, 1.89)	1.92 ( 1.87, 1.98)
Liver and Intrahepatic Bile Duct	1.47 ( 1.41, 1.55)	0.93 ( 0.81, 1.08)	1.06 ( 1.02, 1.10 )
Pancreas	1.30 ( 1.22, 1.38)	1.01 ( 0.87, 1.20 )	1.21 ( 1.17, 1.26 )
Larynx	0.07 ( 0.05, 0.10 )	0.11 ( 0.07, 0.20)	0.13 ( 0.11, 0.14)
Lung and Bronchus	4.20 ( 4.07, 4.33)	4.07 ( 3.83, 4.35)	3.10 ( 3.03, 3.16)
Melanoma of the Skin	0.06 ( 0.04, 0.08)	0.11 ( 0.07, 0.21)	0.10 ( 0.08, 0.11 )
Breast	0.95 ( 0.89, 1.02)	1.03 ( 0.90, 1.20 )	1.10 ( 1.06, 1.14)
Urinary Bladder	0.36 ( 0.32, 0.42)	0.19 ( 0.13, 0.31)	0.37 ( 0.35, 0.40 )
Kidney and Renal Pelvis	0.29 ( 0.25, 0.33)	0.60 ( 0.50, 0.74)	0.48 ( 0.46, 0.51)
Brain and Other Nervous System	0.28 ( 0.25, 0.33)	0.16 ( 0.12, 0.26)	0.32 ( 0.30, 0.35)
Thyroid	0.11 ( 0.09, 0.14)	0.04 ( 0.02, 0.13)	0.09 ( 0.07, 0.10 )
Hodgkin Lymphoma	0.03 ( 0.02, 0.06)	0.02 ( 0.01, 0.11)	0.05 ( 0.05, 0.06 )
Non-Hodgkin Lymphoma	0.70 ( 0.65, 0.76)	0.55 ( 0.44, 0.70 )	0.72 ( 0.69, 0.75 )
Myeloma	0.26 ( 0.23, 0.29)	0.33 ( 0.27, 0.44)	0.39 ( 0.37, 0.41)
Leukemia	0.59 ( 0.54, 0.64)	0.49 ( 0.40, 0.63)	0.63 ( 0.60, 0.66)
Acute Lymphocytic Leukemia	0.04 ( 0.03, 0.06)	0.04 ( 0.02, 0.12)	0.07 ( 0.06, 0.08)
Chronic Lymphocytic Leukemia	0.06 ( 0.04, 0.10 )	0.11 ( 0.06, 0.23)	0.09 ( 0.07, 0.10 )
Acute Myeloid Leukemia	0.26 ( 0.24, 0.30)	0.16 ( 0.12, 0.26)	0.22 ( 0.20, 0.24)
Chronic Myeloid Leukemia	0.02 ( 0.02, 0.04)	0.04 ( 0.02, 0.13)	0.04 ( 0.03, 0.05)

Devcan Version 6.4.0, April 2009, National Cancer Institute ( $\frac{http://srab.cancer.gov/devcan}{}$ ). Source: NCHS public use data file for the total US.

Underlying mortality data for American Indian/Alaska Native are based on the CHSDA (Contract Health Service Delivery Area) counties.

Hispanic is not mutually exclusive from whites, blacks, Asian Pacific Islanders, and American Indians/Alaska Natives.
Underlying mortality data for Hispanics exclude deaths from the District of Columbia, Minnesota, New Hampshire and North Dakota.

A percent or confidence interval value of 0.00 represents a value that is below 0.005.

Table 1.18

Lifetime Risk (Percent) of Dying from Cancer by Site and Race/Ethnicity

Males, Total U.S., 2004-2006

All Races	Whites	Blacks			
Percent ( 95% C.I. )	Percent ( 95% C.I. )	Percent ( 95% C.I. )			
23.24 (23.19, 23.29)	23.36 (23.31, 23.41)	23.51 (23.37, 23.65)			
0.38 ( 0.37, 0.38 )	0.36 ( 0.36, 0.37)	0.50 ( 0.47, 0.52)			
0.78 ( 0.77, 0.79)	0.81 ( 0.80, 0.81)	0.69 ( 0.67, 0.72)			
0.54 ( 0.53, 0.54)	0.48 ( 0.47, 0.49)	0.83 ( 0.80, 0.86)			
2.19 ( 2.18, 2.21)	2.17 ( 2.16, 2.19)	2.42 ( 2.37, 2.48)			
0.74 ( 0.73, 0.75)	0.69 ( 0.68, 0.70 )	0.86 ( 0.83, 0.89)			
1.26 ( 1.25, 1.27)	1.27 ( 1.26, 1.28)	1.21 ( 1.18, 1.25)			
0.23 ( 0.22, 0.23)	0.21 ( 0.21, 0.22)	0.35 ( 0.34, 0.37)			
7.04 ( 7.01, 7.07)	7.13 ( 7.11, 7.16)	6.91 ( 6.83, 7.00 )			
0.39 ( 0.39, 0.40)	0.45 ( 0.44, 0.46)	0.04 ( 0.04, 0.05)			
0.03 ( 0.03, 0.03)	0.03 ( 0.03, 0.03)	0.04 ( 0.03, 0.05)			
2.80 ( 2.78, 2.82)	2.63 ( 2.61, 2.65)	4.42 ( 4.34, 4.50)			
0.02 ( 0.02, 0.02)	0.02 ( 0.02, 0.02)	0.01 ( 0.01, 0.01)			
0.83 ( 0.82, 0.84)	0.89 ( 0.87, 0.90 )	0.44 ( 0.42, 0.47)			
0.59 ( 0.59, 0.60)	0.62 ( 0.61, 0.63)	0.47 ( 0.44, 0.49)			
0.48 ( 0.48, 0.49)	0.52 ( 0.52, 0.53)	0.23 ( 0.22, 0.25)			
0.05 ( 0.05, 0.05)	0.05 ( 0.05, 0.05)	0.02 ( 0.02, 0.03)			
0.05 ( 0.05, 0.05)	0.05 ( 0.05, 0.05)	0.04 ( 0.03, 0.05)			
0.89 ( 0.88, 0.90 )	0.94 ( 0.93, 0.95)	0.48 ( 0.46, 0.50 )			
0.46 ( 0.45, 0.46)	0.44 ( 0.43, 0.45)	0.64 ( 0.62, 0.67)			
0.99 ( 0.98, 1.00)	1.04 ( 1.03, 1.05)	0.67 ( 0.64, 0.70 )			
0.05 ( 0.04, 0.05)	0.05 ( 0.05, 0.05)	0.03 ( 0.03, 0.04)			
0.23 ( 0.23, 0.24)	0.25 ( 0.24, 0.25)	0.18 ( 0.16, 0.19 )			
0.36 ( 0.35, 0.36)	0.38 ( 0.37, 0.39)	0.21 ( 0.19, 0.22)			
0.05 ( 0.05, 0.05)	0.05 ( 0.05, 0.05)	0.04 ( 0.04, 0.05)			
	Percent ( 95% C.I. )  23.24 (23.19, 23.29) 0.38 ( 0.37, 0.38) 0.78 ( 0.77, 0.79) 0.54 ( 0.53, 0.54) 2.19 ( 2.18, 2.21) 0.74 ( 0.73, 0.75) 1.26 ( 1.25, 1.27) 0.23 ( 0.22, 0.23) 7.04 ( 7.01, 7.07) 0.39 ( 0.39, 0.40) 0.03 ( 0.03, 0.03) 2.80 ( 2.78, 2.82) 0.02 ( 0.02, 0.02) 0.83 ( 0.82, 0.84) 0.59 ( 0.59, 0.60) 0.48 ( 0.48, 0.49) 0.05 ( 0.05, 0.05) 0.05 ( 0.05, 0.05) 0.89 ( 0.88, 0.90) 0.46 ( 0.45, 0.46) 0.99 ( 0.98, 1.00) 0.05 ( 0.04, 0.05) 0.23 ( 0.23, 0.24) 0.36 ( 0.35, 0.36)	Percent ( 95% C.I. ) Percent ( 95% C.I. )  23.24 (23.19, 23.29)			

## Table 1.18 - continued

## Lifetime Risk (Percent) of Dying from Cancer by Site and Race/Ethnicity

## Males, Total U.S., 2004-2006

	Asian/Pacific Islanders	American Indian/ Alaska Natives <sup>a</sup>	Hispanics <sup>b</sup>		
Site	Percent ( 95% C.I. )	Percent ( 95% C.I. )	Percent ( 95% C.I. )		
All Sites	20.62 (20.22, 21.04)	17.78 (16.95, 18.69)	19.71 (19.46, 19.97)		
Oral Cavity and Pharynx	0.40 ( 0.35, 0.47)	0.37 ( 0.27, 0.63)	0.30 ( 0.27, 0.34)		
Esophagus	0.48 ( 0.42, 0.56)	0.62 ( 0.49, 0.89)	0.51 ( 0.47, 0.55)		
Stomach	1.42 ( 1.31, 1.55)	0.98 ( 0.75, 1.34)	1.01 ( 0.95, 1.08)		
Colon and Rectum	2.12 ( 1.97, 2.28)	1.89 ( 1.61, 2.30 )	2.09 ( 1.99, 2.19 )		
Liver and Intrahepatic Bile Duct	1.84 ( 1.74, 1.95)	0.97 ( 0.81, 1.27)	1.34 ( 1.28, 1.41 )		
Pancreas	1.25 ( 1.15, 1.37)	1.01 ( 0.80, 1.35)	1.15 ( 1.09, 1.22)		
Larynx	0.13 ( 0.09, 0.19)	0.19 ( 0.12, 0.43)	0.25 ( 0.22, 0.30 )		
Lung and Bronchus	5.45 ( 5.25, 5.66)	4.48 ( 4.08, 4.99)	4.16 ( 4.05, 4.28)		
Melanoma of the Skin	0.05 ( 0.04, 0.10 )	0.15 ( 0.09, 0.39)	0.11 ( 0.09, 0.14)		
Breast	0.01 ( 0.01, 0.05)	0.00 ( 0.00, 0.25)	0.01 ( 0.01, 0.03)		
Prostate	2.35 ( 2.16, 2.56)	2.27 ( 1.88, 2.78)	3.07 ( 2.94, 3.21)		
Testis	0.01 ( 0.01, 0.05)	0.01 ( 0.00, 0.25)	0.02 ( 0.02, 0.04)		
Urinary Bladder	0.49 ( 0.42, 0.59)	0.24 ( 0.16, 0.49)	0.56 ( 0.51, 0.62)		
Kidney and Renal Pelvis	0.37 ( 0.31, 0.44)	0.78 ( 0.63, 1.06)	0.64 ( 0.59, 0.69)		
Brain and Other Nervous System	0.32 ( 0.27, 0.39)	0.23 ( 0.16, 0.47)	0.34 ( 0.31, 0.38)		
Thyroid	0.08 ( 0.05, 0.13)	0.02 ( 0.00, 0.26)	0.08 ( 0.06, 0.11 )		
Hodgkin Lymphoma	0.04 ( 0.02, 0.09)	0.02 ( 0.01, 0.26)	0.06 ( 0.05, 0.08)		
Non-Hodgkin Lymphoma	0.79 ( 0.71, 0.89)	0.57 ( 0.40, 0.89)	0.77 ( 0.72, 0.82)		
Myeloma	0.29 ( 0.25, 0.35)	0.35 ( 0.26, 0.60 )	0.41 ( 0.38, 0.45)		
Leukemia	0.76 ( 0.68, 0.85)	0.59 ( 0.42, 0.89)	0.73 ( 0.68, 0.79 )		
Acute Lymphocytic Leukemia	0.04 ( 0.03, 0.08)	0.05 ( 0.03, 0.29)	0.07 ( 0.06, 0.09)		
Chronic Lymphocytic Leukemia	0.09 ( 0.06, 0.15 )	0.15 ( 0.05, 0.45 )	0.10 ( 0.08, 0.13)		
Acute Myeloid Leukemia	0.34 ( 0.29, 0.41 )	0.17 ( 0.11, 0.40 )	0.27 ( 0.24, 0.30 )		
Chronic Myeloid Leukemia	0.03 ( 0.02, 0.07)	0.07 ( 0.03, 0.31 )	0.04 ( 0.03, 0.06)		

Devcan Version 6.4.0, April 2009, National Cancer Institute ( $\frac{http://srab.cancer.gov/devcan}{}$ ). Source: NCHS public use data file for the total US.

Underlying mortality data for American Indian/Alaska Native are based on the CHSDA (Contract Health Service Delivery Area) counties.

Hispanic is not mutually exclusive from whites, blacks, Asian Pacific Islanders, and American Indians/Alaska Natives.
Underlying mortality data for Hispanics exclude deaths from the District of Columbia, Minnesota, New Hampshire and North Dakota.

A percent or confidence interval value of 0.00 represents a value that is below 0.005.

Table 1.19

Lifetime Risk (Percent) of Dying from Cancer by Site and Race/Ethnicity

Females, Total U.S., 2004-2006

	All Races	Whites	Blacks		
Site	Percent ( 95% C.I. )	Percent ( 95% C.I. )	Percent ( 95% C.I. )		
All Sites	19.65 (19.61, 19.69)	19.87 (19.83, 19.91)	19.24 (19.12, 19.36)		
Oral Cavity and Pharynx	0.18 ( 0.18, 0.19 )	0.19 ( 0.18, 0.19 )	0.15 ( 0.14, 0.17)		
Esophagus	0.22 ( 0.21, 0.22)	0.21 ( 0.21, 0.22)	0.26 ( 0.25, 0.28)		
Stomach	0.36 ( 0.35, 0.36 )	0.31 ( 0.31, 0.32)	0.58 ( 0.55, 0.60 )		
Colon and Rectum	2.04 ( 2.02, 2.05)	2.00 ( 1.99, 2.02)	2.37 ( 2.32, 2.42)		
Liver and Intrahepatic Bile Duct	0.41 ( 0.41, 0.42)	0.39 ( 0.38, 0.40 )	0.42 ( 0.40, 0.44)		
Pancreas	1.25 ( 1.24, 1.26 )	1.23 ( 1.22, 1.25 )	1.39 ( 1.36, 1.43)		
Larynx	0.06 ( 0.05, 0.06)	0.06 ( 0.05, 0.06)	0.07 ( 0.06, 0.08)		
Lung and Bronchus	5.04 ( 5.02, 5.06 )	5.23 ( 5.21, 5.25 )	4.20 ( 4.14, 4.27)		
Melanoma of the Skin	0.20 ( 0.20, 0.21 )	0.23 ( 0.23, 0.24 )	0.04 ( 0.04, 0.05)		
Breast	2.84 ( 2.82, 2.85)	2.82 ( 2.81, 2.84)	3.20 ( 3.15, 3.25)		
Cervix Uteri	0.23 ( 0.23, 0.24 )	0.21 ( 0.21, 0.22)	0.41 ( 0.39, 0.43)		
Corpus and Uterus, NOS	0.52 ( 0.52, 0.53 )	0.50 ( 0.49, 0.51 )	0.77 ( 0.75, 0.80 )		
Ovary	1.05 ( 1.04, 1.06)	1.10 ( 1.09, 1.11 )	0.77 ( 0.74, 0.79)		
Urinary Bladder	0.33 ( 0.32, 0.33 )	0.33 ( 0.32, 0.34 )	0.33 ( 0.31, 0.35 )		
Kidney and Renal Pelvis	0.35 ( 0.34, 0.36 )	0.36 ( 0.36, 0.37 )	0.29 ( 0.27, 0.31)		
Brain and Other Nervous System	0.38 ( 0.38, 0.39 )	0.42 ( 0.41, 0.42)	0.19 ( 0.18, 0.21 )		
Thyroid	0.07 ( 0.06, 0.07)	0.06 ( 0.06, 0.07)	0.07 ( 0.06, 0.07)		
Hodgkin Lymphoma	0.04 ( 0.04, 0.04)	0.04 ( 0.04, 0.04)	0.03 ( 0.02, 0.03)		
Non-Hodgkin Lymphoma	0.74 ( 0.74, 0.75 )	0.79 ( 0.78, 0.80 )	0.42 ( 0.40, 0.44)		
Myeloma	0.38 ( 0.38, 0.39 )	0.36 ( 0.35, 0.36 )	0.63 ( 0.60, 0.65)		
Leukemia	0.71 ( 0.70, 0.72)	0.74 ( 0.73, 0.75)	0.53 ( 0.51, 0.56)		
Acute Lymphocytic Leukemia	0.04 ( 0.04, 0.04)	0.04 ( 0.04, 0.04)	0.02 ( 0.02, 0.03)		
Chronic Lymphocytic Leukemia	0.15 ( 0.15, 0.15)	0.16 ( 0.15, 0.16)	0.11 ( 0.10, 0.12)		
Acute Myeloid Leukemia	0.26 ( 0.26, 0.27)	0.27 ( 0.27, 0.28)	0.19 ( 0.18, 0.20 )		
Chronic Myeloid Leukemia	0.04 ( 0.04, 0.04)	0.04 ( 0.04, 0.04)	0.04 ( 0.03, 0.04)		

## Table 1.19 - continued

## Lifetime Risk (Percent) of Dying from Cancer by Site and Race/Ethnicity

Females, Total U.S., 2004-2006

	Asian/PacificIslanders	American Indian/ Alaska Natives <sup>a</sup>	Hispanics <sup>b</sup>			
Site	Percent ( 95% C.I. )	Percent ( 95% C.I. )	Percent ( 95% C.I. )			
All Sites	16.26 (15.90, 16.63)	16.09 (15.39, 16.84)	15.50 (15.31, 15.71)			
Oral Cavity and Pharynx	0.23 ( 0.19, 0.30 )	0.14 ( 0.08, 0.30 )	0.12 ( 0.10, 0.15 )			
Esophagus	0.19 ( 0.14, 0.25)	0.21 ( 0.14, 0.37)	0.14 ( 0.12, 0.17)			
Stomach	1.01 ( 0.91, 1.13)	0.45 ( 0.31, 0.68)	0.71 ( 0.66, 0.76)			
Colon and Rectum	1.96 ( 1.81, 2.12)	1.50 ( 1.28, 1.80 )	1.81 ( 1.73, 1.89 )			
Liver and Intrahepatic Bile Duct	1.16 ( 1.07, 1.28)	0.88 ( 0.73, 1.12)	0.81 ( 0.76, 0.86)			
Pancreas	1.34 ( 1.23, 1.47)	1.04 ( 0.85, 1.31 )	1.27 ( 1.20, 1.33)			
Larynx	0.02 ( 0.01, 0.06)	0.03 ( 0.01, 0.18)	0.02 ( 0.02, 0.04)			
Lung and Bronchus	3.16 ( 3.01, 3.33)	3.75 ( 3.44, 4.13)	2.22 ( 2.14, 2.30 )			
Melanoma of the Skin	0.06 ( 0.04, 0.10)	0.08 ( 0.04, 0.23 )	0.08 ( 0.07, 0.10 )			
Breast	1.76 ( 1.64, 1.89)	1.98 ( 1.74, 2.29)	2.06 ( 1.99, 2.14)			
Cervix Uteri	0.27 ( 0.23, 0.33)	0.27 ( 0.20, 0.44)	0.36 ( 0.33, 0.39)			
Corpus and Uterus, NOS	0.34 ( 0.30, 0.40)	0.38 ( 0.25, 0.60 )	0.44 ( 0.41, 0.48)			
Ovary	0.69 ( 0.63, 0.77)	0.81 ( 0.63, 1.08)	0.85 ( 0.80, 0.90 )			
Urinary Bladder	0.25 ( 0.20, 0.33)	0.14 ( 0.06, 0.33 )	0.23 ( 0.20, 0.26 )			
Kidney and Renal Pelvis	0.21 ( 0.18, 0.27)	0.43 ( 0.31, 0.64)	0.35 ( 0.32, 0.39 )			
Brain and Other Nervous System	0.25 ( 0.20, 0.32)	0.10 ( 0.06, 0.25 )	0.31 ( 0.28, 0.34)			
Thyroid	0.13 ( 0.10, 0.19)	0.06 ( 0.02, 0.21 )	0.10 ( 0.08, 0.12)			
Hodgkin Lymphoma	0.03 ( 0.02, 0.07)	0.01 ( 0.00, 0.16 )	0.04 ( 0.04, 0.06)			
Non-Hodgkin Lymphoma	0.63 ( 0.56, 0.72)	0.55 ( 0.41, 0.77 )	0.67 ( 0.63, 0.72)			
Myeloma	0.23 ( 0.20, 0.28 )	0.31 ( 0.23, 0.49)	0.37 ( 0.34, 0.41)			
Leukemia	0.45 ( 0.40, 0.52 )	0.40 ( 0.30, 0.60 )	0.55 ( 0.51, 0.59 )			
Acute Lymphocytic Leukemia	0.04 ( 0.03, 0.07)	0.02 ( 0.01, 0.17)	0.07 ( 0.06, 0.08)			
Chronic Lymphocytic Leukemia	0.04 ( 0.02, 0.09)	0.09 ( 0.04, 0.25)	0.08 ( 0.06, 0.10 )			
Acute Myeloid Leukemia	0.20 ( 0.17, 0.26)	0.15 ( 0.09, 0.31)	0.18 ( 0.16, 0.21)			
Chronic Myeloid Leukemia	0.01 ( 0.01, 0.05)	0.01 ( 0.00, 0.17)	0.04 ( 0.03, 0.05)			

Devcan Version 6.4.0, April 2009, National Cancer Institute ( $\frac{http://srab.cancer.gov/devcan}{}$ ). Source: NCHS public use data file for the total US.

