CANCER STATISTICS REVIEW 1975-2012: 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 28% of the US population. The 18 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 http://seer.cancer.gov/resources/.

This report presents statistics on 29 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 a chapter on adolescent and young adult cancers and a chapter 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 added to the ***CSR*** include:

- Confidence intervals for state ranks in mortality were added (Zhang S, et al., 2014).

Changes in methodology to ***CSR*** include:

- Delay factors are now based on information from the entire US and not just SEER areas. See http://surveillance.cancer.gov/delay/.

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 http://seer.cancer.gov/csr/. Statistics from SEER may also be obtained via ***FastStats*** (http://seer.cancer.gov/faststats/) or ***Cancer Query Systems*** (http://seer.cancer.gov/canques/), which allow the user to access over 10,000,000 cancer

statistics. The SEER Research Data file (http://seer.cancer.gov/data/) may be accessed by the public, either through ***SEER*Stat*** software or in an ASCII text format that can be analyzed with standard 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 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 rates and survival estimates 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 for specific cancers are not presented; trends in stage distributions are presented rarely. However, it is possible to compare survival 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 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; the seventh edition is the most recent (Edge et al., 2010). 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. New prognostic variables are introduced into staging for some cancers and so previously collected EOD data cannot determine new stage categories. There can be problems in assessing trends in stage of disease for these cancers. Only by reviewing the evolution of staging for a given cancer is it possible to determine what effects 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 is not appropriate (such as for leukemias, which are all considered to be distant at diagnosis).

Interpreting relative survival: The relative survival estimate is the ratio of observed survival to expected survival for a given patient cohort. Expected survival 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, relative survival estimates 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 the general population. However, smoking is also a risk factor for other diseases so smokers have a shorter life expectancy than nonsmokers. For this reason, expected survival estimates for lung cancer patients based on life tables for the general population will be unrealistically high; since relative survival = observed / expected, this will result in relative-survival estimates 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 an important variable and cannot be easily quantified. In addition, expected survival may not be appropriate 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. This should be considered when interpreting relative survival for these cancers.

Previous to the *CSR* for 1973–1996, the expected survival 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 estimates in this review. There may be small variations among survival estimates 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 28 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 mentioned 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 (http://apps.nccd.cdc.gov/uscs) and CINA+ Online (http://www.cancer-rates.info/naaccr/).

It is sometimes of interest to compare survival 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 is the same for both data sources. Furthermore, patients on clinical trials 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. 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 (http://seer.cancer.gov/popdata/).

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TECHNICAL NOTES

There are four measures commonly used to assess the impact of a cancer in the general population and are reported in this review. 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 estimate 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. 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. See the SEER Research Data (http://seer.cancer.gov/data/) for more information.

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**. In 2012, **Greater Georgia** (the parts of Georgia not included in Atlanta and Rural Georgia) was added to the SEER Program, with data retroactive to 2000.

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 18** areas; these are the SEER 13 plus Kentucky, Greater California, New Jersey, Louisiana, and Greater Georgia.

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 18 SEER geographic areas are used in this report; the given groups contain, respectively, approximately 9, 14, or 28 percent of the US population. By the end of the 2012 diagnosis year, the database of the 18 SEER 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 449,000.

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;
2) 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 et al., 1990). All cases before 1992 were machine-converted to ICD-O-2. Cases diagnosed 2001-2009 have been coded according to the third edition (**ICD-O-3**) (Fritz et al., 2000). Starting with patients diagnosed in 2007, the new multiple primary and histology coding rules may impact their incidence data for some cancer sites (e.g., female breast). However, the impact of the new rule on observed incidence is negligible for a majority of the cancer sites. To learn more about the multiple primary rules, visit: http://seer.cancer.gov/tools/mphrules/. Beginning with 2010 diagnoses, cases are coded based on ICD-O-3 updated for hematopoetic codes based on *WHO Classification of Tumours of Haematopoietic and Lymphoid Tissues* (2008). 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.

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 intercensal and Vintage 2013 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 (http://www.census.gov/popest/) 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. Vintage 2013 population estimates were used; these estimates were developed from the actual 2010 census results.

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 the 1997 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 http://www.cdc.gov/nchs/nvss/bridged_race.htm

Modifications made by the NCI to the population estimates are documented in “Population Estimates Used in NCI’s SEER*Stat Software” (http://seer.cancer.gov/popdata/methods.html) and the population data files are available for download (see “Download US Population Data” from http://seer.cancer.gov/popdata/download.html). 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 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 cancer incidence and mortality rates for American Indians and Alaska Natives (AI/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 AI/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. Beginning in 2013, CSR reporting

diagnoses 1975-2010, CHSDA counties were updated with 9 new counties designated as CHSDA. Four of these are in SEER areas. This addition was made to better reflect AI/AN populations that had been living in these counties.

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 US population, but for the Gulf area, an adjustment for displaced populations was made for 2005 state rates. For more details, see http://seer.cancer.gov/popdata/methods.html.

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 2014

The American Cancer Society (**ACS**) projects the numbers of new cancer cases and cancer deaths in the US in 2015 (American Cancer Society, 2015). The ACS projects incidence in 2014 based on incidence rates for 1995-2011 from 50 states and the District of Columbia, representing about 98% of the US population. These high-quality incidence data were submitted to the North American Association of Central Cancer Registries (NAACCR) by 50 states (and District of Columbia) belonging to the SEER Program and/or the National Program of Cancer Registries (NPCR). For additional details please refer to http://www.cancer.org/docroot/STT/STT_0.asp

LONG-TERM TRENDS, 1950-2012

Trends in cancer mortality from 1950 to 2012 are summarized by age both for all cancers combined and for lung cancer (Table 1-2). 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 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.