Underlying mortality data for American Indian/Alaska Native are based on the CHSDA (Contract Health Service Delivery Area) counties.

Hispanic is not mutually exclusive from whites, blacks, Asian Pacific Islanders, and American Indians/Alaska Natives.
Underlying mortality data for Hispanics exclude deaths from the District of Columbia, Minnesota, New Hampshire and North Dakota.

A percent or confidence interval value of 0.00 represents a value that is below 0.005.

Table 1.20 U.S. and SEER Death Rates by Primary Cancer Site and Race/Ethnicity, 2002-2006

Total United States<sup>a</sup>

SEER 17 Areasab

Site		Total	White	Black	AI/AN <sup>c</sup>	API <sup>d</sup>	Hisp <sup>e</sup>	W-NHisp <sup>e</sup>	Total	White	Black	AI/AN <sup>c</sup>	API <sup>d</sup>	Hisp <sup>e</sup>	W-NHisp <sup>e</sup>
All Sites	Both Sexes Male Female	186.9 229.9 157.8	185.4 226.7 157.3	229.0 304.2 183.7	157.8 183.3 140.1	111.8 135.4 95.1	124.7 154.7 103.9	189.8 231.8 161.2	180.3 218.3 154.8	181.6 218.7 156.8	230.4 297.4 189.2	139.9 160.4 124.6	119.7 146.3 100.7	125.6 153.2 106.7	188.1 226.1 162.7
Oral Cavity & Pharynx	Both Sexes Male Female	2.6 3.9 1.5	2.5 3.7 1.4	3.6 6.5 1.6	2.4 3.6 1.5	2.1 3.2 1.3	1.5 2.5 0.8	2.5 3.8 1.5	2.6 3.9 1.5	2.5 3.8 1.5	3.6 6.2 1.7	2.4 3.1 1.8	2.4 3.4 1.5	1.5 2.4 0.8	2.6 3.9 1.6
Esophagus	Both Sexes Male Female	4.4 7.8 1.7	4.4 7.9 1.6	5.4 9.2 2.7	3.9 6.7 1.7	1.8 3.1 0.9	2.3 4.1 0.9	4.6 8.1 1.7	4.1 7.1 1.6	4.2 7.4 1.7	4.7 8.2 2.2	4.1 6.7 2.1	1.9 3.3 0.9	2.3 4.2 0.9	4.5 7.8 1.7
Stomach	Both Sexes Male Female	4.0 5.5 2.8	3.5 4.8 2.4	7.6 11.0 5.3	6.7 9.8 4.6	7.4 9.6 5.8	6.3 8.3 4.8	3.2 4.5 2.2	4.5 6.2 3.3	3.9 5.3 2.8	7.8 11.2 5.5	7.2 10.8 4.7	7.7 10.1 5.9	6.8 9.0 5.3	3.4 4.8 2.4
Colon & Rectum	Both Sexes Male Female	18.2 21.9 15.4	17.7 21.4 14.9	25.4 31.4 21.6	16.4 20.0 13.7	11.6 13.8 10.0	13.0 16.1 10.7	18.0 21.7 15.1	17.6 21.0 15.0	17.3 20.7 14.7	25.7 30.5 22.6	16.6 19.4 14.3	12.6 15.2 10.6	12.5 15.8 10.1	17.8 21.2 15.2
Liver & Intrahepatic Bile Duct	Both Sexes Male Female	5.1 7.5 3.2	4.7 6.8 2.9	6.8 10.8 3.9	8.3 10.3 6.5	10.3 15.0 6.6	7.9 11.3 5.1	4.4 6.4 2.8	5.7 8.2 3.6	5.0 7.1 3.2	7.2 11.4 4.0	8.3 10.3 6.5	10.5 15.2 6.7	7.8 10.9 5.3	4.6 6.5 2.9
Pancreas	Both Sexes Male Female	10.7 12.3 9.3	10.5 12.2 9.1	13.7 15.4 12.4	8.4 9.1 7.8	7.4 8.1 7.0	8.3 9.1 7.5	10.6 12.4 9.2	10.7 12.1 9.5	10.6 12.2 9.3	14.1 15.1 13.2	7.9 9.2 6.9	8.0 8.8 7.4	8.8 9.0 8.4	10.8 12.5 9.4
Larynx	Both Sexes Male Female	1.3 2.3 0.5	1.2 2.1 0.5	2.3 4.7 0.7	1.0 1.9	0.4 0.7 0.1	0.9 1.9 0.2	1.2 2.1 0.5	1.1 2.1 0.4	1.1 2.0 0.4	2.3 4.6 0.8	- - -	0.4 0.8 -	0.8 1.7 0.1	1.1 2.0 0.5
Lung & Bronchus	Both Sexes Male Female	53.4 70.5 40.9	53.8 69.9 41.9	59.9 90.1 40.0	39.7 48.0 33.5	26.2 36.9 18.2	22.7 33.9 14.4	56.4 72.9 44.2	48.6 62.4 38.5	49.6 62.5 40.2	60.0 87.2 41.8	30.6 37.6 25.2	28.0 40.1 19.0	21.5 30.9 14.5	53.2 66.4 43.6
Melanoma of the Skin	Both Sexes Male Female	2.7 3.9 1.7	3.0 4.4 2.0	0.4 0.5 0.4	1.2 1.6 0.9	0.4 0.5 0.3	0.7 0.9 0.6	3.3 4.8 2.1	2.6 3.9 1.6	3.0 4.5 1.9	0.4 0.5 0.3	1.1 - -	0.4 0.5 0.3	0.8 1.0 0.6	3.4 5.1 2.1
Breast	Female	24.5	23.9	33.0	17.6	12.5	15.5	24.5	24.4	24.4	34.2	15.6	14.0	15.2	25.5

US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention. Rates are per 100,000

and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

The SEER 17 areas are San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey.

Rates for American Indian/Alaska Native (AI/AN) are based on the CHSDA(Contract Health Service Delivery Area) counties.

Asian/Pacific Islander.

Hispanic (Hisp) and White Non-Hispanic (W-NHisp) are not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Mortality data for Hispanics and White Non-Hispanics do not include cases from the District of Columbia, Minnesota, New Hampshire, and North Dakota.

Statistic could not be calculated due to less than 16 cases in the time interval.

#### Table 1.20 - continued US AND SEER DEATH RATES BY PRIMARY CANCER SITE AND RACE/ETHNICITY, 2002-2006

Total United States<sup>a</sup>

SEER 17 Areasab

Site		Total	White	Black	AI/AN°	API <sup>d</sup>	Hisp <sup>e</sup>	W-NHisp <sup>e</sup>	Total	White	Black	AI/AN <sup>c</sup>	API <sup>d</sup>	Hisp <sup>e</sup>	W-NHisp <sup>e</sup>
Cervix	Female	2.5	2.2	4.6	3.4	2.2	3.1	2.1	2.4	2.2	4.1	2.5	2.2	3.2	2.0
Corpus & Uterus, NOS	Female	4.1	3.9	7.2	3.0	2.5	3.1	3.9	4.2	4.0	7.1	2.7	2.7	3.1	4.1
Ovary	Female	8.8	9.1	7.3	6.8	4.9	6.0	9.3	8.8	9.3	7.5	7.6	5.2	6.4	9.7
Prostate	Male	25.6	23.6	56.3	20.0	10.6	19.6	23.7	25.2	24.4	53.1	15.7	11.7	20.2	24.7
Testis	Male	0.3	0.3	0.2	-	0.1	0.3	0.3	0.3	0.3	0.2	-	0.1	0.3	0.3
Urinary Bladder	Both Sexes Male Female	4.3 7.5 2.2	4.5 7.9 2.2	3.7 5.5 2.8	1.8 2.7 1.1	1.7 2.7 1.0	2.4 3.9 1.3	4.7 8.2 2.3	4.2 7.3 2.2	4.5 7.9 2.2	3.9 5.4 3.1	1.2 - -	1.8 3.0 1.0	2.5 3.9 1.5	4.7 8.3 2.3
Kidney & Renal Pelvis	Both Sexes Male Female	4.1 6.0 2.7	4.2 6.1 2.8	4.0 6.0 2.7	6.3 9.0 4.2	1.7 2.4 1.2	3.6 5.2 2.4	4.2 6.1 2.8	3.9 5.6 2.6	4.1 5.9 2.7	4.0 6.0 2.6	5.4 8.1 3.3	1.8 2.6 1.2	3.7 5.1 2.5	4.1 6.0 2.7
Brain & Nervous System	Both Sexes Male Female	4.3 5.3 3.5	4.7 5.7 3.8	2.5 3.2 2.1	2.0 2.9 1.3	2.0 2.5 1.6	2.8 3.3 2.4	4.9 5.9 4.0	4.3 5.2 3.5	4.7 5.7 3.8	2.6 3.4 2.0	1.6 2.6	2.1 2.7 1.7	3.0 3.5 2.5	5.0 6.1 4.1
Thyroid	Both Sexes Male Female	0.5 0.5 0.5	0.5 0.5 0.5	0.5 0.3 0.5	0.4 - -	0.6 0.4 0.7	0.6 0.6 0.6	0.5 0.5 0.5	0.5 0.5 0.5	0.5 0.5 0.5	0.4 0.3 0.5	- - -	0.6 0.5 0.8	0.6 0.5 0.7	0.5 0.5 0.5
Hodgkin Lymphoma	Both Sexes Male Female	0.4 0.5 0.4	0.5 0.6 0.4	0.4 0.5 0.3	0.3	0.2 0.3 0.2	0.4 0.5 0.3	0.5 0.6 0.4	0.5 0.6 0.4	0.5 0.6 0.4	0.4 0.6 0.3	- - -	0.2 0.3 0.2	0.4 0.5 0.3	0.5 0.6 0.4
Non-Hodgkin Lymphoma	Both Sexes Male Female	7.1 9.0 5.7	7.4 9.3 5.9	5.0 6.3 4.1	4.8 5.2 4.4	4.4 5.4 3.7	5.4 6.4 4.6	7.5 9.5 6.0	7.0 8.9 5.6	7.4 9.4 5.9	5.2 6.4 4.2	3.5 3.2 3.7	4.8 5.9 4.0	5.5 6.6 4.6	7.6 9.7 6.0
Myeloma	Both Sexes Male Female	3.6 4.5 3.0	3.4 4.3 2.7	6.8 8.2 5.8	3.6 4.3 3.3	1.6 1.9 1.5	2.9 3.4 2.6	3.4 4.3 2.7	3.5 4.4 2.9	3.4 4.3 2.7	7.0 8.4 6.2	2.8 3.0 2.7	1.9 2.2 1.7	3.2 3.7 2.8	3.4 4.3 2.7
Leukemia	Both Sexes Male Female	7.3 9.8 5.5	7.5 10.1 5.7	6.4 8.5 5.1	4.7 5.9 3.6	3.8 5.0 2.9	4.9 6.1 4.0	7.6 10.3 5.7	7.1 9.5 5.3	7.4 9.9 5.6	6.5 8.9 5.0	4.0 5.4 2.8	4.1 5.2 3.1	4.9 6.2 4.0	7.6 10.2 5.7

US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention. Rates are per 100,000

and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

The SEER 17 areas are San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey.

Rates for American Indian/Alaska Native (AI/AN) are based on the CHSDA(Contract Health Service Delivery Area) counties.

Asian/Pacific Islander.

Hispanic (Hisp) and White Non-Hispanic (W-NHisp) are not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Mortality data for Hispanics and White Non-Hispanics do not include cases from the District of Columbia, Minnesota, New Hampshire, and North Dakota.

Statistic could not be calculated due to less than 16 cases in the time interval.

Table 1.21 U.S. Prevalence Counts, Invasive Cancers Only, January 1, 2006<sup>a</sup> Using Different Tumor Inclusion Criteriab

5-Year Limited Duration

31-year Limited Duration

<u>Site</u>	Sex	lst Invasive Tumor Ever <sup>c</sup>	1st Per Site in Previous 31 Years <sup>d</sup>	lst Per Site in Previous 5 Years <sup>e</sup>	1st Invasive Tumor Ever <sup>c</sup>	1st Per Site in Previous 31 Years <sup>d</sup>
All Sites	Both Sexes Male	4,077,488 2,080,191	4,154,826 2,108,988	4,519,388 2,284,134	10,831,324 5,056,502	11,027,782 5,116,252
	Female	1,997,297	2,045,838	2,235,254	5,774,822	5,911,530
Oral Cavity &	Both Sexes	88,149	100,786	104,275	229,332	251,715
Pharynx	Male	59,730	67,492	69,596	148,389	161,197
-	Female	28,419	33,294	34,679	80,943	90,518
Esophagus	Both Sexes	18,231	21,903	21,915	27,407	32,201
	Male	13,976	16,810	16,810	20,647	24,147
	Female	4,255	5,093	5,105	6,760	8,054
Stomach	Both Sexes	31,763	38,156	38,279	62,024	71,142
	Male	19,112	22,988	23,004	35,526	40,842
	Female	12,651	15,168	15,275	26,498	30,300
Colon & Rectum	Both Sexes	410,878	473,926	481,943	1,063,937	1,184,011
	Male	207,419	239,595	243,087	522,508	578,045
	Female	203,459	234,331	238,856	541,429	605,966
Liver &	Both Sexes	18,570	20,914	20,914	24,536	27,242
Intrahepatic	Male	13,017	14,616	14,616	16,411	18,199
Bile Duct	Female	5,553	6,298	6,298	8,125	9,043
Pancreas	Both Sexes	23,089	27,435	27,446	30,784	35,776
	Male	11,266	13,503	13,514	14,813	17,277
	Female	11,823	13,932	13,932	15,971	18,499
Larynx	Both Sexes	30,174	35,697	35,972	88,041	97,768
_	Male	24,109	28,434	28,686	70,364	77,761
	Female	6,065	7,263	7,286	17,677	20,007
Lung & Bronchus	Both Sexes	209,050	260,966	266,149	354,138	426,254
_	Male	98,835	124,555	126,720	165,363	199,378
	Female	110,215	136,411	139,429	188,775	226,876
Melanoma of	Both Sexes	233,089	260,265	269,851	714,792	765,882
the Skin	Male	122,409	139,106	145,296	353,155	381,997
	Female	110,680	121,159	124,555	361,637	383,885
Breast	Female	801,058	861,011	905,789	2,442,116	2,589,991
Cervix	Female	39,451	41,186	41,269	192,354	197,813
Corpus & Uterus,	Female	146,768	165,629	165,699	518,293	563,072

U.S. 2006 cancer prevalence counts are based on 2006 cancer prevalence proportions from the SEER 9 registries and 1/1/2006 U.S. population estimates based on the average of 2005 and 2006 population estimates from the U.S. Bureau of the Census.

b

d

<sup>(</sup>b) Prevalence estimates are ambiguous for those with multiple cancers, unless the tumor inclusion criteria are understood. Depending on the application, different inclusion criteria may be appropriate. This table provides three different methods of tumor inclusion:

<sup>(</sup>c) First invasive tumor ever
(d) First invasive tumor for each cancer site diagnosed during the previous 31 years (1975-2005)
(e) First invasive tumor for each cancer site diagnosed during the previous 5 years (2001-2005)
For definitions (d) and (e) all sites is treated as a separate cancer "site".

Consider a woman who had three invasive cancers: Melanoma in 1981; Breast cancer in 2001;

Melanoma in 2002.

In method (c) the melanoma is the woman's first cancer, and is counted for the melanoma and all sites 31-year limited duration prevalence. For 5-year limited duration prevalence, the woman is not counted at all since her first cancer occurred more than 5 years prior to 1/1/2006. In method (d) the 1981 melanoma is counted for the melanoma and all sites 31-year limited duration prevalence. The 2001 breast cancer is counted for the breast 5-year and 31-year limited duration prevalence.

In method (e) the 2001 breast cancer is counted for the breast cancer and all sites 5-year limited duration prevalence. The 2002 melanoma is counted for 5-year limited duration prevalence for melanoma.

Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.

## Table 1.21 - continued U.S. Prevalence Counts, Invasive Cancers Only, January 1, 2006<sup>a</sup> Using Different Tumor Inclusion Criteriab

5-Year Limited Duration

31-year Limited Duration

<u>Site</u>	Sex	1st Invasive Tumor Ever <sup>c</sup>	1st Per Site in Previous 31 Years <sup>d</sup>	lst Per Site in Previous 5 Years <sup>e</sup>	lst Invasive Tumor Ever <sup>c</sup>	1st Per Site in Previous 31 Years <sup>d</sup>
Prostate	Male	930,125	1,003,839	1,003,911	2,174,982	2,320,295
Testis	Male	39,842	40,565	41,075	172,591	174,841
Urinary Bladder	Both Sexes	188,227	231,571	235,384	508,818	586,875
	Male	140,439	173,578	176,622	376,871	433,882
	Female	47,788	57,993	58,762	131,947	152,993
Kidney & Renal Pelvis	Both Sexes Male Female	111,278 66,844 44,434	134,837 81,868 52,969	135,889 82,613 53,276	254,925 150,001 104,924	295,615 175,152 120,463
Brain & Nervous System	Both Sexes Male Female	39,632 21,221 18,411	41,635 22,407 19,228	41,953 22,579 19,374	108,661 58,031 50,630	111,711 59,668 52,043
Thyroid	Both Sexes	120,479	130,868	131,194	367,333	387,569
	Male	26,876	30,552	30,586	81,388	87,358
	Female	93,603	100,316	100,608	285,945	300,211
Hodgkin Lymphoma	Both Sexes	35,015	36,820	36,831	145,147	148,461
	Male	18,420	19,309	19,320	74,925	76,593
	Female	16,595	17,511	17,511	70,222	71,868
Non-Hodgkin Lymphoma	Both Sexes Male Female	178,216 92,687 85,529	206,582 108,381 98,201	208,073 109,127 98,946	407,962 211,075 196,887	452,723 233,951 218,772
Myeloma	Both Sexes	39,615	45,364	45,401	58,905	66,529
	Male	21,534	24,854	24,878	32,370	36,858
	Female	18,081	20,510	20,523	26,535	29,671
Leukemia	Both Sexes	96,231	108,820	108,981	225,790	245,225
	Male	55,777	63,265	63,346	127,972	139,195
	Female	40,454	45,555	45,635	97,818	106,030
Acute	Both Sexes	15,118	15,404	15,404	55,306	55,720
Lymphocytic	Male	8,660	8,708	8,708	30,447	30,533
Leukemia	Female	6,458	6,696	6,696	24,859	25,187
Childhood (Ages 0-19)	Both Sexes Male Female	60,231 32,416 27,815	60,330 32,472 27,858	60,634 32,581 28,053	259,480 133,367 126,113	259,966 133,580 126,386
Kaposi Sarcoma	Both Sexes	6,695	7,138	7,138	21,168	22,209
	Male	6,215	6,544	6,544	19,850	20,703
	Female	480	594	594	1,318	1,506
Mesothelioma	Both Sexes	2,774	3,453	3,453	4,194	5,000
	Male	2,022	2,510	2,510	2,603	3,185
	Female	752	943	943	1,591	1,815

U.S. 2006 cancer prevalence counts are based on 2006 cancer prevalence proportions from the SEER 9 registries and 1/1/2006 U.S. population estimates based on the average of 2005 and 2006 population estimates from the U.S. Bureau of the Census.

d

Consider a woman who had three invasive cancers: Melanoma in 1981; Breast cancer in 2001;

Melanoma in 2002.

In method (c) the melanoma is the woman's first cancer, and is counted for the melanoma and all sites 31-year limited duration prevalence. For 5-year limited duration prevalence, the woman is not counted at all since her first cancer occurred more than 5 years prior to 1/1/2006. In method (d) the 1981 melanoma is counted for the melanoma and all sites 31-year limited duration prevalence. The 2001 breast cancer is counted for the breast 5-year and 31-year

limited duration prevalence.

In method (e) the 2001 breast cancer is counted for the breast cancer and all sites 5-year limited duration prevalence. The 2002 melanoma is counted for 5-year limited duration prevalence for melanoma.

<sup>(</sup>b) Prevalence estimates are ambiguous for those with multiple cancers, unless the tumor inclusion criteria are understood. Depending on the application, different inclusion criteria may be appropriate. This table provides three different methods of tumor inclusion:

(c) First invasive tumor ever

(d) First invasive tumor for each cancer site diagnosed during the previous 31 years (1975-2005)

(e) First invasive tumor for each cancer site diagnosed during the previous 5 years (2001-2005)

For definitions (d) and (e) all sites is treated as a separate garger "site"

For definitions (d) and (e) all sites is treated as a separate cancer "site"

Table 1.22 U.S. Complete Prevalence Counts, Invasive Cancers Only, January 1, 2006a By Age at Prevalence

	Age at Prevalence									
Site/Sex	All Ages <sup>c</sup>	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70+	
All Sites										
Males	5,168,889	17,479	39,370	75,164	144,948	331,732	720,142	1,194,219	2,645,836	
Females	6,216,003	14,832	33,518	81,003	213,538	597,268	1,130,077	1,333,585	2,812,181	
Oral Cavity & Pharynx										
Males	157,250	23	492	1,318	3,276	14,407	37,003	40,095	60,638	
Females	87,223	101	501	1,668	3,489	8,222	15,686	18,110	39,446	
Esophagus										
Males	20,742	0	0	17	130	1,166	4,085	6,436	8,907	
Females	6,861	0	0	12	50	303	909	1,550	4,037	
Stomach										
Males	36,725	0	5	86	649	2,426	5,764	8,519	19,274	
Females	27,397	11	23	91	491	1,896	3,966	4,776	16,143	
Colon & Rectum										
Males	536,944	11	46	961	5,116	22,614	69,355	116,858	321,983	
Females	567,158	0	115	1,190	4,881	20,121	58,565	96,908	385,378	
Liver & Intrahep										
Males	16,484	415	403	334	382	1,391	5,714	3,821	4,025	
Females	8,445	424	329	318	328	843	1,678	1,630	2,896	
1 CINCLED	0,113	121	327	310	320	013	1,070	1,030	2,000	
Pancreas										
Males	14,979	0	35	69	255	1,190	3,251	4,246	5,933	
Females	16,201	0	44	114	434	1,327	2,738	4,093	7,452	
Larynx										
Males	73,244	0	0	11	232	2,513	10,523	19,979	39,986	
Females	18,326	0	0	46	132	1,174	3,010	4,737	9,227	
Lung & Bronchus										
Males	171,522	45	46	345	1,118	6,174	24,269	49,093	90,433	
Females	193,474	0	32	372	1,441	8,500	25,665	51,689	105,775	
Melanoma of the Skin										
Males	367,925	72	692	5,217	16,598	46,626	83,425	86,050	129,247	
Females	390,763	84	980	10,591	32,264	68,250	93,268	73,818	111,509	
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U.S. 2006 cancer prevalence counts are based on 2006 cancer prevalence proportions from the SEER 9 registries (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta) and 1/1/2006 U.S. population estimates based on the average of 2005 and 2006 population estimates from the U.S. Bureau of the Census. Prevalence was calculated using the First Malignant Primary Only for a person.

Cases diagnosed more than 30 years ago were estimated using the completeness index method (Capocaccia et. al. 1997, Merrill et. al. 2000).

Due to rounding, the sum of the age specific estimates may not equal the all ages estimate.

Table 1.22 - continued U.S. Complete Prevalence Counts, Invasive Cancers Only, January 1, 2006<sup>a</sup> By Age at Prevalence

				Age	at Prevalence	e			
Site/Sex	All Ages <sup>c</sup>	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70+
Para and									
Breast	12 120		0	0.2		F 4.0	0.050	2 200	T 000
Males	13,132	0	0	23	75	542	2,078	3,322	7,093
Females	2,533,193	0	104	2,335	35,060	206,965	500,267	614,770	1,173,691
Cervix									
Females	248,166	11	92	2,502	18,006	43,602	57,740	48,934	77,278
Corpus & Uterus, NOS									
Females	572,603	0	55	543	4,924	23,372	76,468	124,512	342,730
a	,				, -	, ,	,	, -	,
Ovary <sup>d</sup>									
Females	176,007	45	891	3,473	7,019	20,547	37,874	39,554	66,605
Prostate									
Males	2,177,975	45	92	69	349	16,618	187,672	552,329	1,420,801
Urinary Bladder									
Males	388,965	23	143	717	2,390	12,796	41,822	85,952	245,121
Females	138,531	33	68	414	1,120	4,555	13,137	26,664	92,539
Kidney & Renal Pelvis									
Males	156,166	1,489	2,424	2,363	4,140	13,996	31,742	40,436	59,577
Females	109,902	1,565	2,655	2,595	3,885	10,133	17,631	24,085	47,353
Hodgkin Lymphoma									
Males	82,450	129	2,058	8,923	16,247	22,575	18,055	9,050	5,412
Females	77,557	101	1,477	10,135	16,381	21,291	15,813	6,811	5,549
	,,,55,	101	1,1,,	10,133	10,301	21,251	13,013	0,011	3,313
Non-Hodgkin Lymphoma									
Males	217,143	663	3,555	6,616	12,138	26,624	42,988	48,865	75,694
Females	202,390	360	1,529	3,938	7,562	18,662	35,213	43,070	92,057
Myeloma									
Males	32,483	0	0	51	549	2,188	6,759	9,771	13,165
Females	26,720	0	0	23	222	1,661	4,882	7,103	12,830
Leukemia									
Males	130,746	6,418	11,449	10,565	9,207	10,991	17,345	23,135	41,637
Females	101,110	5,023	9,672	9,353	7,857	7,821	11,507	14,611	35,265
Acute Lymphocytic Leuk									
Males	32,255	5,310	9,965	8,164	5,276	1,976	781	520	263
Females	26,601	4,202	8,131	6,920	4,273	1,699	654	442	281
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U.S. 2006 cancer prevalence counts are based on 2006 cancer prevalence proportions from the SEER 9 registries (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta) and 1/1/2006 U.S. population estimates based on the average of 2005 and 2006 population estimates from the U.S. Bureau of the Census. Prevalence was calculated using the First Malignant Primary Only for a person.

Cases diagnosed more than 30 years ago were estimated using the completeness index method (Capocaccia et. al. 1997, Merrill et. al. 2000).

Due to rounding, the sum of the age specific estimates may not equal the all ages estimate.

Table 1.23 Age-Adjusted SEER Incidence Rates and Trends for the Top 15 Cancer Sites by Race/Ethnicity Both Sexes

All Ra	ces		Whit	ce		Blac	:k	
	Rate <sup>b</sup> 2002-2006	APC <sup>c</sup> 1997-2006		Rate <sup>b</sup> 2002-2006	APC <sup>c</sup> 1997-2006		Rate <sup>b</sup> 2002-2006	APC° 1997-2006
All Sites	462.9	-1.0*	All Sites	470.6	-0.9*	All Sites	493.6	-1.4*
Prostate <sup>f</sup>	70.6	-1.2	Breast	68.7	-2.1*	Prostate <sup>f</sup>	99.6	-2.7*
Breast	67.1	-1.9*	Prostate <sup>f</sup>	68.5	-1.1	Lung and Bronchus	74.7	-1.8*
Lung and Bronchus	63.1	-1.5*	Lung and Bronchus	64.4	-1.5*	Breast	67.4	-0.7*
Colon and Rectum	49.1	-2.4*	Colon and Rectum	48.6	-2.6*	Colon and Rectum	59.9	-1.5*
Urinary Bladder	21.0	-0.4	Melanoma of the Skin	22.9	2.1*	Pancreas	15.6	-0.2
Melanoma of the Skin	19.6	1.6*	Urinary Bladder	22.8	-0.3	Kidney and Renal Pelvis	15.0	1.5
Non-Hodgkin Lymphoma	19.5	0.1	Non-Hodgkin Lymphoma	20.4	0.2	Non-Hodgkin Lymphoma	14.8	0.3
Kidney and Renal Pelvis	13.6	2.3*	Kidney and Renal Pelvis	14.1	2.4*	Urinary Bladder	12.8	-0.1
Corpus and Uterus, NOSf	12.5	-1.0*	Corpus and Uterus, NOSf	12.9	-1.3*	Stomach	12.1	-3.3*
Leukemia	12.2	-0.9*	Leukemia	12.8	-1.0*	Myeloma	11.7	-0.2
Pancreas	11.7	0.5	Pancreas	11.5	0.6*	Corpus and Uterus, NOSf	11.7	1.2
Oral Cavity and Pharynx	10.4	-1.5*	Oral Cavity and Pharynx	10.5	-1.3*	Oral Cavity and Pharynx	10.5	-2.7*
Thyroid	9.6	5.9*	Thyroid	10.1	6.2*	Leukemia	9.8	-0.7
Stomach	7.9	-1.7*	Ovary <sup>fh</sup>	7.4	-1.9*	Liver & IBD <sup>g</sup>	8.2	3.3*
Ovary <sup>fh</sup>	7.1	-1.8*	Brain and ONS <sup>g</sup>	7.1	-0.6	Ovary <sup>fh</sup>	5.8	-1.2

Asian/Pacific	<u> Islander</u>		American Indian/	Alaska Nat	ive <sup>a</sup>	Hispar	nic <sup>e</sup>	
	Rate <sup>b</sup> 2002-2006	APC <sup>c</sup> 1997-2006		Rate <sup>b</sup> 2002-2006	APC <sup>c</sup> 1997-2006		Rate <sup>b</sup> 2002-2006	APC <sup>c</sup> 1997-2006
All Sites	311.1	-0.9*	All Sites	313.6	-0.3	All Sites	350.6	-1.0*
Breast	48.9	-0.9*	Lung and Bronchus	44.9	0.6	Prostate <sup>f</sup>	58.2	-1.5*
Colon and Rectum	40.0	-1.9*	Colon and Rectum	42.3	-1.7	Breast	47.4	-0.9*
Prostate <sup>f</sup>	39.4	-0.9	Breast	40.2	1.4	Colon and Rectum	38.4	-1.4*
Lung and Bronchus	38.9	-0.9*	Prostate <sup>f</sup>	33.6	-1.3	Lung and Bronchus	32.5	-2.4*
Liver & IBD <sup>g</sup>	14.2	0.1	Kidney and Renal Pelvis	17.5	2.7	Non-Hodgkin Lymphoma	16.7	-0.2
Stomach	13.4	-3.2*	Stomach	11.2	-4.0	Kidney and Renal Pelvis	13.2	2.0*
Non-Hodgkin Lymphoma	12.9	-0.9	Non-Hodgkin Lymphoma	10.8	0.5	Stomach	11.7	-2.3*
Thyroid	9.4	3.6*	Liver & IBD <sup>g</sup>	9.9	4.6	Urinary Bladder	11.4	0.0
Urinary Bladder	9.3	0.1	Pancreas	9.7	-0.9	Pancreas	10.6	-0.1
Corpus and Uterus, NOSf	9.1	0.6	Corpus and Uterus, NOSf	8.8	1.6	Liver & IBD <sup>g</sup>	10.2	1.9*
Pancreas	9.0	-0.1	Urinary Bladder	7.4	-	Leukemia	9.7	-0.4
Oral Cavity and Pharynx	7.8	-2.0*	Oral Cavity and Pharynx	7.1	-4.3	Corpus and Uterus, NOS <sup>f</sup>	9.5	0.6
Leukemia	7.3	-1.0	Leukemia	7.0	2.1	Thyroid	8.2	5.2*
Kidney and Renal Pelvis	6.9	2.2*	Ovary <sup>fh</sup>	5.9	-2.3	Cervix Uteri <sup>f</sup>	6.5	-4.1*
Ovary <sup>fh</sup>	5.4	-0.5	Thyroid	5.8	0.3	Ovary <sup>fh</sup>	6.1	-1.1

- Top 15 cancer sites selected based on 2002-2006 age-adjusted rates for the race/ethnic group.
- Incidence data used in calculating the rates are from the 17 SEER areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey).
  - Rates are age-adjusted to the 2000 US Std Population (19 age groups Census P25-1130).
- The APC is the Annual Percent Change over the time interval. Incidence data used in calculating the trends are from the 13 SEER areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry and Rural Georgia).
- Trends are based on rates age-adjusted to the 2000 US Std Population (19 age groups Census P25-1130).
- d Rates for American Indian/Alaska Native are based on the CHSDA(Contract Health Service Delivery Area) counties.
- e Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives.
- Incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.
- f The rates for sex-specific cancer sites are calculated using the population for both sexes combined.
- g IBD = Intrahepatic Bile Duct. ONS = Other Nervous System.
- Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.
- \* The APC is significantly different from zero (p<.05).
- Statistic not shown. Rate based on less than 16 cases for the time interval. Trend based on less than 10 cases for at least one year within the time interval.

All Races

Rateb

APCC

 ${\it Table 1.24} \\ {\it Age-Adjusted SEER Incidence Rates and Trends for the Top 15 Cancer Sites^a by Race/Ethnicity } \\ {\it Males}$ 