RELATIVE SURVIVAL

Relative survival (Ederer, 1961) was developed to provide an objective measure of the probability of survival of cancer in the absence of other causes of death. It is a measure that is not influenced by changes in mortality from other causes and, therefore, provides a useful measure for both tracking survival across time and comparisons between racial/ethnic groups or between registries. For most cancer registries, cause-of-death information obtained from death certificates is either unavailable or unreliable due to misclassification error. Therefore, instead of calculating the probability of surviving cancer in the usual (cause-specific) way, considering deaths from other causes as censoring events, relative survival compares the observed survival proportion of a group of cancer patients with the survival of a “similar” theoretical cancer-free group. Relative survival is formally defined as the ratio of the observed survival (all causes of death) of a cohort of cancer patients to the expected survival of a comparable set of cancer-free individuals. Since a cohort of cancer-free individuals is difficult to obtain, life tables representing survival of the general population are used instead. The underlying assumption is that the cancer deaths are a negligible proportion of all deaths. To learn more on this topic, visit: http://surveillance.cancer.gov/survival/measures.html.

Expected survival can be calculated using different methods which vary with respect to the definition of the matching group. The three most common methods are: Ederer I (Ederer, et al., 1961), Ederer II (Ederer and Heise, 1959) and Hakulinen (Hakulinen, 1982). In previous versions of SEER*Stat, relative survival has been calculated using Ederer I and Hakulinen methods, Ederer I being the default for calculations in the Cancer Statistics Review. In the Ederer I and Hakulinen methods, theoretical individuals are matched to each patient and are considered to be at risk for the entire follow-up. Hakulinen adjusts for potential follow-up times. Relative survival using expected rates derived via these two methods are very similar. However, recent research on relative survival has resuscitated the initial method to estimate expected rate: the Ederer II method. Although none of the three methods can be considered a gold standard, the Ederer II method has be shown to be in better alignment with the concept of net

cancer survival. For that reason, as of 2012, we have switched to Ederer II as our default choice for calculating expected rate in SEER*Stat and the CSR. For more detail regarding this topic, read Cho et al., 2012 at: http://surveillance.cancer.gov/reports/. As of 2013, Survival time was calculated using pre-calculated months based on the exact day information. See http://seer.cancer.gov/survivaltime/. As of 2014, the default censoring age for survival calculations has changed from 199 to 99 year when using newly available expected survival tables. Minimal changes may occur in survival for older age groups. See http://seer.cancer.gov/expsurvival/ for more information.

CAUSE-SPECIFIC SURVIVAL

Cause-specific survival is a net-survival measure representing survival of a specified cause of death in the (theoretical) absence of other causes of death. Estimates are calculated by specifying the cause of death. Individuals who die of causes other than the specified cause are censored. This requires a cause-of-death variable that accurately captures all causes related to the specific cause. Cancer registries use algorithms to process causes of death from death certificates in order to identify a single, disease-specific, underlying cause of death. In some cases, attribution of a single cause of death may be difficult and misattribution may occur. For example, a death may be attributed to the site of metastasis instead of the primary site (Percy et al., 1981).

To capture deaths related to the specific cancer but not coded as such, the SEER cause-specific death classification variable is defined by taking into account causes of deaths in conjunction with tumor sequence (i.e., only one tumor or the first of subsequent tumors), site of the original cancer diagnosis, and comorbidities (e.g., AIDS and/or site-related diseases). To learn more on this topic, please read the recent article published at the Journal of National Cancer Institute (Howlader et al., 2010) or visit: http://seer.cancer.gov/causespecific/.

CANCER PREVALENCE

Methods: In this report prevalence is calculated at 1/1/2012. 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 2011 from the SEER 9 registries; prevalence estimates for Asian Pacific Islanders and Hispanics use cases diagnosed from 1990 through 2011 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 include 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 http://surveillance.cancer.gov/prevalence/methods.html.

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 http://surveillance.cancer.gov/comprev/. 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 24-year 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 1/1/2012 *were estimated* by multiplying the SEER age- and race-specific prevalence proportions by the corresponding US population estimates based on the average of 2011 and 2012 population estimates from the US Census Bureau. 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 US diagnosed with cancer as children (ages 0-19), including those surviving for more than 36 years, is calculated 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 http://surveillance.cancer.gov/prevalence/.

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 37 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 20 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 2008-2012 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 et al., 2003) and (Fay, 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 http://surveillance.cancer.gov/devcan/.

US 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 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:

$$PD = [(\text{State Rate} - \text{Total US Rate})/\text{Total US Rate}] * 100$$

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

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

where SE_S and SE_U are the standard errors of a state rate and of the total US rate, respectively, and $\text{Cov}_{S,U}$ 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 ***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*.

The states are ranked according to the death rate, with 1 indicating the highest and 51 the lowest rate in the US. 95% confidence intervals for the rank are shown in parentheses () after the rank. The confidence intervals of ranks of age-adjusted rates are calculated using a simulation-based method (Zhang, 2014) implemented in the CI*Rank tool http://surveillance.cancer.gov/cirank/.

JOINPOINT REGRESSION ANALYSIS OF CANCER TRENDS

Joinpoint regression is a useful way to characterize trends in cancer rates and other heath indices (Kim et al., 2000). It characterizes segments using connected linear segments on a log scale (i.e. constant annual percent changes (APC's) between changepoints. The locations of the changepoints are optimally determined using by the data using a statistical algorithm. To achieve greater descriptive accuracy, a statistical algorithm finds the optimal number and location of places where a trend changes. The point (in time) when 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 continuous, piecewise-exponential function. Adjacent segments are connected at a joinpoint. The segments are connected because we assume that rates generally change smoothly, rather than "jump" abruptly. In each segment, the rates are assumed to grow or decay exponentially ($y = e^{mx+b}$), i.e., to change by a constant percentage each year. Thus the "slope" *m* in each segment can be associated with a fixed annual percent change (**APC**) by $APC = 100(e^m - 1)$.

Joinpoint analysis first assumes no joinpoints are needed to describe the data accurately, i.e., the trend over the entire interval 1975-2012 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. 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:

(1) Joinpoints occur only at exact years; the joinpoint is not necessarily the same as the data point for that year;
(2) The minimum time interval between consecutive joinpoints is three years;
(3) The first joinpoint is not earlier than two years after the first year of data;
(4) The last joinpoint is not later than two years before the last year of data;
(5) The maximum number of joinpoints is five for 1975-2012 (SEER 9) data and three for 1992-2012 (SEER 13) data.

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.

A Windows-based program, *Joinpoint*, is freely available at http://surveillance.cancer.gov/joinpoint/; it accepts data from the *SEER*Stat* program, as well as user-defined data. Further details on joinpoint regression may be found at the website. Starting with the 2012 edition of CSR, we have generated all our cancer trend statistics using a Linux-based *Joinpoint* program as opposed to the downloadable Windows-based program. As a result of using a different platform, in rare instances the results (e.g., # of joinpoints) may differ.

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 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 http://surveillance.cancer.gov/joinpoint/aapc.html.

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 2012 were first reported to the NCI in November 2014 and released to the public in April 2015. However, in each subsequent release of the SEER data, *records from all prior diagnosis years* (e.g., diagnosis years 2012 and earlier in the 2014 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. To adjust for this, statistical models have been developed to estimate "reporting delay-adjusted rates" for the SEER 9 since 2003 and SEER 13 registries since 2010 and the delay adjusted rates are reported

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).

In addition to registries funded by NCI-SEER, registries for the remainder of the U.S. are funded by the Centers for Disease Control and Prevention National Program of Cancer Registries (CDC-NPCR). (Some registries are co-funded by both NCI and CDC). Annual cancer incidence and survival data are reported by U.S. registries to NCI-SEER and CDC-NPCR, while registries throughout the US and Canada are report annually to the North American Association of Central Cancer Registries (NAACCR), a registry member organization. A coordinated effort by NCI, CDC and NAACCR has led to a unified approach to estimate and report delay adjusted rates.

Starting with data released in 2015 using the December 2014 NAACCR submission, delay adjustment factors have been produced by cancer site, registry, age group, gender, race, and year of diagnosis. The factors developed based on the NAACCR data are then linked to the appropriate cases (based on cancer site, registry, age group, gender, race, and year of diagnosis), to data submissions for each of the three partners in this joint effort (NCI-SEER, NAACCR, and CDC-NPCR). This will allow all the partners and users of these data to produce delay adjusted rates. See Appendix for details.
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 combined), 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.

For more information on cancer incidence rates adjusted for reporting delay, see http://surveillance.cancer.gov/delay/.

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** (α), is chosen; usually, α 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 α. 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 difference would occur; this number is called the ***P*-value** of the observed result. If the *P*-value of a comparison is less than α (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 α, 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 α (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 α = 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 α 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 α (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 —51% of the total population in 2010 (US Census Bureau, 2013)—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 estimates, the magnitude of the standard error is given as a measure of the reliability of a given rate: the greater the standard error, the more uncertainty associated with the estimated 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 estimate could not be calculated, as is noted in the table footnotes.

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

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

where CR_t is the t-year relative survival estimate, and for $i = 1, \ldots, t$,
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 sex-specific 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 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 population. The potential confounding effect of age is reduced when comparing age-adjusted rates based on the same standard population. For this report, the 2000 US standard 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 **ln(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(r) = mx + 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 subinterval 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: The observed survival estimate 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: The relative survival estimate is calculated using a procedure (Ederer et al., 1961; Ederer and Heise, 1959) whereby the observed survival estimate is adjusted for expected mortality. The relative survival estimate approximates the likelihood that a patient 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 estimate 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://surveillance.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; Edge et al., 2010).

SOFTWARE USED TO GENERATE THE SEER CANCER STATISTICS REVIEW

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

- SEER*Stat, 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 Joinpoint Regression Program are presented to better describe trends that are not constant over time.
- The DevCan system generated the probability of developing cancer from twelve SEER areas and the probability of dying from cancer from the total United States.
- The ComPrev software was used to calculate complete prevalence estimates.