White

Rateb

APCC

Black

Rateb

APCC

		APC		Rate"	APC		Rate"	APC
	2002-2006	1997-2006	_	2002-2006	1997-2006		2002-2006	1997-2006
All Sites	541.8	-1.2*	All Sites	544.3	-1.1*	All Sites	633.7	-2.4*
Prostate	159.3	-1.6*	Prostate	153.0	-1.6*	Prostate	239.8	-3.0*
Lung and Bronchus	77.7	-2.3*	Lung and Bronchus	77.6	-2.3*	Lung and Bronchus	104.3	-3.3*
Colon and Rectum	57.3	-2.9*	Colon and Rectum	56.9	-3.1*	Colon and Rectum	69.3	-1.8*
Urinary Bladder	37.1	-0.4	Urinary Bladder	40.3	-0.4	Kidney and Renal Pelvis	21.3	1.4
Melanoma of the Skin	25.0	1.7*	Melanoma of the Skin	28.9	2.2*	Urinary Bladder	20.0	-0.6
Non-Hodgkin Lymphoma	23.5	-0.1	Non-Hodgkin Lymphoma	24.4	0.0	Non-Hodgkin Lymphoma	18.3	-0.2
Kidney and Renal Pelvis		1.8*	Kidney and Renal Pelvis	19.2	1.9*	Stomach	16.8	-3.2*
Leukemia	15.8	-1.4*	Leukemia	16.5	-1.4*	Oral Cavity and Pharynx	16.7	-3.6*
Oral Cavity and Pharyn	15.4	-1.7*	Oral Cavity and Pharynx	15.6	-1.4*	Pancreas	16.6	-0.8
Pancreas	13.1	0.3	Pancreas	13.1	0.4	Myeloma	14.3	0.0
Stomach	11.0	-2.1*	Stomach	9.8	-2.1*	Liver & IBD <sup>f</sup>	13.4	3.4*
Liver & IBD <sup>f</sup>	10.2	2.4*	Liver & IBD <sup>f</sup>	8.6	2.7*	Leukemia	12.7	-1.1
Esophagus	7.7	-0.5	Brain and ONS <sup>f</sup>	8.4	-0.6	Larynx	10.5	-3.2*
Brain and ONS <sup>f</sup>	7.6	-0.7*	Esophagus	7.9	0.1	Esophagus	9.3	-4.1*
Myeloma	7.1	-0.8	Myeloma	6.6	-0.8	Brain and ONS <sup>f</sup>	4.7	-1.0
Asian/Pacifi	<u>c Islander</u>		American Indian/A	<u>Alaska Nat</u>	ive <sup>d</sup>	Hispan	ic <sup>e</sup>	
	Rate <sup>b</sup>	APC <sup>c</sup>		Rateb	APCc		Rateb	APCc
	Rate <sup>b</sup> 2002-2006	APC° 1997-2006		Rate <sup>b</sup> 2002-2006	APC° 1997-2006		Rate <sup>b</sup> 2002-2006	APC <sup>c</sup> 1997-2006
All Sites	Rate <sup>b</sup> 2002-2006 349.1	1997-2006	All Sites	2002-2006	1997-2006	All Sites	Rate <sup>b</sup> 2002-2006 409.7	1997-2006
All Sites Prostate	2002-2006					All Sites Prostate	2002-2006	
	2002-2006 349.1	<u>1997-2006</u> -1.2*	All Sites	331.0	<u>1997-2006</u> -1.7		2002-2006 409.7	1997-2006 -1.5*
Prostate	2002-2006 349.1 91.1 53.4	1997-2006 -1.2* -0.8 -1.4*	All Sites Prostate	331.0 76.1	-1.7 -1.5 -2.1	Prostate Colon and Rectum	2002-2006 409.7 133.4	1997-2006 -1.5* -2.0*
Prostate Lung and Bronchus	2002-2006 349.1 91.1	1997-2006 -1.2* -0.8	All Sites Prostate Lung and Bronchus Colon and Rectum	2002-2006 331.0 76.1 51.6	1997-2006 -1.7 -1.5	Prostate Colon and Rectum Lung and Bronchus	2002-2006 409.7 133.4 46.3	1997-2006 -1.5* -2.0* -2.0*
Prostate Lung and Bronchus Colon and Rectum	2002-2006 349.1 91.1 53.4 46.9 21.4	1997-2006 -1.2* -0.8 -1.4* -2.5*	All Sites Prostate Lung and Bronchus	331.0 76.1 51.6 43.1	1997-2006 -1.7 -1.5 -2.1 -2.7 -0.6	Prostate Colon and Rectum Lung and Bronchus Urinary Bladder	2002-2006 409.7 133.4 46.3 43.2	1997-2006 -1.5* -2.0* -2.0* -2.7*
Prostate Lung and Bronchus Colon and Rectum Liver & IBD <sup>f</sup> Stomach	2002-2006 349.1 91.1 53.4 46.9	1997-2006 -1.2* -0.8 -1.4* -2.5* -0.3	All Sites Prostate Lung and Bronchus Colon and Rectum Kidney and Renal Pelvis	2002-2006 331.0 76.1 51.6 43.1 21.7	1997-2006 -1.7 -1.5 -2.1 -2.7	Prostate Colon and Rectum Lung and Bronchus	2002-2006 409.7 133.4 46.3 43.2 19.8	1997-2006 -1.5* -2.0* -2.0* -2.7* -0.4
Prostate Lung and Bronchus Colon and Rectum Liver & IBD <sup>f</sup>	2002-2006 349.1 91.1 53.4 46.9 21.4 18.0	1997-2006 -1.2* -0.8 -1.4* -2.5* -0.3 -3.0*	All Sites Prostate Lung and Bronchus Colon and Rectum Kidney and Renal Pelvis Stomach	2002-2006 331.0 76.1 51.6 43.1 21.7 15.5	1997-2006 -1.7 -1.5 -2.1 -2.7 -0.6 -2.2	Prostate Colon and Rectum Lung and Bronchus Urinary Bladder Non-Hodgkin Lymphoma	2002-2006 409.7 133.4 46.3 43.2 19.8 19.1	1997-2006 -1.5* -2.0* -2.0* -2.7* -0.4 -0.4
Prostate Lung and Bronchus Colon and Rectum Liver & IBD <sup>f</sup> Stomach Urinary Bladder Non-Hodgkin Lymphoma	2002-2006 349.1 91.1 53.4 46.9 21.4 18.0 16.5 15.5	1997-2006 -1.2* -0.8 -1.4* -2.5* -0.3 -3.0* 0.9	All Sites Prostate Lung and Bronchus Colon and Rectum Kidney and Renal Pelvis Stomach Liver & IBD <sup>f</sup> Urinary Bladder	2002-2006 331.0 76.1 51.6 43.1 21.7 15.5 13.6	-1.7 -1.5 -2.1 -2.7 -0.6 -2.2	Prostate Colon and Rectum Lung and Bronchus Urinary Bladder Non-Hodgkin Lymphoma Kidney and Renal Pelvis	2002-2006 409.7 133.4 46.3 43.2 19.8 19.1 17.6	1997-2006 -1.5* -2.0* -2.7* -0.4 -0.4 2.0*
Prostate Lung and Bronchus Colon and Rectum Liver & IBD <sup>f</sup> Stomach Urinary Bladder	2002-2006 349.1 91.1 53.4 46.9 21.4 18.0 16.5 15.5 10.8	1997-2006 -1.2* -0.8 -1.4* -2.5* -0.3 -3.0* 0.9 -0.9 -2.3*	All Sites Prostate Lung and Bronchus Colon and Rectum Kidney and Renal Pelvis Stomach Liver & IBD <sup>f</sup>	2002-2006 331.0 76.1 51.6 43.1 21.7 15.5 13.6 12.4 11.8	-1.7 -1.5 -2.1 -2.7 -0.6 -2.2	Prostate Colon and Rectum Lung and Bronchus Urinary Bladder Non-Hodgkin Lymphoma Kidney and Renal Pelvis Liver & IBD <sup>f</sup>	2002-2006 409.7 133.4 46.3 43.2 19.8 19.1 17.6 15.2	1997-2006 -1.5* -2.0* -2.7* -0.4 -0.4 2.0* 2.3*
Prostate Lung and Bronchus Colon and Rectum Liver & IBD <sup>f</sup> Stomach Urinary Bladder Non-Hodgkin Lymphoma Oral Cavity and Pharyns Pancreas	2002-2006 349.1 91.1 53.4 46.9 21.4 18.0 16.5 15.5 10.8 10.1	1997-2006 -1.2* -0.8 -1.4* -2.5* -0.3 -3.0* 0.9 -0.9	All Sites Prostate Lung and Bronchus Colon and Rectum Kidney and Renal Pelvis Stomach Liver & IBD <sup>f</sup> Urinary Bladder Non-Hodgkin Lymphoma Pancreas	2002-2006 331.0 76.1 51.6 43.1 21.7 15.5 13.6 12.4	-1.7 -1.5 -2.1 -2.7 -0.6 -2.2	Prostate Colon and Rectum Lung and Bronchus Urinary Bladder Non-Hodgkin Lymphoma Kidney and Renal Pelvis Liver & IBD <sup>f</sup> Stomach	2002-2006 409.7 133.4 46.3 43.2 19.8 19.1 17.6 15.2 14.9	1997-2006 -1.5* -2.0* -2.7* -0.4 -2.0* 2.0* 2.3* -3.6*
Prostate Lung and Bronchus Colon and Rectum Liver & IBD <sup>f</sup> Stomach Urinary Bladder Non-Hodgkin Lymphoma Oral Cavity and Pharyns	2002-2006 349.1 91.1 53.4 46.9 21.4 18.0 16.5 15.5 10.8 10.1	1997-2006 -1.2* -0.8 -1.4* -2.5* -0.3 -3.0* 0.9 -0.9 -2.3* -0.1	All Sites Prostate Lung and Bronchus Colon and Rectum Kidney and Renal Pelvis Stomach Liver & IBD <sup>f</sup> Urinary Bladder Non-Hodgkin Lymphoma	2002-2006 331.0 76.1 51.6 43.1 21.7 15.5 13.6 12.4 11.8 10.2	-1.7 -1.5 -2.1 -2.7 -0.6 -2.2	Prostate Colon and Rectum Lung and Bronchus Urinary Bladder Non-Hodgkin Lymphoma Kidney and Renal Pelvis Liver & IBD <sup>f</sup> Stomach Leukemia Pancreas	2002-2006 409.7 133.4 46.3 43.2 19.8 19.1 17.6 15.2 14.9 11.8	1997-2006 -1.5* -2.0* -2.7* -0.4 -0.4 2.0* 2.3* -3.6* -0.2
Prostate Lung and Bronchus Colon and Rectum Liver & IBD <sup>f</sup> Stomach Urinary Bladder Non-Hodgkin Lymphoma Oral Cavity and Pharyns Pancreas Kidney and Renal Pelvis	2002-2006 349.1 91.1 53.4 46.9 21.4 18.0 16.5 15.5 10.8 10.1 9.6	1997-2006 -1.2* -0.8 -1.4* -2.5* -0.3 -3.0* 0.9 -0.9 -2.3* -0.1 1.5	All Sites Prostate Lung and Bronchus Colon and Rectum Kidney and Renal Pelvis Stomach Liver & IBD <sup>f</sup> Urinary Bladder Non-Hodgkin Lymphoma Pancreas Oral Cavity and Pharynx	2002-2006 331.0 76.1 51.6 43.1 21.7 15.5 13.6 12.4 11.8 10.2 9.2	-1.7 -1.5 -2.1 -2.7 -0.6 -2.2	Prostate Colon and Rectum Lung and Bronchus Urinary Bladder Non-Hodgkin Lymphoma Kidney and Renal Pelvis Liver & IBD <sup>f</sup> Stomach Leukemia	2002-2006 409.7 133.4 46.3 43.2 19.8 19.1 17.6 15.2 14.9 11.8 11.1	1997-2006 -1.5* -2.0* -2.7* -0.4 -0.4 2.0* 2.3* -3.6* -0.2 0.6
Prostate Lung and Bronchus Colon and Rectum Liver & IBD <sup>f</sup> Stomach Urinary Bladder Non-Hodgkin Lymphoma Oral Cavity and Pharyn Pancreas Kidney and Renal Pelvis Leukemia Thyroid	2002-2006 349.1 91.1 53.4 46.9 21.4 18.0 16.5 15.5 10.8 10.1 9.6 8.9	1997-2006 -1.2* -0.8 -1.4* -2.5* -0.3 -3.0* 0.9 -0.9 -2.3* -0.1 1.5 -1.8	All Sites Prostate Lung and Bronchus Colon and Rectum Kidney and Renal Pelvis Stomach Liver & IBD <sup>f</sup> Urinary Bladder Non-Hodgkin Lymphoma Pancreas Oral Cavity and Pharynx Leukemia	2002-2006 331.0 76.1 51.6 43.1 21.7 15.5 13.6 12.4 11.8 10.2 9.2 7.9	-1.7 -1.5 -2.1 -2.7 -0.6 -2.2	Prostate Colon and Rectum Lung and Bronchus Urinary Bladder Non-Hodgkin Lymphoma Kidney and Renal Pelvis Liver & IBD <sup>f</sup> Stomach Leukemia Pancreas Oral Cavity and Pharynx Myeloma	2002-2006 409.7 133.4 46.3 43.2 19.8 19.1 17.6 15.2 14.9 11.8 11.1 9.0	1997-2006 -1.5* -2.0* -2.7* -0.4 -0.4 2.0* 2.3* -3.6* -0.2 0.6 -2.8*
Prostate Lung and Bronchus Colon and Rectum Liver & IBD <sup>f</sup> Stomach Urinary Bladder Non-Hodgkin Lymphoma Oral Cavity and Pharyns Pancreas Kidney and Renal Pelvis Leukemia	2002-2006 349.1 91.1 53.4 46.9 21.4 18.0 16.5 15.5 10.8 10.1 9.6 8.9 4.2	1997-2006 -1.2* -0.8 -1.4* -2.5* -0.3 -3.0* 0.9 -0.9 -2.3* -0.1 1.5 -1.8 1.7	All Sites Prostate Lung and Bronchus Colon and Rectum Kidney and Renal Pelvis Stomach Liver & IBD <sup>f</sup> Urinary Bladder Non-Hodgkin Lymphoma Pancreas Oral Cavity and Pharynx Leukemia Esophagus	2002-2006 331.0 76.1 51.6 43.1 21.7 15.5 13.6 12.4 11.8 10.2 9.2 7.9 6.8	-1.7 -1.5 -2.1 -2.7 -0.6 -2.2	Prostate Colon and Rectum Lung and Bronchus Urinary Bladder Non-Hodgkin Lymphoma Kidney and Renal Pelvis Liver & IBD <sup>f</sup> Stomach Leukemia Pancreas Oral Cavity and Pharynx	2002-2006 409.7 133.4 46.3 43.2 19.8 19.1 17.6 15.2 14.9 11.8 11.1 9.0 6.4	1997-2006 -1.5* -2.0* -2.7* -0.4 -0.4 2.0* 2.3* -3.6* -0.2 0.6 -2.8* -0.1

- Top 15 cancer sites selected based on 2002-2006 age-adjusted rates for the race/ethnic group.
- Incidence data used in calculating the rates are from the 17 SEER areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey).
- Rates are age-adjusted to the 2000 US Std Population (19 age groups Census P25-1130).
- The APC is the Annual Percent Change over the time interval. Incidence data used in calculating the trends are from the 13 SEER areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry and Rural Georgia).
- Trends are based on rates age-adjusted to the 2000 US Std Population (19 age groups Census P25-1130).
- d Rates for American Indian/Alaska Native are based on the CHSDA(Contract Health Service Delivery Area) counties.
- Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives.
  Incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.
- f IBD = Intrahepatic Bile Duct. ONS = Other Nervous System.
- The APC is significantly different from zero (p<.05).
- Statistic not shown. Rate based on less than 16 cases for the time interval. Trend based on less than 10 cases for at least one year within the time interval.

All Sites

Lung and Bronchus

Colon and Rectum

Breast

All Races

Rateb

408.5

123.8

52.5

42.8

2002-2006 1997-2006

APC<sup>c</sup>

-0.8\*

-1.8\*

-0.6\*

-2.1\*

All Sites

Lung and Bronchus

Colon and Rectum

Breast

#### Females White

Rateb

420.5

127.8

54.8

42.1

2002-2006 1997-2006

APC<sup>c</sup>

-0.8\*

-1.9\*

-0.7\*

-2.3\*

All Sites

Lung and Bronchus

Colon and Rectum

Breast

Black

Rateb

398.9

117.7

54.7

53.5

2002-2006 1997-2006

APC<sup>c</sup>

-0.4\*

-0.6\*

0.3

-1.3\*

COTOII and Rectuiii	42.0	-2.1	COTOII and Rectuiii	42.1	-4.3	COTOII and Rectuiii	55.5	-1.5
Corpus and Uterus, NOS	23.3	-0.8*	Corpus and Uterus, NOS	24.2	-1.0*	Corpus and Uterus, NOS	20.3	1.3
Non-Hodgkin Lymphoma	16.4	0.4	Melanoma of the Skin	18.7	2.1*	Pancreas	14.6	0.2
Melanoma of the Skin	15.8	1.6*	Non-Hodgkin Lymphoma	17.2	0.5	Non-Hodgkin Lymphoma	12.2	0.7
Thyroid	14.2	6.2*	Thyroid	15.0	6.5*	Cervix Uteri	10.4	-5.2*
Ovaryg	13.1	-1.6*	Ovary <sup>g</sup>	13.8	-1.7*	Kidney and Renal Pelvis	10.3	1.6
Pancreas	10.4	0.6*	Pancreas	10.2	0.8*	Ovary <sup>g</sup>	10.1	-1.0
Kidney and Renal Pelvis	9.5	2.8*	Urinary Bladder	9.9	-0.6	Myeloma	10.0	-0.4
Leukemia	9.5	-0.5	Leukemia	9.9	-0.6	Stomach	9.0	-3.1*
Urinary Bladder	9.3	-0.6*	Kidney and Renal Pelvis	9.9	2.9*	Thyroid	8.4	6.8*
Cervix Uteri	8.2	-3.3*	Cervix Uteri	8.1	-2.8*	Urinary Bladder	7.9	0.3
Oral Cavity and Pharynx	6.1	-1.4*	Oral Cavity and Pharynx	6.1	-1.5*	Leukemia	7.8	-0.3
Stomach	5.5	-1.3*	Brain and ONS <sup>f</sup>	5.9	-0.7	Oral Cavity and Pharynx	5.8	-1.1
Asian/Pacific	c Islander		American Indian/A	Alaska Nat	ive <sup>d</sup>	Hispan	ic <sup>e</sup>	
	Rateb	APC <sup>c</sup>		Rateb	APC°		Rateb	APC <sup>c</sup>
	2002-2006	1997-2006		2002-2006	1997-2006		2002-2006	1997-2006
All Sites	287.5	-0.5	All Sites	302.2	1.0	All Sites	312.5	-0.6*
Breast	89.5	-0.9*	Breast	74.4	1.4	Breast	88.3	-0.6
Colon and Rectum	34.6	-1.2	Colon and Rectum	41.2	-0.5	Colon and Rectum	32.2	-0.9*
Lung and Bronchus	28.1	0.3	Lung and Bronchus	39.8	4.2	Lung and Bronchus	24.7	-1.9*
Corpus and Uterus, NOS	16.8	0.6	Corpus and Uterus, NOS	16.3	1.5	Corpus and Uterus, NOS	17.8	1.0
Thyroid	14.2	4.1*	Kidney and Renal Pelvis	14.1	-	Non-Hodgkin Lymphoma	14.6	0.2
Non-Hodgkin Lymphoma	10.9	-0.6	Ovary <sup>g</sup>	10.8	-2.2	Thyroid	12.9	5.6*
Stomach	10.0	-3.3*	Non-Hodgkin Lymphoma	10.0	-	Cervix Uteri	12.7	-3.8*
Ovary <sup>g</sup>	9.9	-0.6	Pancreas	9.3	-	Ovary <sup>g</sup>	11.3	-0.9
Liver & IBD <sup>f</sup>	8.3	0.8	Thyroid	8.5	-0.2	Pancreas	10.2	-0.8
Pancreas	8.2	-0.2	Stomach	7.9	-	Kidney and Renal Pelvis	9.6	1.9*
Cervix Uteri	7.6	-4.6*	Cervix Uteri	7.2	0.0	Stomach	9.3	-1.0
Leukemia	6.1	-0.1	Liver & IBD <sup>f</sup>	6.6	-	Leukemia	8.1	-0.8
Oral Cavity and Pharynx	5.4	-1.5	Leukemia	6.1	-	Liver & IBD <sup>f</sup>	5.9	0.5
Kidney and Renal Pelvis				- 1		TT		0 1
	4.8	3.4*	Oral Cavity and Pharynx	5.1	_	Urinary Bladder	5.3	0.4
Urinary Bladder	4.8 4.0	3.4*	Oral Cavity and Pharynx Myeloma	5.1	-	Melanoma of the Skin	4.7	-1.7

- Top 15 cancer sites selected based on 2002-2006 age-adjusted rates for the race/ethnic group.
- Incidence data used in calculating the rates are from the 17 SEER areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey).
- Rates are age-adjusted to the 2000 US Std Population (19 age groups Census P25-1130).
- The APC is the Annual Percent Change over the time interval. Incidence data used in calculating the trends are from the 13 SEER areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry and Rural Georgia).
- Trends are based on rates age-adjusted to the 2000 US Std Population (19 age groups Census P25-1130).
- d Rates for American Indian/Alaska Native are based on the CHSDA(Contract Health Service Delivery Area) counties.
- Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.
- f IBD = Intrahepatic Bile Duct. ONS = Other Nervous System.
- Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.
- The APC is significantly different from zero (p<.05).
- Statistic not shown. Rate based on less than 16 cases for the time interval. Trend based on less than 10 cases for at least one year within the time interval.