Additional statistics can be obtained via SEER's Cancer Query Systems. 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 2015
All Races, By Sex

Primary Site	Estimated New Cases			Estimated Deaths		
	Total	Males	Females	Total	Males	Females
All Sites	1,658,370	848,200	810,170	589,430	312,150	277,280
Oral Cavity and Pharynx	45,780	32,670	13,110	8,650	6,010	2,640
Tongue	14,320	10,310	4,010	2,190	1,500	690
Mouth	12,920	7,750	5,170	2,120	1,200	920
Pharynx	15,520	12,380	3,140	2,660	2,010	650
Other Oral Cavity	3,020	2,230	790	1,680	1,300	380
Digestive System	291,150	163,050	128,100	149,300	86,540	62,760
Esophagus	16,980	16,980	3,410	15,590	12,600	2,990
Stomach	24,590	15,540	9,050	10,720	6,500	4,220
Small Intestine	9,410	4,960	4,450	1,260	670	590
Colon[a]	93,090	45,890	47,200	49,700	26,100	23,600
Rectum	39,610	23,200	16,410			
Anus, Anal Canal, and Anorectum	7,270	2,640	4,630	1,010	400	610
Liver and Intrahepatic Bile Duct	35,660	25,510	10,150	24,550	17,030	7,520
Gallbladder and Other Biliary	10,910	4,990	5,920	3,700	1,660	2,040
Pancreas	48,960	24,840	24,120	40,560	20,710	19,850
Other Digestive	4,670	1,910	2,760	2,210	870	1,340
Respiratory System	240,390	130,260	110,130	162,460	89,750	72,710
Larynx	13,560	10,720	2,840	3,640	2,890	750
Lung and Bronchus	221,200	115,610	105,590	158,040	86,380	71,660
Other Respiratory	5,630	3,930	1,700	780	480	300
Bones and Joints	2,970	1,640	1,330	1,490	850	640
Soft Tissue	11,930	6,610	5,320	4,870	2,600	2,270
Skin (excl. basal & squamous)	80,100	46,610	33,490	13,340	9,120	4,220
Melanoma of the Skin[b]	73,870	42,670	31,200	9,940	6,640	3,300
Other non-epithelial skin	6,230	3,940	2,290	3,400	2,480	920
Breast[b]	234,190	2,350	231,840	40,730	440	40,290
Genital Organs	329,330	231,050	98,280	58,670	28,230	30,440
Cervix (uterus)	12,900		12,900	4,100		4,100
Endometrium (uterus)	54,870		54,870	10,170		10,170
Ovary	21,290		21,290	14,180		14,180
Vulva	5,150		5,150	1,080		1,080
Vagina and other genital organs, female	4,070		4,070	910		910
Prostate	220,800	220,800		27,540	27,540	
Testis	8,430	8,430		380	380	
Penis and other genital organs, male	1,820	1,820		310	310	
Urinary System	138,710	96,580	42,130	30,970	21,110	9,860
Urinary Bladder	74,000	56,320	17,680	16,000	11,510	4,490
Kidney and Renal Pelvis	61,560	38,270	23,290	14,080	9,070	5,010
Ureter and other urinary organs	3,150	1,990	1,160	890	530	360
Eye and Orbit	2,580	1,360	1,220	270	140	130
Brain and Other Nervous System	22,850	12,900	9,950	15,320	8,940	6,380
Endocrine System	64,860	16,520	48,340	2,890	1,350	1,540
Thyroid	62,450	15,220	47,230	1,950	870	1,080
Other Endocrine	2,410	1,300	1,110	940	480	460
Lymphoma	80,900	44,950	35,950	20,940	12,140	8,800
Hodgkin Lymphoma	9,050	5,100	3,950	1,150	660	490
Non-Hodgkin Lymphoma	71,850	39,850	32,000	19,790	11,480	8,310
Myeloma	26,850	14,090	12,760	11,240	6,240	5,000
Leukemia	54,270	30,900	23,370	24,450	14,210	10,240
Acute lymphocytic leukemia	6,250	3,100	3,150	1,450	800	650
Chronic lymphocytic leukemia	14,620	8,140	6,480	4,650	2,830	1,820
Acute myeloid leukemia	20,830	12,730	8,100	10,460	6,110	4,350
Chronic myeloid leukemia	6,660	3,530	3,130	1,140	590	550
Other leukemia	5,910	3,400	2,510	6,750	3,880	2,870
All Other Sites[c]	31,510	16,660	14,850	43,840	24,480	19,360

Cancer Facts & Figures – 2015, American Cancer Society (ACS), Atlanta, Georgia, 2015.
Excludes basal and squamous cell skin and *in situ* carcinomas except urinary bladder.

Estimated new cases are based on 1995-2011 incidence rates reported by the North American Association of Central Cancer Registries (NAACCR).
Estimated deaths are based on 1997-2011 US mortality data, National Center for Health Statistics, Centers for Disease Control and Prevention.

[a] Estimated deaths for colon & rectum cancers are combined.

[b] Carcinoma *in situ* of the breast accounts for about 60,290 new cases annually, and melanoma *in situ* accounts for about 63,440 new cases annually.

[c] More deaths than cases suggests lack of specificity in recording underlying causes of death on death certificate.

Table 1.3

63-Year Trends in U.S. Cancer Death Rates[a]

All Races, Males and Females

All Primary Cancer Sites Combined

Age Group	1950	1981	2012	Annual Percent Change 1950-1981	Annual Percent Change 1981-2012	Total Percent Change 1950-2012
Ages 0-4	11.1	4.4	2.3	-3.2*	-2.5*	-79.5
Ages 5-14	6.7	4.1	2.2	-1.6*	-2.0*	-66.7
Ages 15-24	8.6	5.6	3.5	-1.2*	-1.5*	-58.7
Ages 25-34	20.4	13.3	8.8	-1.4*	-1.6*	-56.9
Ages 35-44	63.6	48.9	27.7	-0.8*	-1.9*	-56.5
Ages 45-54	174.2	172.9	105.5	0.1*	-1.7*	-39.5
Ages 55-64	391.3	430.7	291.0	0.4*	-1.5*	-25.6
Ages 65-74	710.0	823.9	647.0	0.5*	-0.9*	-8.9
Ages 75-84	1,167.2	1,229.5	1,151.5	0.2*	-0.3*	-1.3
Ages 85+	1,450.7	1,580.4	1,660.5	0.3*	0.1	14.5
All Ages	195.4	206.4	166.4	0.2*	-0.8*	-14.8

Lung and Bronchus Cancer[b]

Age Group	1950	1981	2012	Annual Percent Change 1950-1981	Annual Percent Change 1981-2012	Total Percent Change 1950-2012
Ages 0-4	-	-	-	-	-	-
Ages 5-14	-	-	-	-	-	-
Ages 15-24	0.2	0.1	0.1	-2.8*	-0.1	-65.0
Ages 25-34	0.8	0.6	0.4	-0.5	-2.3*	-47.6
Ages 35-44	4.6	9.5	2.9	2.5*	-2.9*	-37.6
Ages 45-54	20.2	52.5	24.2	3.2*	-2.7*	19.5
Ages 55-64	48.9	138.8	81.0	3.3*	-2.1*	65.7
Ages 65-74	59.4	238.1	211.4	4.1*	-0.5*	255.7
Ages 75-84	55.4	242.9	338.8	4.9*	0.9*	511.8
Ages 85+	42.3	178.9	324.9	5.1*	1.8*	668.2
All Ages	14.9	50.2	45.0	3.8*	-0.5*	201.5

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

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

[b] 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 1.4

Summary of Changes in Cancer Mortality, 1950-2012 and
5-Year Relative Survival (Percent), 1950-2011
Males and Females, By Primary Cancer Site

	Whites			
	U.S. Mortality Percent Change 1950-2012[a]		5-Year Relative Survival (Percent)[b]	
Primary Site	Total	APC	1950-1954	2005-2011
Oral cavity and pharynx	-51.1	-1.3*	46	68.1
Esophagus	26.9	0.7*	4	21.0
Stomach	-88.3	-3.4*	12	29.1
Colon and rectum	-56.3	-1.3*	37	66.9
Colon	-49.9	-1.0*	41	66.5
Rectum	-70.7	-2.3*	40	68.1
Liver and intrahepatic bile duct	58.2	0.8*	1	17.6
Pancreas	27.9	0.1*	1	7.8
Larynx	-41.4	-0.8*	52	64.6
Lung and bronchus	200.7	1.3*	6	18.8
Males	125.1	0.6*	5	16.2
Females	535.2	2.8*	9	21.4
Melanoma of the skin	170.8	1.3*	49	93.1
Breast(females)	-36.5	-0.7*	60	92.0
Cervix uteri	-81.9	-3.2*	59	71.0
Corpus and uterus, NOS	-66.2	-1.6*	72	85.3
Ovary	-13.3	-0.3*	30	45.6
Prostate	-37.7	-0.4*	43	99.7
Testis	-71.4	-2.8*	57	97.2
Urinary bladder	-28.8	-0.7*	53	79.4
Kidney and renal pelvis	30.9	0.4*	34	74.4
Brain and nervous system	55.0	0.5*	21	33.4
Thyroid	-43.6	-1.0*	80	98.5
Hodgkin lymphoma	-82.2	-3.3*	30	88.9
Non-Hodgkin lymphoma	79.2	0.9*	33	73.0
Myeloma	218.5	1.1*	6	48.1
Leukemia	-2.2	-0.3*	10	62.5
Childhood (Ages 0-14)	-72.6	-2.6*	20	84.5
All Sites	-15.2	-0.2*	35	69.7

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).

[a] 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.

[b] Survival estimates 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.
Survival estimates for 2005-2011 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 2012.

* The APC is significantly different from zero ($p<.05$).