All Races

Table 1.26 Age-Adjusted U.S. Death Rates and Trends for the Top 15 Cancer Sites by Race/Ethnicity Both Sexes

White

Black

	Rate <sup>b</sup> 2002-2006	APC <sup>c</sup> 1997-2006		Rate <sup>b</sup>	APC° 1997-2006		Rate <sup>b</sup> 2002-2006	APC <sup>c</sup> 1997-2006
All Sites	186.9	-1.3*	All Sites	185.4	-1.2*	All Sites	229.0	-2.0*
Lung and Bronchus	53.4	-1.1*	Lung and Bronchus	53.8	-0.9*	Lung and Bronchus	59.9	-1.8*
Colon and Rectum	18.2	-2.7*	Colon and Rectum	17.7	-2.7*	Colon and Rectum	25.4	-2.0*
Breast	13.8	-2.1*	Breast	13.4	-2.2*	Prostate <sup>f</sup>	20.0	-3.9*
Pancreas	10.7	0.3*	Pancreas	10.5	0.4*	Breast	19.5	-1.6*
Prostatef	9.8	-3.4*	Prostatef	9.0	-3.2*	Pancreas	13.7	-0.7*
Leukemia	7.3	-0.9*	Leukemia	7.5	-0.8*	Stomach	7.6	-3.7*
Non-Hodgkin Lymphoma	7.1	-3.2*	Non-Hodgkin Lymphoma	7.4	-3.2*	Liver & IBD <sup>g</sup>	6.8	2.0*
Liver & IBD <sup>g</sup>	5.1	2.0*	Ovaryf	5.1	-0.5*	Myeloma	6.8	-1.9*
Ovary <sup>f</sup>	4.9	-0.5*	Liver & IBD <sup>g</sup>	4.7	2.1*	Leukemia	6.4	-1.2*
Esophagus	4.4	0.3*	Brain and ONS <sup>g</sup>	4.7	-1.1*	Esophagus	5.4	-4.4*
Urinary Bladder	4.3	-0.1	Urinary Bladder	4.5	0.1	Non-Hodgkin Lymphoma	5.0	-2.8*
Brain and ONS <sup>g</sup>	4.3	-1.2*	Esophagus	4.4	1.1*	Ovary <sup>f</sup>	4.4	-0.7
Kidney and Renal Pelvis	4.1	-0.5*	Kidney and Renal Pelvis		-0.4	Corpus and Uterus, NOSf	4.3	0.5
Stomach	4.0	-3.2*	Stomach	3.5	-3.3*	Kidney and Renal Pelvis		-0.8*
Myeloma	3.6	-1.2*	Myeloma	3.4	-1.0*	Urinary Bladder	3.7	-0.9*
Asian/Pacifi	a Talandan		American Indian/	Alaska Nata	:d	Hispar	e	
ASIAII/PACIII			American indian/			HISPAI		
	Rate <sup>b</sup>	APC <sup>c</sup>		Rate <sup>b</sup>	APC <sup>c</sup>		Rate <sup>b</sup>	APC <sup>c</sup>
		1997-2006			1997-2006		2002-2006	
All Sites	111.8	-1.7*	All Sites	157.8	-0.5	All Sites	124.7	-1.6*
Lung and Bronchus	26.2	-1.3*	Lung and Bronchus	39.7	-0.7	Lung and Bronchus	22.7	-2.1*
Colon and Rectum	11.6	-2.3*	Colon and Rectum	16.4	-1.8*	Colon and Rectum	13.0	-1.6*
Liver & IBD <sup>g</sup>	10.3	-1.0	Breast	9.9	1.4	Breast	8.6	-2.4*
Pancreas	7.4	0.3	Pancreas	8.4	2.7	Pancreas	8.3	0.4
Stomach	7.4	-4.0*	Liver & IBD <sup>g</sup>	8.3	1.9	Liver & IBD <sup>g</sup>	7.9	1.4*
Breast	7.0	-0.1	Prostate <sup>f</sup>	7.9	-1.0	Prostate <sup>f</sup>	7.8	-2.9*
Non-Hodgkin Lymphoma	4.4	-3.5*	Stomach	6.7	-2.7	Stomach	6.3	-2.8*
Prostate <sup>f</sup>	4.3	-4.3*	Kidney and Renal Pelvis		-0.5	Non-Hodgkin Lymphoma	5.4	-3.6*
Leukemia	3.8	-1.5*	Non-Hodgkin Lymphoma	4.8	-1.8	Leukemia	4.9	-1.3*
Ovary <sup>f</sup>	2.8	1.4	Leukemia	4.7	0.2	Kidney and Renal Pelvis		0.0
Oral Cavity and Pharynx		-1.7	Esophagus	3.9	2.2	Ovary <sup>f</sup>	3.4	0.4
Brain and ONS <sup>g</sup>	2.0	0.6	Ovary <sup>f</sup>	3.8	0.4	Myeloma	2.9	-1.7*
Esophagus								
1 0	1.8	-2.4	Myeloma	3.6	-0.5	Brain and ONS <sup>g</sup>	2.8	-1.1*
Kidney and Renal Pelvis Urinary Bladder	1.8	-2.4 -1.9 -1.5	Myeloma Oral Cavity and Pharynx Brain and ONS <sup>9</sup>		-0.5 -2.0 -1.5	Brain and ONS <sup>9</sup> Urinary Bladder Esophagus	2.8 2.4 2.3	-1.1* -0.5 -1.8*

- Top 15 cancer sites selected based on 2002-2006 age-adjusted rates for the race/ethnic group.
- Mortality data used in calculating the rates are analyzed from US mortality files provided by the National Center for Health Statistics, CDC. Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
- The APC is the Annual Percent Change over the time interval. Mortality data used in calculating the trends are analyzed from US mortality files provided by the National Center for Health Statistics, CDC. Trends are based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
- Rates for American Indian/Alaska Native are based on the CHSDA(Contract Health Service Delivery Area) counties.
- Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. The 2002-2006 Hispanic death rates do not include deaths from the District of Columbia, Minnesota, New Hampshire and North Dakota. The 1997-2006 Hispanic mortality trends do not include deaths from the District of Columbia, Maine, Minnesota, New Hampshire and North Dakota.
- The rates for sex-specific cancer sites are calculated using the population for both sexes combined.
- IBD = Intrahepatic Bile Duct. ONS = Other Nervous System.
- The APC is significantly different from zero (p<.05).
- Statistic not shown. Rate based on less than 16 cases for the time interval. Trend based on less than 10 cases for at least one year within the time interval.

All Ra	ces		Whit	e		Black		
	Rate <sup>b</sup> 2002-2006	APC <sup>c</sup> 1997-2006		Rate <sup>b</sup> 2002-2006	APC <sup>c</sup> 1997-2006		Rate <sup>b</sup> 2002-2006	APC <sup>c</sup> 1997-2006
All Sites	229.9	-1.7*	All Sites	226.7	-1.6*	All Sites	304.2	-2.6*
Lung and Bronchus	70.5	-2.0*	Lung and Bronchus	69.9	-1.8*	Lung and Bronchus	90.1	-2.9*
Prostate	25.6	-4.0*	Prostate	23.6	-3.9*	Prostate	56.3	-4.2*
Colon and Rectum	21.9	-2.8*	Colon and Rectum	21.4	-2.9*	Colon and Rectum	31.4	-1.7*
Pancreas	12.3	0.1	Pancreas	12.2	0.3*	Pancreas	15.4	-1.0*
Leukemia	9.8	-0.8*	Leukemia	10.1	-0.7*	Stomach	11.0	-3.9*
Non-Hodgkin Lymphoma	9.0	-3.0*	Non-Hodgkin Lymphoma	9.3	-2.9*	Liver & IBD <sup>f</sup>	10.8	2.6*
Esophagus	7.8	0.4*	Urinary Bladder	7.9	0.0	Esophagus	9.2	-4.6*
Urinary Bladder	7.5	-0.2	Esophagus	7.9	1.2*	Leukemia	8.5	-1.1*
Liver & IBD <sup>f</sup>	7.5	2.1*	Liver & IBD <sup>f</sup>	6.8	2.2*	Myeloma	8.2	-1.7*
Kidney and Renal Pelvis	6.0	-0.6*	Kidney and Renal Pelvis	6.1	-0.5	Oral Cavity and Pharynx	6.5	-3.0*
Stomach	5.5	-3.7*	Brain and ONS <sup>f</sup>	5.7	-1.1*	Non-Hodgkin Lymphoma	6.3	-3.3*
Brain and ONS <sup>f</sup>	5.3	-1.1*	Stomach	4.8	-3.8*	Kidney and Renal Pelvis	6.0	-0.9*
Myeloma	4.5	-1.1*	Melanoma of the Skin	4.4	0.4	Urinary Bladder	5.5	-0.6
Oral Cavity and Pharynx	3.9	-1.8*	Myeloma	4.3	-1.0*	Larynx	4.7	-3.2*
Melanoma of the Skin	3.9	0.2	Oral Cavity and Pharynx	3.7	-1.5*	Brain and ONS <sup>f</sup>	3.2	-0.9
Asian/Pacific	: Islander		American Indian/	Alaska Nat	ive <sup>d</sup>	Hispan	ic <sup>e</sup>	
	$\mathtt{Rate}^\mathtt{b}$	APC <sup>c</sup>		Rate <sup>b</sup>	APCc		Rateb	APC <sup>c</sup>
		1997-2006			1997-2006		2002-2006	
All Sites	135.4	-2.1*	All Sites	183.3	-1.2*	All Sites	154.7	-2.2*
Lung and Bronchus	36.9	-1.5*	Lung and Bronchus	48.0	-3.3*	Lung and Bronchus	33.9	-3.0*
Liver & IBD <sup>f</sup>	15.0	-1.4*	Colon and Rectum	20.0	-1.2	Prostate	19.6	-3.6*
Colon and Rectum	13.8	-2.8*	Prostate	20.0	-1.4	Colon and Rectum	16.1	-2.2*
Prostate	10.6	-3.9*	Liver & IBD <sup>f</sup>	10.3	0.9	Liver & IBD <sup>f</sup>	11.3	1.3*
Stomach	9.6	-4.0*	Stomach	9.8	0.7	Pancreas	9.1	0.0
Pancreas	8.1	-0.3	Pancreas	9.1	3.7	Stomach	8.3	-3.4*
Non-Hodgkin Lymphoma	5.4	-4.1*	Kidney and Renal Pelvis	9.0	-0.9	Non-Hodgkin Lymphoma	6.4	-3.9*
Leukemia	5.0	-0.8	Esophagus	6.7	2.3	Leukemia	6.1	-1.5*
Oral Cavity and Pharynx	3.2	-2.5*	Leukemia	5.9	1.6	Kidney and Renal Pelvis	5.2	-0.3
Esophagus	3.1	-2.4	Non-Hodgkin Lymphoma	5.2	-3.3	Esophagus	4.1	-2.0*
Urinary Bladder	2.7	-1.6	Myeloma	4.3	-0.1	Urinary Bladder	3.9	-0.9
Brain and ONS <sup>f</sup>	2.5	0.6	Oral Cavity and Pharynx	3.6	-3.1	Myeloma	3.4	-2.0
Kidney and Renal Pelvis	2.4	-2.4*	Brain and ONS <sup>f</sup>	2.9	2.6	Brain and ONS <sup>f</sup>	3.3	-1.7*
Myeloma	1.9	-2.8*	Urinary Bladder	2.7	-	Oral Cavity and Pharynx	2.5	-3.8*
Soft Tissue including H	eart 0.9	-0.8	Larynx	1.9	_	Larynx	1.9	-4.1*

- a Top 15 cancer sites selected based on 2002-2006 age-adjusted rates for the race/ethnic group.
- Mortality data used in calculating the rates are analyzed from US mortality files provided by the National Center for
- Health Statistics, CDC. Rates are age-adjusted to the 2000 US Std Population (19 age groups Census P25-1130).

  The APC is the Annual Percent Change over the time interval. Mortality data used in calculating the trends are analyzed from US mortality files provided by the National Center for Health Statistics, CDC. Trends are based on rates age-adjusted to the
- 2000 US Std Population (19 age groups Census P25-1130).

  Rates for American Indian/Alaska Native are based on the CHSDA(Contract Health Service Delivery Area) counties.
- Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives.
  The 2002-2006 Hispanic death rates do not include deaths from the District of Columbia, Minnesota, New Hampshire and North Dakota. The 1997-2006 Hispanic mortality trends do not include deaths from the District of Columbia, Maine, Minnesota, New Hampshire and North Dakota.
- f IBD = Intrahepatic Bile Duct. ONS = Other Nervous System.
- The APC is significantly different from zero (p<.05).
- Statistic not shown. Rate based on less than 16 cases for the time interval. Trend based on less than 10 cases for at least one year within the time interval.

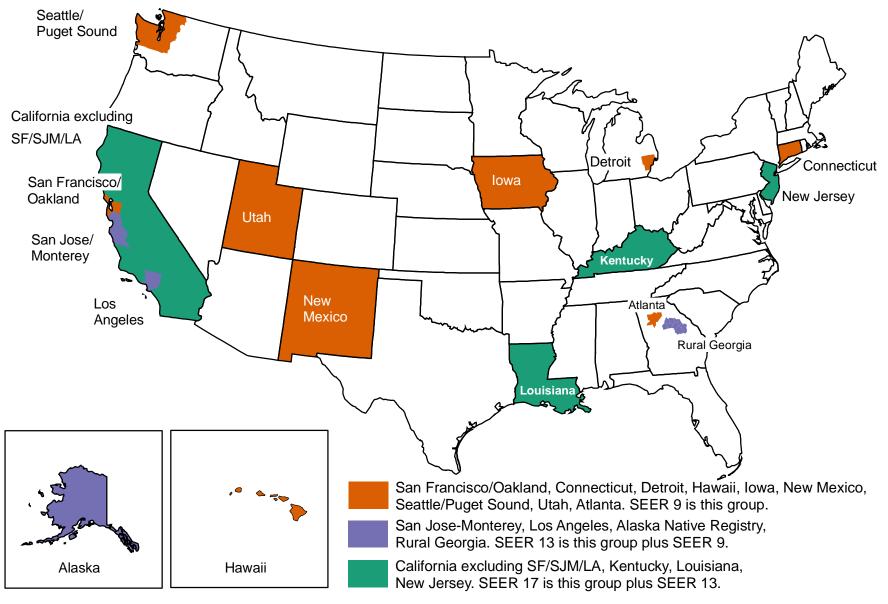
Table 1.28 Age-Adjusted U.S. Death Rates and Trends for the Top 15 Cancer Sites by Race/Ethnicity Females

All Ra	ces		Whit	te		Blac	:k	
	Rate <sup>b</sup> 2002-2006	APC° 1997-2006		Rate <sup>b</sup> 2002-2006	APC <sup>c</sup> 1997-2006		Rate <sup>b</sup> 2002-2006	APC° 1997-2006
All Sites	157.8	-1.1*	All Sites	157.3	-1.0*	All Sites	183.7	-1.4*
Lung and Bronchus	40.9	-0.1	Lung and Bronchus	41.9	0.0	Lung and Bronchus	40.0	-0.2
Breast	24.5	-1.9*	Breast	23.9	-2.0*	Breast	33.0	-1.5*
Colon and Rectum	15.4	-2.7*	Colon and Rectum	14.9	-2.7*	Colon and Rectum	21.6	-2.4*
Pancreas	9.3	0.4*	Pancreas	9.1	0.5*	Pancreas	12.4	-0.6*
Ovary	8.8	-0.3	Ovary	9.1	-0.2	Ovary	7.3	-0.7
Non-Hodgkin Lymphoma	5.7	-3.5*	Non-Hodgkin Lymphoma	5.9	-3.5*	Corpus and Uterus, NOS	7.2	0.7*
Leukemia	5.5	-1.2*	Leukemia	5.7	-1.0*	Myeloma	5.8	-2.3*
Corpus and Uterus, NOS	4.1	0.3*	Corpus and Uterus, NOS	3.9	0.2	Stomach	5.3	-3.5*
Brain and ONS <sup>f</sup>	3.5	-1.4*	Brain and ONS <sup>f</sup>	3.8	-1.2*	Leukemia	5.1	-1.4*
Liver & IBD <sup>f</sup>	3.2	1.3*	Liver & IBD <sup>f</sup>	2.9	1.4*	Cervix Uteri	4.6	-4.3*
Myeloma	3.0	-1.5*	Kidney and Renal Pelvis	2.8	-0.5	Non-Hodgkin Lymphoma	4.1	-2.4*
Stomach	2.8	-2.8*	Myeloma	2.7	-1.3*	Liver & IBD <sup>f</sup>	3.9	0.4
Kidney and Renal Pelvis	2.7	-0.6*	Stomach	2.4	-2.8*	Urinary Bladder	2.8	-1.3*
Cervix Uteri	2.5	-3.0*	Urinary Bladder	2.2	-0.7*	Kidney and Renal Pelvis	2.7	-0.7
Urinary Bladder	2.2	-0.8*	Cervix Uteri	2.2	-2.7*	Esophagus	2.7	-4.1*
Asian/Pacific Islander		American Indian/	'Alaska Nat	ive <sup>d</sup>	Hispanic <sup>e</sup>			
	Rateb	APC <sup>c</sup>		Rateb	APCc		Rateb	APCc
	2002-2006	<u>1997-2006</u>		2002-2006	<u>1997-2006</u>		2002-2006	1997-2006
All Sites	95.1	-1.1*	All Sites	140.1	0.1	All Sites	103.9	-1.2*

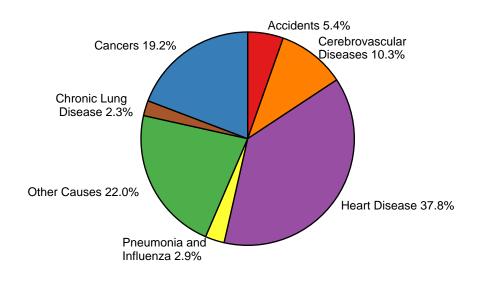
	Rate <sup>b</sup> 2002-2006	APC <sup>c</sup> 1997-2006		Rate <sup>b</sup> 2002-2006	APC <sup>c</sup> 1997-2006		Rate <sup>b</sup> 2002-2006	APC° 1997-2006
All Sites	95.1	-1.1*	All Sites	140.1	0.1	All Sites	103.9	-1.2*
Lung and Bronchus	18.2	-0.9	Lung and Bronchus	33.5	2.3*	Breast	15.5	-2.1*
Breast	12.5	-0.2	Breast	17.6	1.4	Lung and Bronchus	14.4	-0.8*
Colon and Rectum	10.0	-1.7*	Colon and Rectum	13.7	-2.5	Colon and Rectum	10.7	-1.1*
Pancreas	7.0	0.8	Pancreas	7.8	2.5	Pancreas	7.5	0.7
Liver & IBD <sup>f</sup>	6.6	-0.4	Ovary	6.8	0.7	Ovary	6.0	0.6
Stomach	5.8	-3.7*	Liver & IBD <sup>f</sup>	6.5	2.6	Liver & IBD <sup>f</sup>	5.1	1.1
Ovary	4.9	1.3	Stomach	4.6	-6.6*	Stomach	4.8	-2.2*
Non-Hodgkin Lymphoma	3.7	-2.8*	Non-Hodgkin Lymphoma	4.4	-0.2	Non-Hodgkin Lymphoma	4.6	-3.3*
Leukemia	2.9	-2.2*	Kidney and Renal Pelvis	4.2	0.2	Leukemia	4.0	-1.3*
Corpus and Uterus, NOS	2.5	1.8	Leukemia	3.6	-	Corpus and Uterus, NOS	3.1	0.0
Cervix Uteri	2.2	-4.7*	Cervix Uteri	3.4	-4.5	Cervix Uteri	3.1	-2.4*
Brain and ONS <sup>f</sup>	1.6	0.8	Myeloma	3.3	-0.5	Myeloma	2.6	-1.3
Myeloma	1.5	-1.6	Corpus and Uterus, NOS	3.0	-	Kidney and Renal Pelvis	2.4	0.0
Oral Cavity and Pharynx	1.3	0.0	Gallbladder	2.4	-	Brain and ONS <sup>f</sup>	2.4	-0.7
Kidney and Renal Pelvis	1.2	-0.9	Esophagus	1.7	-	Urinary Bladder	1.3	-0.4

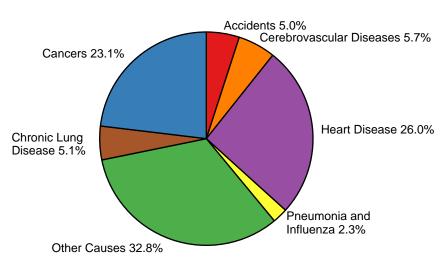
- Top 15 cancer sites selected based on 2002-2006 age-adjusted rates for the race/ethnic group.
- Mortality data used in calculating the rates are analyzed from US mortality files provided by the National Center for
- Health Statistics, CDC. Rates are age-adjusted to the 2000 US Std Population (19 age groups Census P25-1130).
- The APC is the Annual Percent Change over the time interval. Mortality data used in calculating the trends are analyzed from US mortality files provided by the National Center for Health Statistics, CDC. Trends are based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
- d Rates for American Indian/Alaska Native are based on the CHSDA(Contract Health Service Delivery Area) counties.
- Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. The 2002-2006 Hispanic death rates do not include deaths from the District of Columbia, Minnesota, New Hampshire and North Dakota. The 1997-2006 Hispanic mortality trends do not include deaths from the District of Columbia, Maine, Minnesota, New Hampshire and North Dakota.
- IBD = Intrahepatic Bile Duct. ONS = Other Nervous System.
- The APC is significantly different from zero (p<.05).
- Statistic not shown. Rate based on less than 16 cases for the time interval. Trend based on less than 10 cases for at least one year within the time interval.