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

All Races

Site	Incidence[a] (2008-2012)			US Mortality[b] (2008-2012)			Survival[c] (%) (2005-2011)		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
All Sites	454.8	516.6	411.2	171.2	207.9	145.4	66.5	66.8	66.2
Oral Cavity & Pharynx:	11.0	16.5	6.3	2.5	3.8	1.4	63.2	62.3	65.3
Lip	0.7	1.1	0.3	0.0	0.0	0.0	90.2	90.9	87.5
Tongue	3.3	4.9	1.8	0.6	0.9	0.4	63.4	63.6	62.8
Salivary gland	1.3	1.7	1.0	0.2	0.4	0.1	72.7	65.5	82.5
Floor of mouth	0.6	0.8	0.3	0.0	0.0	0.0	50.5	48.4	55.7
Gum & other oral cavity	1.5	1.8	1.3	0.4	0.4	0.3	59.6	56.5	63.2
Nasopharynx	0.6	0.9	0.4	0.2	0.3	0.1	59.6	58.1	63.2
Tonsil	1.9	3.2	0.6	0.2	0.4	0.1	71.7	72.6	67.5
Oropharynx	0.4	0.7	0.2	0.2	0.4	0.1	41.7	43.4	35.7
Hypopharynx	0.6	1.1	0.2	0.1	0.2	0.0	32.2	31.8	34.0
Other oral cavity & pharynx	0.2	0.3	0.1	0.5	0.8	0.2	39.3	41.9	32.7
Digestive System:	83.3	101.7	68.1	42.2	54.2	32.5	44.3	42.4	46.6
Esophagus	4.4	7.6	1.7	4.2	7.5	1.5	17.9	17.9	17.7
Stomach	7.4	10.1	5.3	3.4	4.6	2.4	29.3	27.6	31.9
Small intestine	2.2	2.6	1.9	0.4	0.4	0.3	65.5	65.1	66.0
Colon & Rectum:	42.4	48.9	37.1	15.5	18.6	13.1	64.9	65.0	64.9
Colon	30.1	33.5	27.4	-	-	-	64.2	64.6	63.9
Rectum	12.3	15.3	9.7	-	-	-	66.6	65.9	67.4
Anus, anal canal & anorectum	1.8	1.5	2.0	0.2	0.2	0.3	65.7	60.1	69.3
Liver & intrahepatic bile duct	8.2	12.7	4.3	6.0	8.8	3.5	17.2	16.8	18.3
Gallbladder	1.2	0.8	1.4	0.6	0.5	0.7	17.9	16.0	18.7
Other biliary	1.9	2.4	1.5	0.4	0.5	0.4	16.5	17.4	15.4
Pancreas	12.4	14.0	11.0	10.9	12.6	9.6	7.2	7.0	7.3
Retroperitoneum	0.4	0.4	0.4	0.1	0.1	0.1	55.4	54.5	56.3
Peritoneum, omentum & mesentery	0.6	0.1	1.0	0.3	0.1	0.4	33.2	44.5	32.3
Other digestive system	0.6	0.7	0.5	0.3	0.4	0.2	10.3	9.1	11.5
Respiratory System:	62.8	77.1	52.0	48.6	62.1	38.4	20.4	19.4	21.6
Nose, nasal cavity & middle ear	0.7	0.9	0.5	0.1	0.2	0.1	55.3	55.6	54.7
Larynx	3.2	5.8	1.2	1.1	1.9	0.4	60.6	61.5	56.9
Lung & bronchus	58.7	70.1	50.2	47.2	59.8	37.8	17.4	14.8	20.3
Pleura[d]	0.0	0.0	0.0	0.1	0.1	0.0	23.0	18.8	29.0
Trachea & other respiratory organs	0.2	0.3	0.1	0.1	0.1	0.0	51.6	53.6	46.4
Bones & joints	0.9	1.1	0.8	0.4	0.5	0.3	66.7	64.6	69.3
Soft tissue (including heart)	3.4	4.0	2.9	1.3	1.5	1.2	64.9	64.1	65.8
Skin (excl. basal & squamous):	23.5	31.0	18.2	3.6	5.6	2.1	90.9	89.1	93.3
Melanoma of the skin	21.6	28.2	16.8	2.7	4.1	1.7	91.5	89.7	93.8
Other non-epithelial skin	2.0	2.8	1.4	0.9	1.5	0.4	84.3	82.2	87.0
Breast	67.2	1.2	124.8	12.2	0.3	21.9	89.4	82.7	89.4
Breast (*in situ*)	16.7	0.1	31.7	-	-	-	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).

[a] SEER 18 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, New Jersey and Georgia excluding ATL/RG).

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

[c] SEER 18 areas. Based on follow-up of patients into 2012.

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

\- 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 (Percent)
By Primary Cancer Site, Sex and Time Period

All Races

Site	Incidence[a] (2008-2012) Total	Males	Females	US Mortality[b] (2008-2012) Total	Males	Females	Survival[c] (%) (2005-2011) Total	Males	Females
Female Genital System:	26.2	-	49.1	8.5	-	15.4	68.9	-	68.9
Cervix uteri	4.0	-	7.7	1.2	-	2.3	67.8	-	67.8
Corpus uteri	13.0	-	24.4	1.1	-	1.9	83.0	-	83.0
Uterus, NOS	0.4	-	0.7	1.4	-	2.5	27.2	-	27.2
Ovary[d]	6.5	-	12.1	4.3	-	7.7	45.6	-	45.6
Vagina	0.4	-	0.7	0.1	-	0.2	49.4	-	49.4
Vulva	1.3	-	2.4	0.3	-	0.5	71.2	-	71.2
Other female genital system	0.6	-	1.0	0.1	-	0.3	57.3	-	57.3
Male Genital System:	66.1	144.7	-	8.7	21.9	-	98.6	98.6	-
Prostate	62.7	137.9	-	8.5	21.4	-	98.9	98.9	-
Testis	2.8	5.6	-	0.1	0.3	-	95.3	95.3	-
Penis	0.4	0.9	-	0.1	0.2	-	68.9	68.9	-
Other male genital system	0.1	0.3	-	0.0	0.0	-	87.6	87.6	-
Urinary System:	36.8	58.5	20.1	8.6	13.7	4.9	75.0	76.0	72.9
Urinary bladder	20.3	35.8	8.7	4.4	7.7	2.2	77.4	78.9	72.9
Kidney & renal pelvis	15.6	21.3	10.8	3.9	5.7	2.5	73.2	72.6	74.1
Ureter	0.5	0.8	0.4	0.1	0.1	0.1	47.9	48.6	47.0
Other urinary system	0.3	0.5	0.2	0.1	0.2	0.1	50.0	54.4	42.2
Eye & Orbit	0.8	1.0	0.7	0.1	0.1	0.1	82.2	82.6	81.6
Brain & Nervous System:[e]	6.4	7.7	5.4	4.3	5.3	3.5	33.3	32.4	34.5
Brain	6.0	7.2	5.0	-	-	-	30.3	29.8	30.9
Cranial nerves & other nervous system	0.4	0.4	0.4	-	-	-	77.6	76.5	78.6
Endocrine System:	14.2	7.5	20.7	0.8	0.8	0.8	96.0	91.7	97.4
Thyroid	13.5	6.7	20.0	0.5	0.5	0.5	97.9	95.7	98.5
Other endocrine & thymus	0.7	0.8	0.7	0.3	0.3	0.3	64.8	65.2	64.5
Lymphoma:	22.3	26.9	18.7	6.5	8.4	5.1	72.3	71.0	73.8
Hodgkin lymphoma	2.7	3.0	2.4	0.4	0.5	0.3	85.9	85.1	86.9
Non-Hodgkin lymphoma	19.7	23.9	16.3	6.2	7.9	4.8	70.0	68.6	71.6
Myeloma	6.3	7.9	5.1	3.3	4.2	2.7	46.6	47.7	45.2
Leukemia:	13.3	17.0	10.4	7.0	9.4	5.2	58.5	59.6	57.1
Lymphocytic:	6.6	8.8	4.9	1.9	2.7	1.3	77.6	78.1	76.8
Acute lymphocytic	1.7	1.9	1.5	0.4	0.5	0.4	67.5	67.5	67.6
Chronic lymphocytic	4.5	6.2	3.2	1.4	2.0	0.9	81.7	81.7	81.8
Other lymphocytic	0.4	0.6	0.2	0.1	0.2	0.1	80.6	85.3	67.1
Myeloid & Monocytic:	6.1	7.5	5.0	3.4	4.5	2.6	37.5	37.3	37.6
Acute myeloid	4.0	4.8	3.3	2.8	3.7	2.2	25.9	24.8	27.1
Chronic myeloid	1.7	2.2	1.3	0.3	0.4	0.2	63.2	63.0	63.3
Acute monocytic	0.2	0.3	0.2	0.0	0.0	0.0	23.5	22.1	25.2
Other myeloid & monocytic	0.2	0.2	0.1	0.2	0.3	0.2	33.2	32.3	34.3
Other leukemia:	0.6	0.7	0.5	1.6	2.2	1.3	32.5	32.4	32.5
Other acute leukemia	0.2	0.3	0.2	0.6	0.8	0.5	19.6	19.7	19.5
Aleukemic, subleukemic & NOS	0.4	0.4	0.3	1.0	1.4	0.8	41.3	42.0	40.5
Kaposi Sarcoma[f]	0.5	1.0	0.1	-	-	-	72.9	72.2	77.4
Mesothelioma[f]	1.0	1.8	0.4	-	-	-	9.2	7.4	14.7
Ill-defined & unspecified	8.6	10.0	7.6	12.6	16.0	10.1	17.9	21.7	14.1

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).

[a] SEER 18 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, New Jersey and Georgia excluding ATL/RG).

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

[c] SEER 18 areas. Based on follow-up of patients into 2012.

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

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

[f] 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 1.6
Age-Adjusted SEER Incidence and U.S. Death Rates and 5-Year Relative Survival (Percent)
By Primary Cancer Site, Sex and Time Period