#### Surveillance, Epidemiology, and End Results (SEER) Program: SEER 9, 13, & 17 Geographic Areas National Cancer Institute, USA



### Leading Causes of Death in US Percent of All Causes of Death 1975 vs 2006





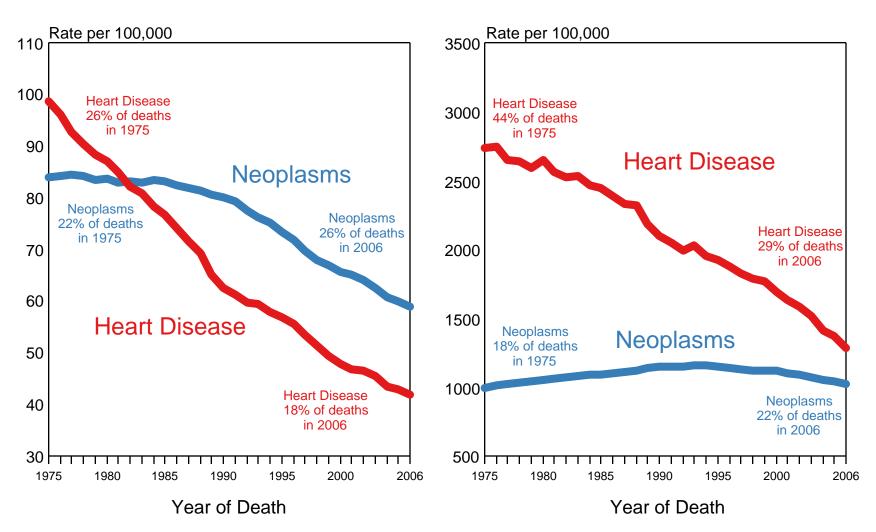
1975 2006

#### US Death Rates 1975-2006



#### Ages 65 and Over

Figure 1-3

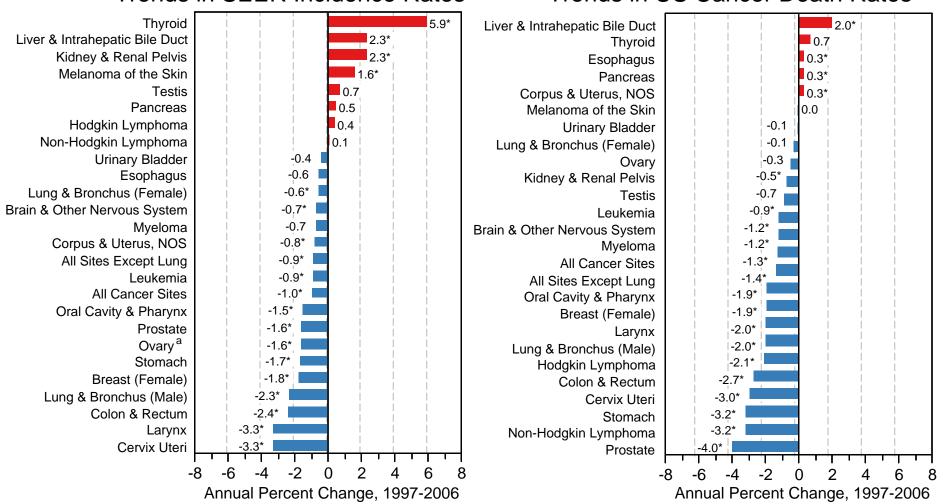


Source: US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention. Rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103).

#### Trends in SEER Incidence & US Death Rates by Primary Cancer Site 1997-2006

#### Trends in SEER Incidence Rates

#### Trends in US Cancer Death Rates



Source: SEER 13 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry and Rural Georgia) and US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention. For sex-specific cancer sites, the population was limited to the population of the appropriate sex.

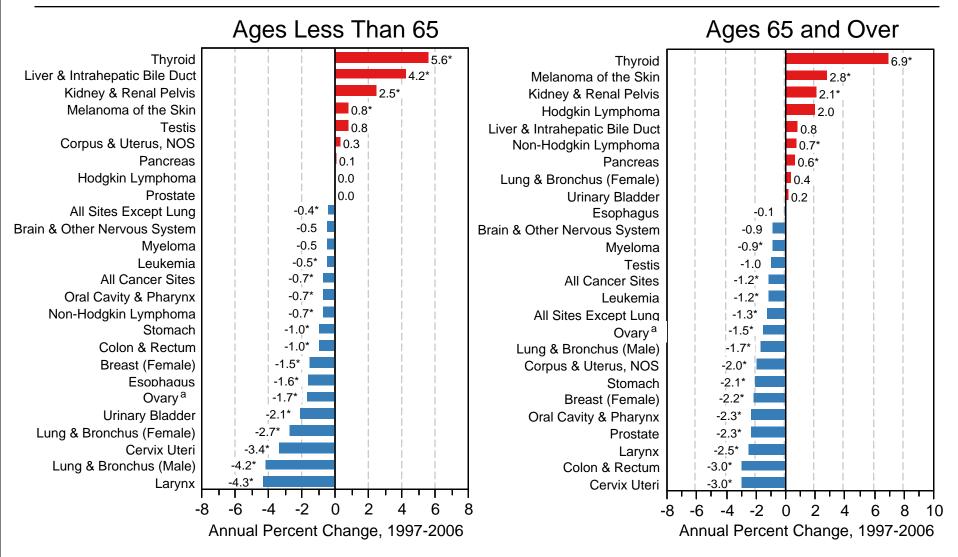
Figure 1.4

Underlying rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103).

<sup>\*</sup> The Annual Percent Change is significantly different from zero (p<.05).

<sup>&</sup>lt;sup>a</sup> Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.

### Trends in SEER Incidence Rates by Primary Cancer Site 1997-2006



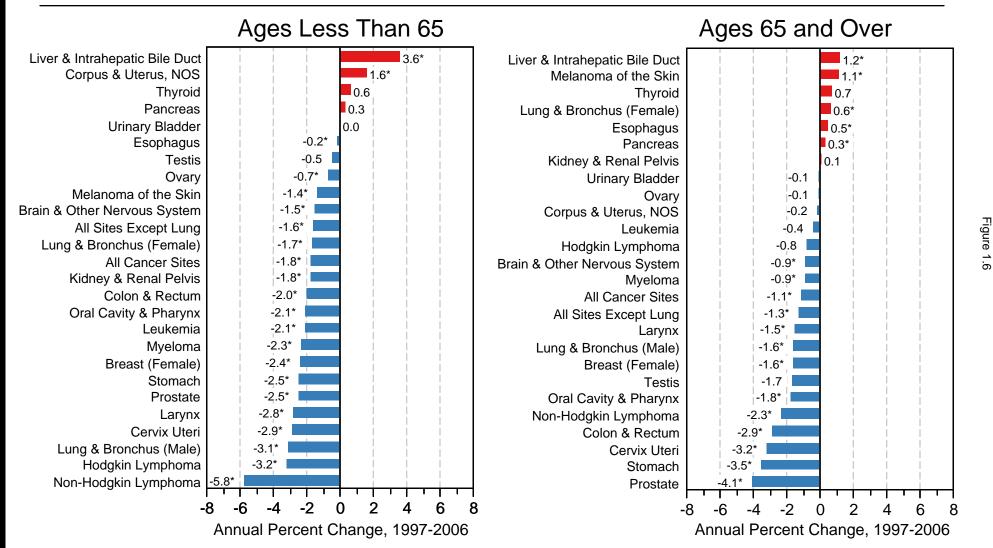
Source: SEER 13 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry and Rural Georgia). For sex-specific cancer sites, the population was limited to the population of the appropriate sex. Underlying rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103).

Figure 1.5

<sup>\*</sup> The Annual Percent Change is significantly different from zero (p<.05).

<sup>&</sup>lt;sup>a</sup> Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.

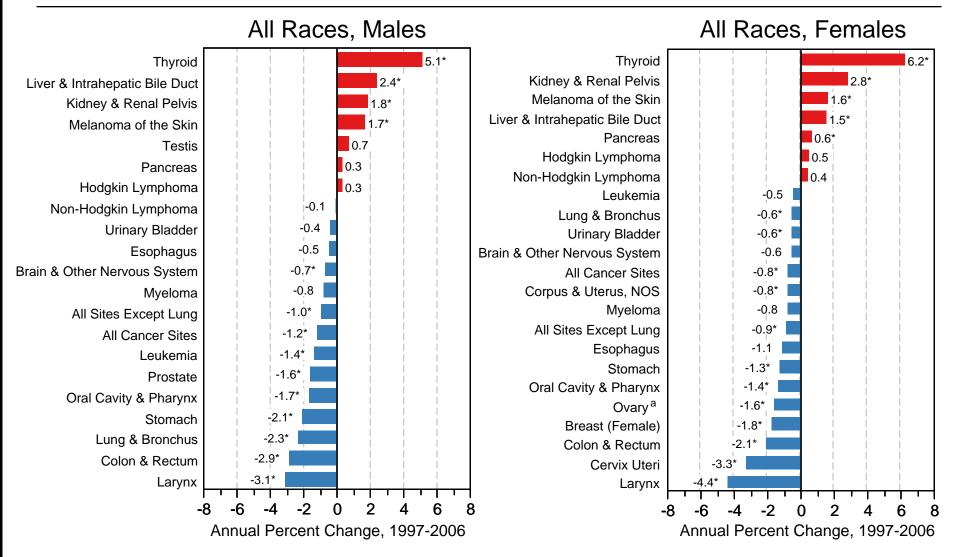
### Trends in US Death Rates by Primary Cancer Site 1997-2006



Source: US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention. For sex-specific cancer sites, the population was limited to the population of the appropriate sex.

<sup>\*</sup> Underlying rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103). The Annual Percent Change is significantly different from zero (p<.05).

### Trends in SEER Incidence Rates by Primary Cancer Site 1997-2006



Source: SEER 13 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry and Rural Georgia).

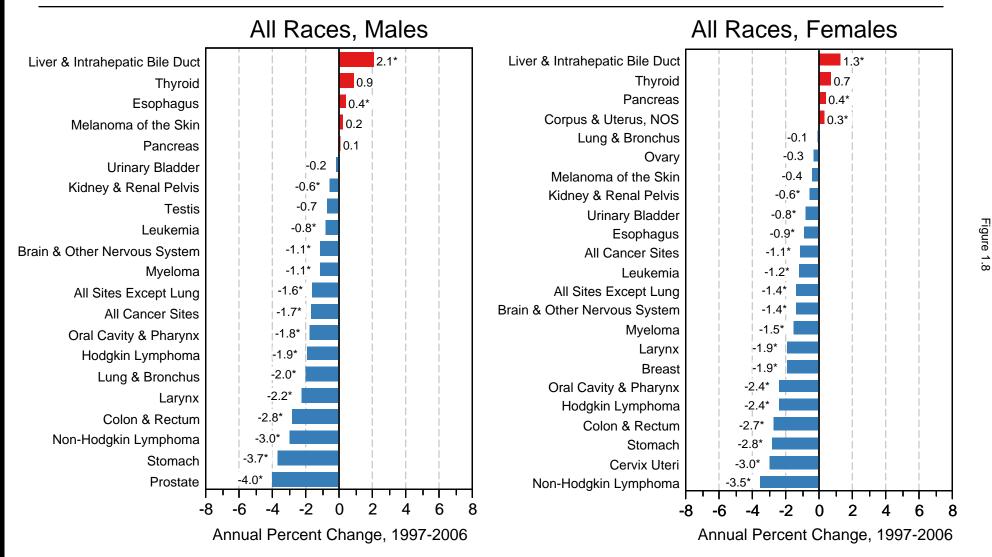
Figure 1.7

Underlying rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103).

The Annual Percent Change is significantly different from zero (p<.05).

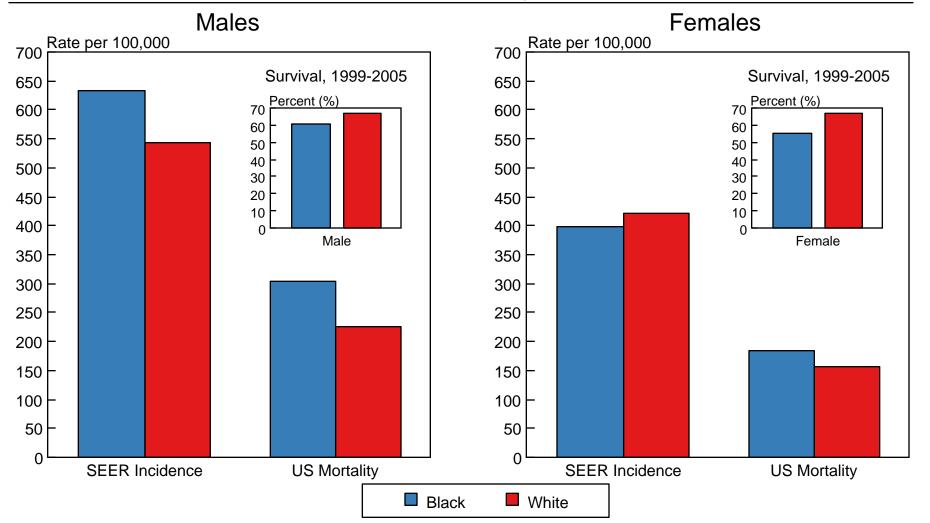
a Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.

### Trends in US Death Rates by Primary Cancer Site 1997-2006



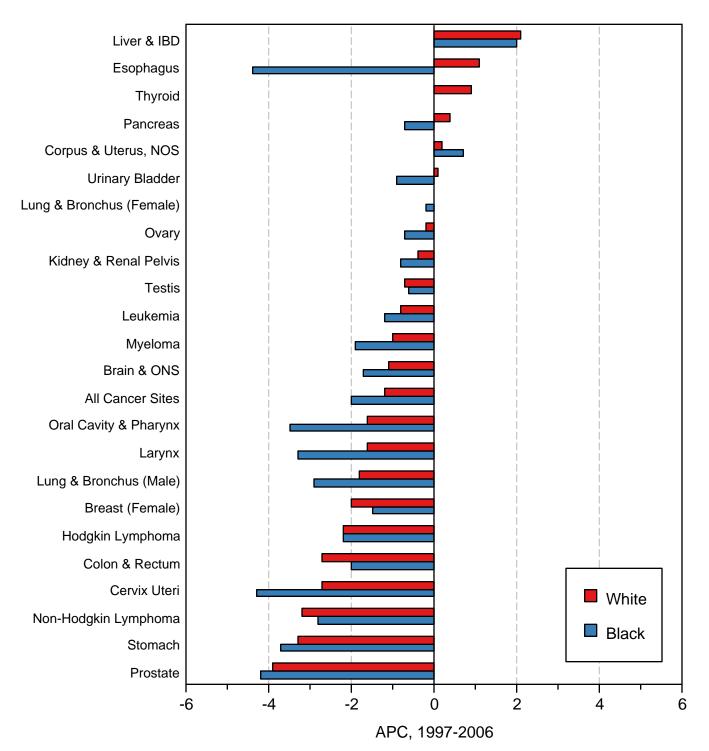
Source: US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention. Underlying rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103). \* The Annual Percent Change is significantly different from zero (p<.05).

## SEER Incidence<sup>a</sup> and US Death Rates<sup>b</sup>, 2002-2006 5-Year Relative Survival Rates<sup>c</sup>, 1999-2005 All Cancer Combined, by Race and Sex



- a Incidence rates are from the SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, and New Jersey) and are age-adjusted to the 2000 US Std Population (19 age groups Census P25-1103).
- b Death rates are from the US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention and are age-adjusted to the 2000 US Std Population (19 age groups Census P25-1103).
- Survival rates are from the SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, and New Jersey). California excluding SF/SJM/LA, Kentucky, Louisiana, and New Jersey contribute cases for diagnosis years 2000-2006. The remaining 13 SEER Areas contribute cases for the entire period 1999-2005. Relative survival rates are expressed as percents.

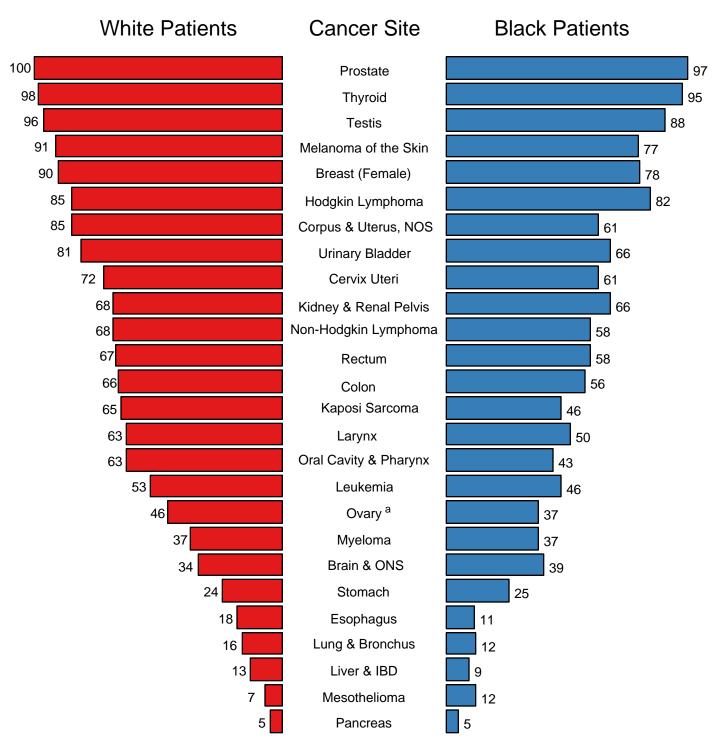
## Trends in US Death Rates, 1997-2006 by Primary Cancer Site All Ages, by Race



Source: US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention. The APC is the Annual Percent Change over the time interval.

Trends are based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

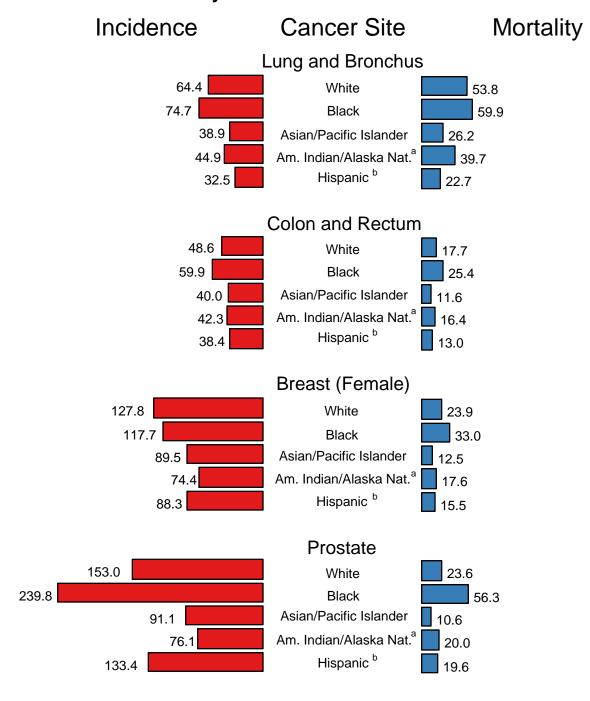
#### 5-Year Relative Survival Rates SEER Program, 1999-2006 Both Sexes, by Race



Source: SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, and New Jersey). California excluding SF/SJM/LA, Kentucky, Louisiana, and New Jersey contribute cases for diagnosis years 2000-2006. The remaining 13 SEER Areas contribute cases for the entire period 1999-2006.

<sup>&</sup>lt;sup>a</sup> Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.

#### SEER Cancer Incidence and US Death Rates, 2002-2006 By Cancer Site and Race

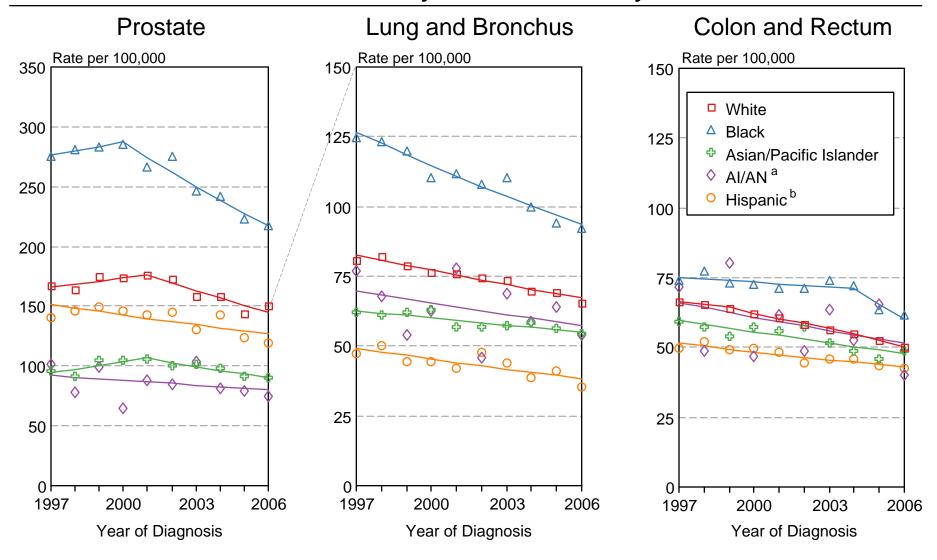


Source: SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, and New Jersey) and US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

<sup>&</sup>lt;sup>a</sup> Rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103).

Rates for American Indian/Alaska Native are based on the CHSDA (Contract Health Service Delivery Area) counties. Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry and Kentucky. Mortality data for Hispanics exclude cases from Minnesota, New Hampshire, and North Dakota.

### SEER Incidence 1997-2006 Males by Race/Ethnicity



Source: SEER 13 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry and Rural Georgia). Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103). Regression lines are calculated using the Joinpoint Regression Program Version 3.3.1, April 2008, National Cancer Institute.

igure 1.1

<sup>&</sup>lt;sup>a</sup> Incidence rates for American Indian/Alaska Native (Al/AN) are based on the CHSDA(Contract Health Service Delivery Area) counties.

b Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

# SEER Incidence 1997-2006 Females by Race/Ethnicity

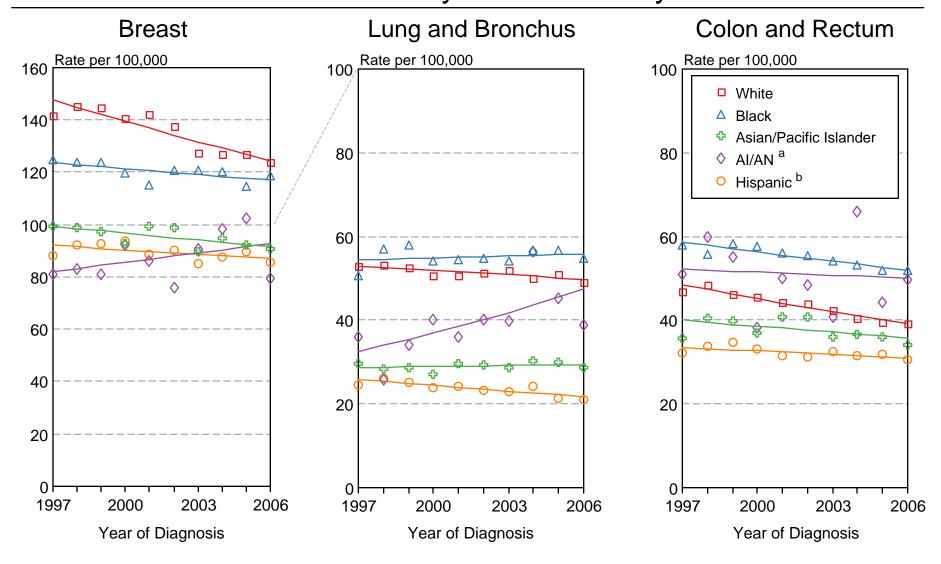


Figure 1.14

Source: SEER 13 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry and Rural Georgia). Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103). Regression lines are calculated using the Joinpoint Regression Program Version 3.3.1, April 2008, National Cancer Institute.

<sup>&</sup>lt;sup>a</sup> Incidence rates for American Indian/Alaska Native (Al/AN) are based on the CHSDA(Contract Health Service Delivery Area) counties.

b Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

# US Mortality 1997-2006 Males by Race/Ethnicity

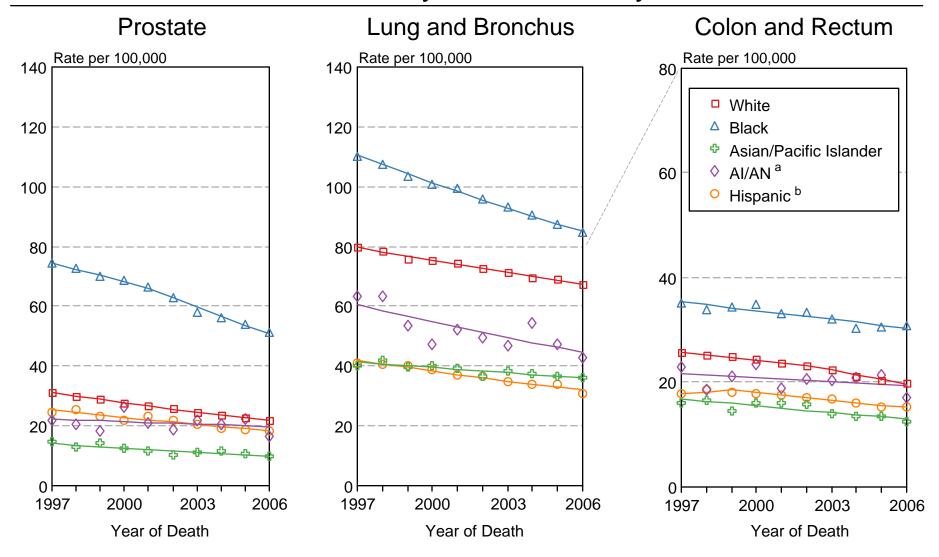


Figure 1.15

Source: US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention. Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103). Regression lines are calculated using the Joinpoint Regression Program Version 3.3.1, April 2008, National Cancer Institute.

a Mortality rates for American Indian/Alaska Native (Al/AN) are based on the CHSDA(Contract Health Service Delivery Area) counties.

b Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Mortality data for Hispanics excludes cases from the District of Columbia, Maine, Minnesota, New Hampshire, North Dakota, and Oklahoma.

### US Mortality 1997-2006 Females by Race/Ethnicity

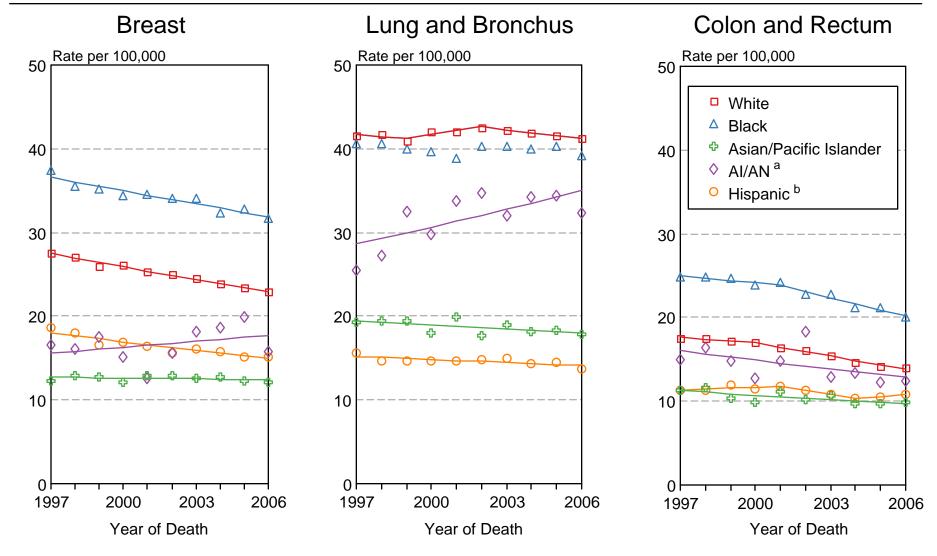


Figure 1.16

Source: US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention. Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103). Regression lines are calculated using the Joinpoint Regression Program Version 3.3.1, April 2008, National Cancer Institute.

a Mortality rates for American Indian/Alaska Native (Al/AN) are based on the CHSDA(Contract Health Service Delivery Area) counties.

b Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Mortality data for Hispanics excludes cases from the District of Columbia, Maine, Minnesota, New Hampshire, North Dakota, and Oklahoma.

## Incidence Percent Change between 1997 and 2006 Numbers (burden) vs Rates (risk) All Ages

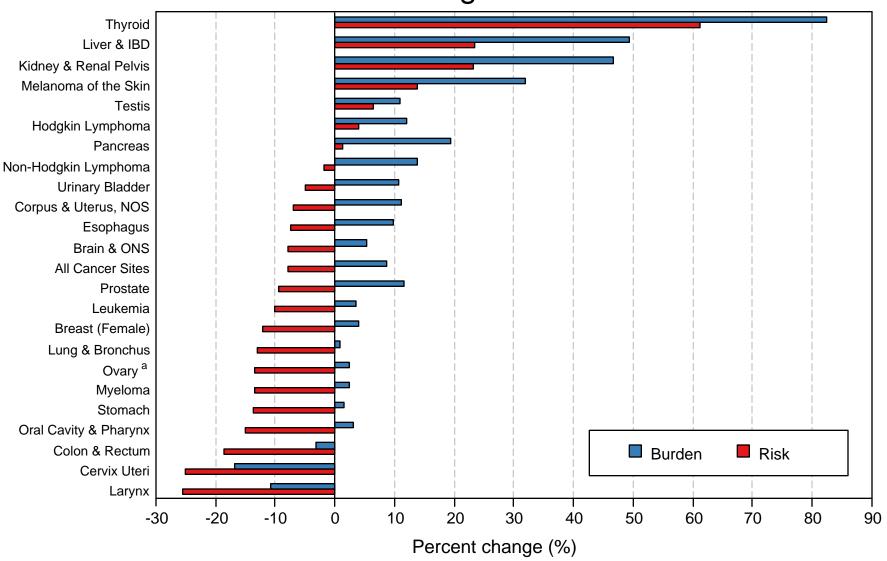


Figure I.17

US Incidence estimates based on SEER age-specific rates applied to US population. Burden is the change in the number of incidence cases between 1997 and 2006. Risk is the change in the cancer incidence rates between 1997 and 2006.

<sup>&</sup>lt;sup>a</sup> Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.

## Mortality Percent Change between 1997 and 2006 Numbers (burden) vs Rates (risk) All Ages

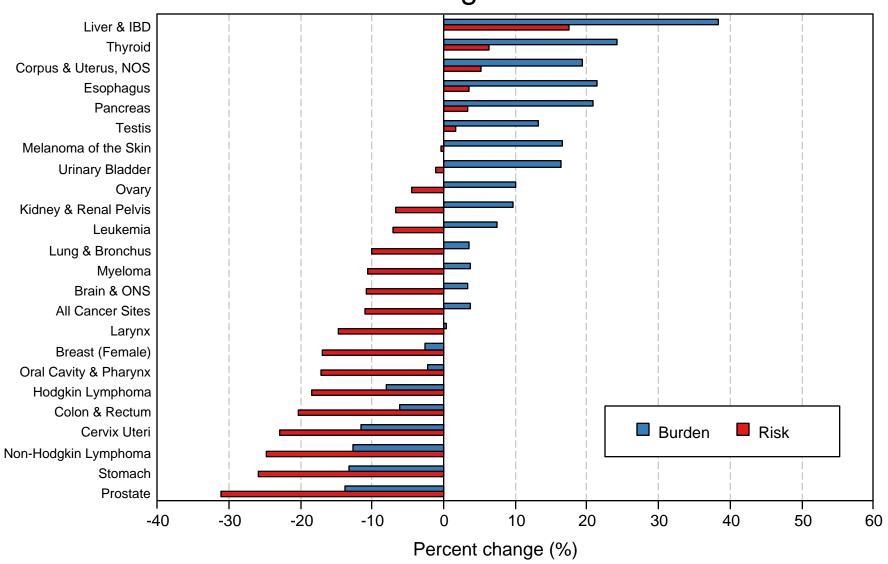


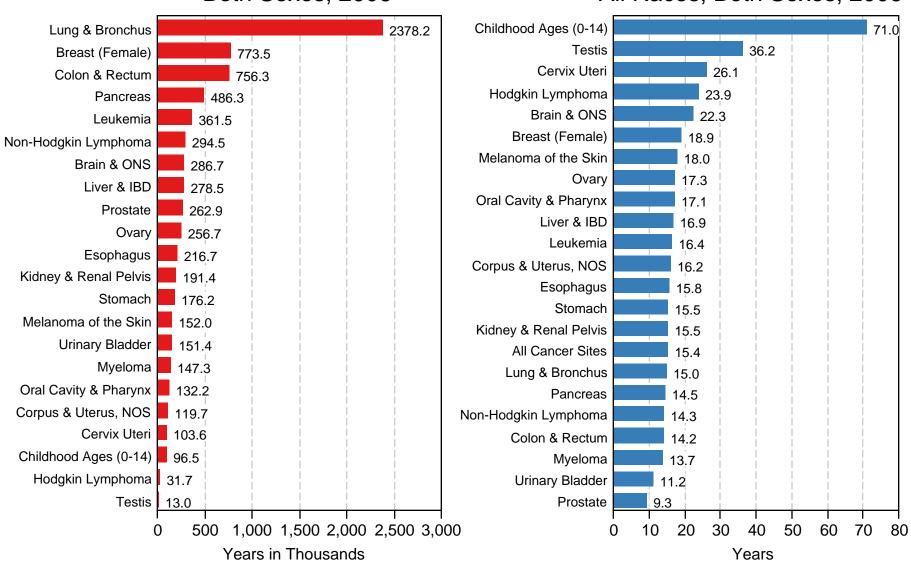
Figure 1-18

US Mortality estimates based on US age-specific rates applied to US population. Burden is the change in the number of deaths between 1997 and 2006. Risk is the change in the cancer death rates between 1997 and 2006.

#### Person-Years of Life Lost Due to Cancer, All Races Both Sexes, 2006

#### Average Years of Life Lost Per Person Dying of Cancer All Races, Both Sexes, 2006

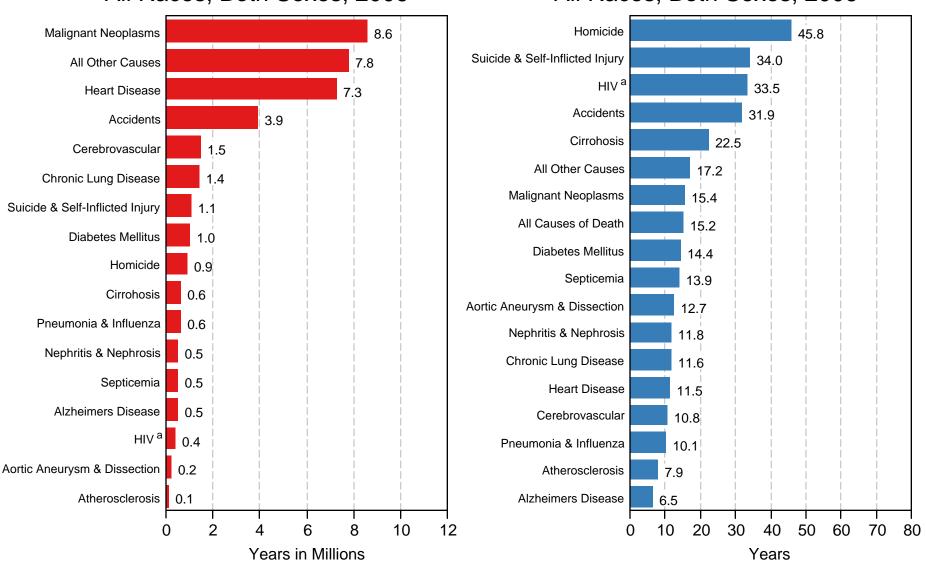
Figure 1-19



Source: US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention and 2006 Life Tables.

#### Person-Years of Life Lost Due to Major Causes of Death in US All Races, Both Sexes, 2006

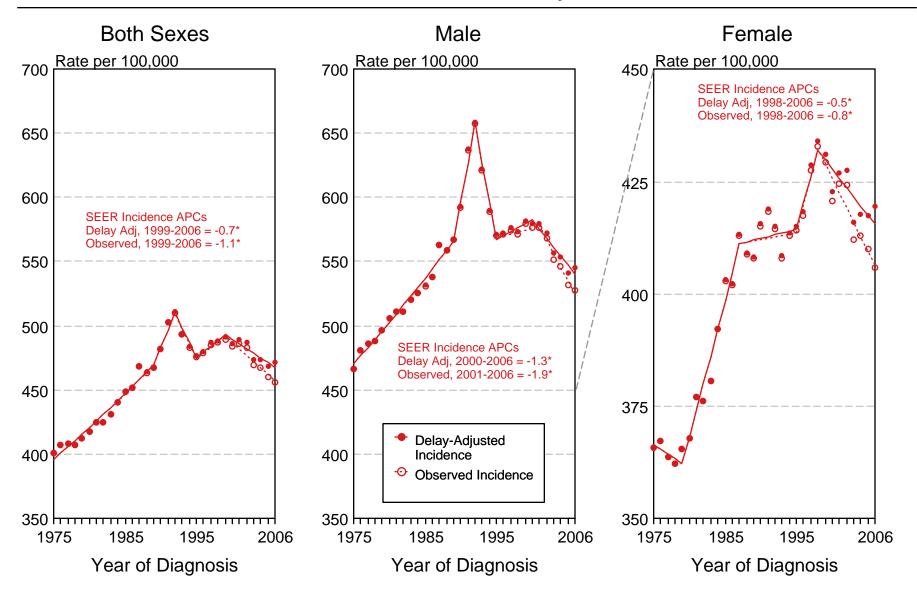
#### Average Years of Life Lost Per Person Due to Major Causes of Death in US All Races, Both Sexes, 2006



Source: US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention and 2006 Life Tables.

a Human Immunodeficiency Virus

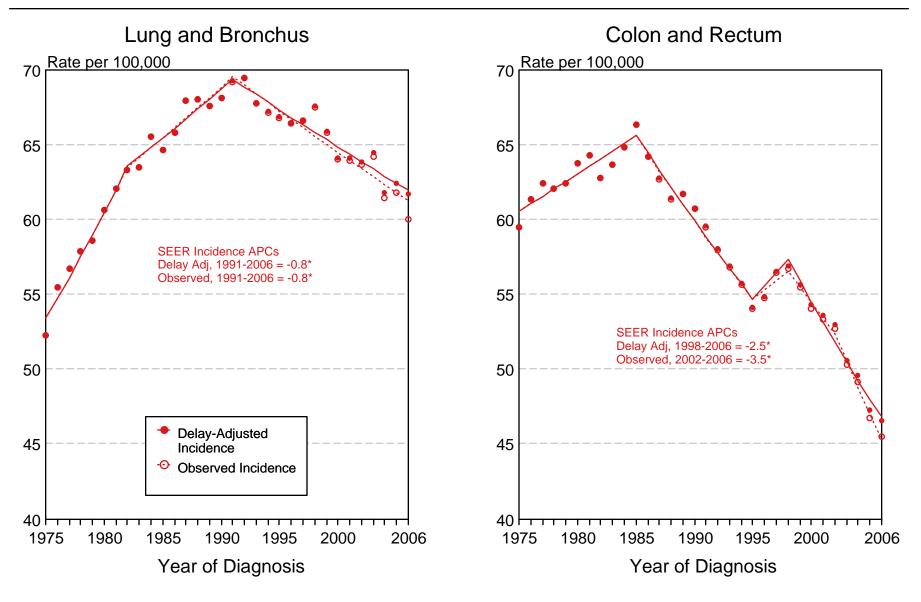
# SEER Observed Incidence and Delay Adjusted Incidence Rates<sup>a</sup> All Cancer Sites, By Sex



Source: SEER 9 areas. Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103). Regression lines and APCs are calculated using the Joinpoint Regression Program Version 3.3.1, April 2008, National Cancer Institute. The APC is the Annual Percent Change for the regression line segments. The APC shown on the graph is for the most recent trend.

The APC is significantly different from zero (p < 0.05).

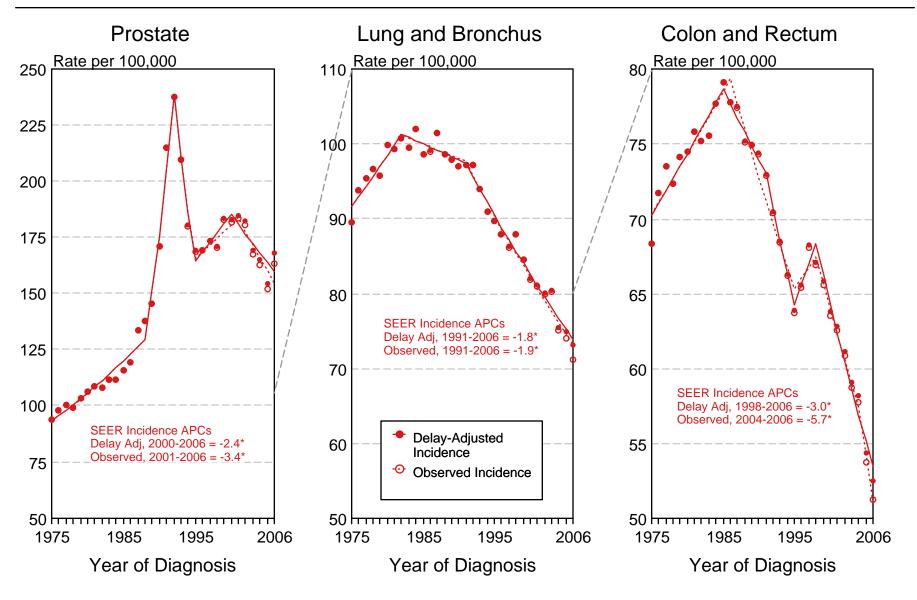
## SEER Observed Incidence and Delay Adjusted Incidence Rates<sup>a</sup> Both Sexes



a Source: SEER 9 areas. Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103). Regression lines and APCs are calculated using the Joinpoint Regression Program Version 3.3.1, April 2008, National Cancer Institute. The APC is the Annual Percent Change for the regression line segments. The APC shown on the graph is for the most recent trend.

The APC is significantly different from zero (p < 0.05).

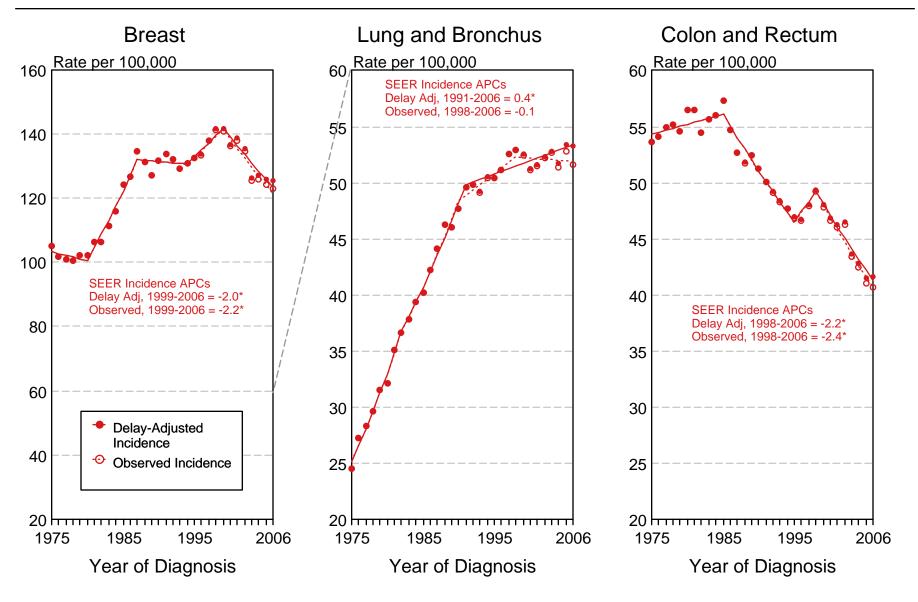
## SEER Observed Incidence and Delay Adjusted Incidence Rates<sup>a</sup> Males



Source: SEER 9 areas. Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103). Regression lines and APCs are calculated using the Joinpoint Regression Program Version 3.3.1, April 2008, National Cancer Institute. The APC is the Annual Percent Change for the regression line segments. The APC shown on the graph is for the most recent trend.

The APC is significantly different from zero (p < 0.05).

## SEER Observed Incidence and Delay Adjusted Incidence Rates<sup>a</sup> Females

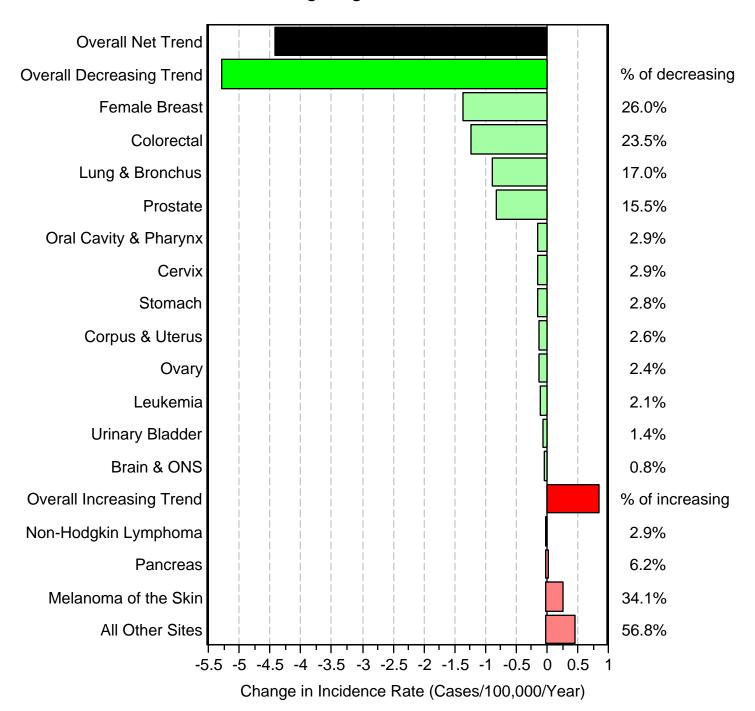


Source: SEER 9 areas. Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103). Regression lines and APCs are calculated using the Joinpoint Regression Program Version 3.3.1, April 2008, National Cancer Institute. The APC is the Annual Percent Change for the regression line segments. The APC shown on the graph is for the most recent trend.

The APC is significantly different from zero (p < 0.05).

# Partition of Trend in Incidence Rates for the Time Period 1999-2006 All Races, Both Sexes

Overall Decreasing Regression Coefficient: -4.43



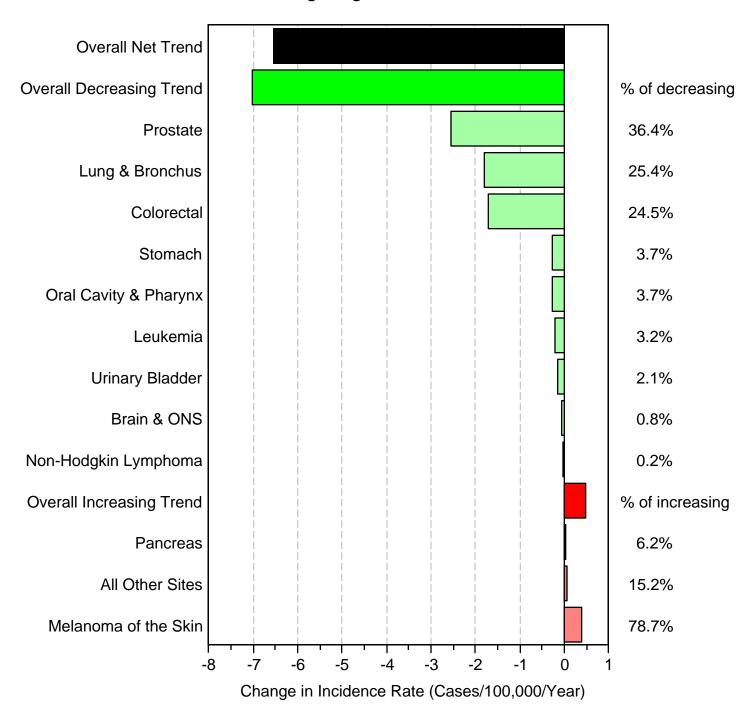
Source: SEER 13 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry and Rural Georgia).

Percents may not add to 100 due to rounding.

<sup>\*</sup>Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.

# Partition of Trend in Incidence Rates for the Time Period 1999-2006 All Races, Males

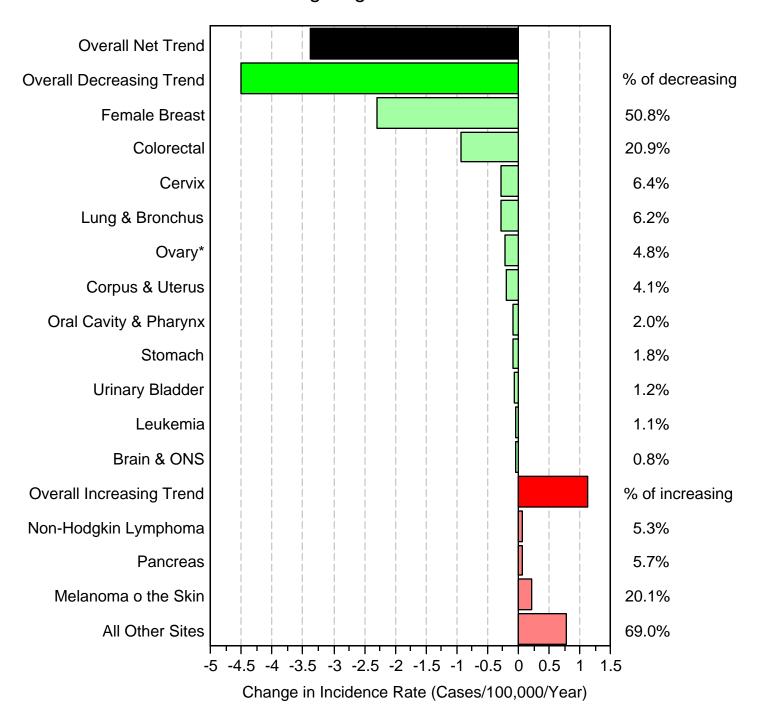
Overall Decreasing Regression Coefficient: -6.53



Source: SEER 13 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry and Rural Georgia). Percents may not add to 100 due to rounding.

# Partition of Trend in Incidence Rates for the Time Period 1999-2006 All Races, Females

Overall Decreasing Regression Coefficient: -3.39



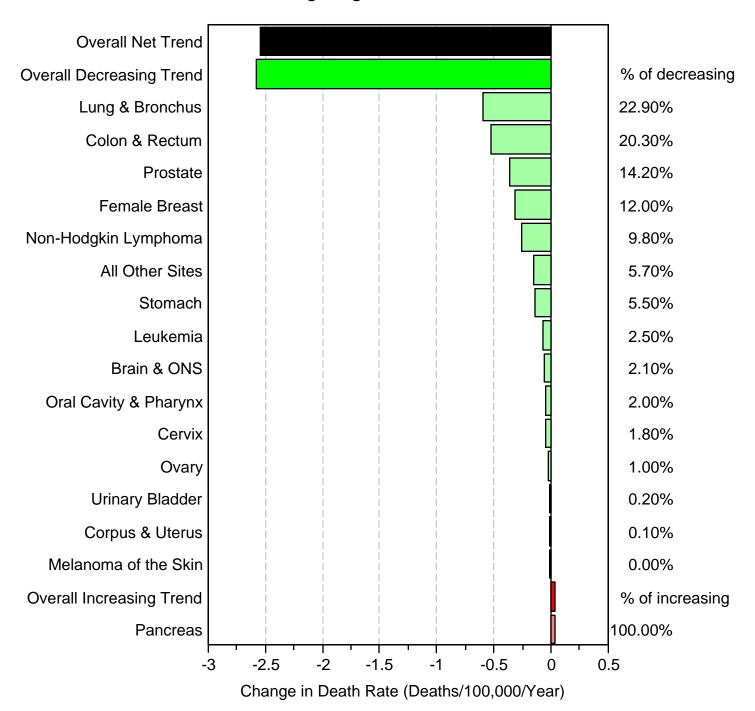
Source: SEER 13 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry and Rural Georgia).

Percents may not add to 100 due to rounding.

<sup>\*</sup>Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.

# Partition of Trend in Death Rates for the Time Period 1997-2006 All Races, Both Sexes

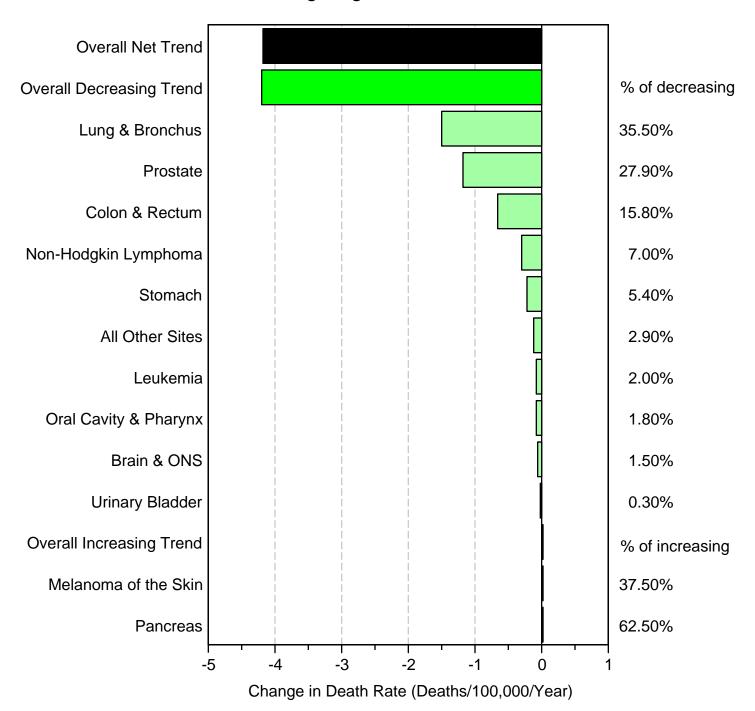
Overall Decreasing Regression Coefficient: -2.55



Source: US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention. Percents may not add to 100 due to rounding.

# Partition of Trend in Death Rates for the Time Period 1997-2006 All Races, Males

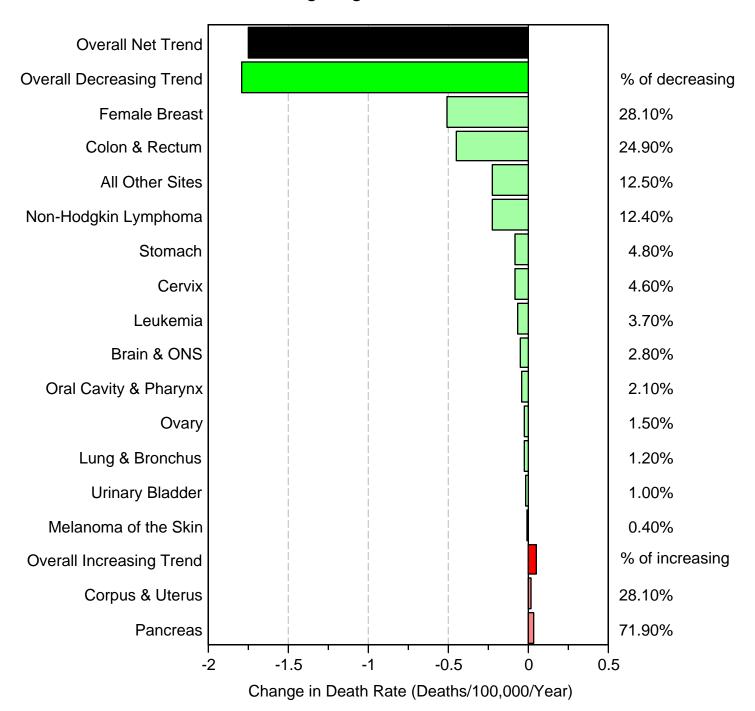
Overall Decreasing Regression Coefficient: -4.18



Source: US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention. Percents may not add to 100 due to rounding.

# Partition of Trend in Death Rates for the Time Period 1997-2006 All Races, Females

Overall Decreasing Regression Coefficient: -1.75



Source: US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention. Percents may not add to 100 due to rounding.