Whites

Site	Incidence[a] (2008-2012)			US Mortality[b] (2008-2012)			Survival[c] (%) (2005-2011)		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
All Sites	463.3	519.8	423.9	170.9	206.4	145.6	67.2	67.3	67.0
Oral Cavity & Pharynx:	11.5	17.1	6.4	2.4	3.7	1.3	64.8	64.4	65.9
Lip	0.8	1.3	0.4	0.0	0.0	0.0	90.3	90.8	88.2
Tongue	3.5	5.3	1.9	0.6	0.9	0.4	65.2	65.7	64.0
Salivary gland	1.3	1.8	1.0	0.2	0.4	0.1	71.5	64.0	82.5
Floor of mouth	0.6	0.8	0.4	0.0	0.0	0.0	51.8	49.8	56.7
Gum & other oral cavity	1.5	1.8	1.3	0.4	0.4	0.3	59.6	56.9	62.9
Nasopharynx	0.4	0.6	0.2	0.1	0.2	0.1	56.6	56.3	57.0
Tonsil	2.1	3.5	0.7	0.2	0.4	0.1	73.4	74.2	69.4
Oropharynx	0.4	0.7	0.2	0.2	0.3	0.1	45.5	47.8	37.1
Hypopharynx	0.6	1.0	0.2	0.1	0.1	0.0	35.1	35.3	34.5
Other oral cavity & pharynx	0.2	0.4	0.1	0.4	0.7	0.2	43.0	46.1	35.1
Digestive System:	80.7	98.5	65.9	40.9	52.5	31.3	44.9	43.0	47.3
Esophagus	4.6	8.0	1.7	4.3	7.7	1.5	18.6	18.8	18.0
Stomach	6.6	9.2	4.5	2.9	4.0	2.1	28.0	26.2	31.0
Small intestine	2.1	2.5	1.8	0.3	0.4	0.3	66.5	66.2	66.8
Colon & Rectum:	41.5	47.8	36.3	15.0	18.0	12.7	65.6	65.7	65.4
Colon	29.5	32.9	26.8	-	-	-	65.3	65.6	64.9
Rectum	12.0	15.0	9.5	-	-	-	66.4	66.0	67.0
Anus, anal canal & anorectum	1.9	1.5	2.3	0.2	0.2	0.3	67.0	61.7	70.2
Liver & intrahepatic bile duct	7.2	11.2	3.7	5.5	8.1	3.3	16.5	16.1	17.5
Gallbladder	1.1	0.8	1.4	0.6	0.4	0.7	18.0	16.4	18.7
Other biliary	1.8	2.3	1.4	0.4	0.5	0.4	16.6	17.9	14.9
Pancreas	12.3	14.0	10.8	10.8	12.5	9.4	7.1	6.9	7.3
Retroperitoneum	0.4	0.4	0.4	0.1	0.1	0.1	55.2	53.5	56.9
Peritoneum, omentum & mesentery	0.7	0.1	1.1	0.3	0.1	0.4	32.9	43.8	32.1
Other digestive system	0.6	0.6	0.5	0.3	0.4	0.2	10.7	9.9	11.3
Respiratory System:	64.4	77.2	54.5	49.2	61.9	39.6	20.7	19.8	21.8
Nose, nasal cavity & middle ear	0.7	0.9	0.5	0.1	0.2	0.1	57.3	58.6	55.6
Larynx	3.3	5.8	1.2	1.0	1.8	0.4	61.6	62.6	57.6
Lung & bronchus	60.2	70.3	52.7	47.9	59.7	39.1	17.7	15.1	20.5
Pleura[d]	0.0	0.1	0.0	0.1	0.1	0.0	18.9	19.5	18.0
Trachea & other respiratory organs	0.2	0.3	0.1	0.1	0.1	0.0	51.7	54.2	44.4
Bones & joints	1.0	1.2	0.8	0.4	0.5	0.4	67.0	64.6	69.9
Soft tissue (including heart)	3.4	4.1	2.9	1.3	1.6	1.1	65.8	64.8	67.0
Skin (excl. basal & squamous):	27.7	36.0	21.7	4.1	6.3	2.4	90.6	88.7	93.1
Melanoma of the skin	25.6	33.0	20.2	3.1	4.6	2.0	91.2	89.4	93.6
Other non-epithelial skin	2.1	3.0	1.5	1.0	1.7	0.5	82.3	79.8	85.5
Breast	68.1	1.2	127.9	11.8	0.3	21.3	90.6	84.5	90.6
Breast (*in situ*)	16.6	0.1	31.9	-	-	-	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).

[a] SEER 18 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, New Jersey and Georgia excluding ATL/RG).

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

[c] SEER 18 areas. Based on follow-up of patients into 2012.

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

\- 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 (Percent)
By Primary Cancer Site, Sex and Time Period

Whites

Site	Incidence[a] (2008-2012) Total	Males	Females	US Mortality[b] (2008-2012) Total	Males	Females	Survival[c] (%) (2005-2011) Total	Males	Females
Female Genital System:	26.7	-	50.8	8.3	-	15.2	70.2	-	70.2
Cervix uteri	3.9	-	7.7	1.1	-	2.1	69.2	-	69.2
Corpus uteri	13.3	-	25.2	1.0	-	1.8	85.0	-	85.0
Uterus, NOS	0.3	-	0.6	1.3	-	2.3	28.7	-	28.7
Ovary[d]	6.8	-	12.8	4.4	-	8.0	45.5	-	45.5
Vagina	0.4	-	0.7	0.1	-	0.2	50.4	-	50.4
Vulva	1.4	-	2.6	0.3	-	0.5	70.5	-	70.5
Other female genital system	0.6	-	1.1	0.1	-	0.3	56.6	-	56.6
Male Genital System:	63.9	138.2	-	8.1	20.3	-	98.9	98.9	-
Prostate	60.0	130.4	-	7.9	19.8	-	99.2	99.2	-
Testis	3.4	6.7	-	0.1	0.3	-	95.4	95.4	-
Penis	0.4	0.9	-	0.1	0.2	-	67.5	67.5	-
Other male genital system	0.1	0.3	-	0.0	0.0	-	88.1	88.1	-
Urinary System:	39.2	62.2	21.1	8.9	14.3	4.9	75.6	76.4	73.6
Urinary bladder	22.2	39.0	9.4	4.6	8.1	2.2	78.0	79.2	74.1
Kidney & renal pelvis	16.1	21.9	11.1	4.0	5.9	2.6	73.4	72.9	74.2
Ureter	0.6	0.9	0.4	0.1	0.2	0.1	48.6	49.6	47.1
Other urinary system	0.3	0.5	0.2	0.1	0.2	0.1	50.3	52.9	44.9
Eye & Orbit	0.9	1.1	0.8	0.1	0.1	0.1	81.4	82.1	80.6
Brain & Nervous System:[e]	7.1	8.4	5.9	4.7	5.7	3.8	32.1	31.5	33.0
Brain	6.7	8.0	5.5	-	-	-	29.2	29.0	29.5
Cranial nerves & other nervous system	0.4	0.4	0.4	-	-	-	78.8	77.2	80.4
Endocrine System:	15.0	7.9	22.0	0.8	0.8	0.7	96.4	92.5	97.6
Thyroid	14.3	7.2	21.3	0.5	0.5	0.5	98.1	95.9	98.7
Other endocrine & thymus	0.7	0.8	0.6	0.3	0.3	0.3	64.8	66.2	63.3
Lymphoma:	23.5	28.1	19.7	6.8	8.7	5.3	72.8	71.7	74.1
Hodgkin lymphoma	2.9	3.2	2.6	0.4	0.5	0.3	86.1	85.6	86.8
Non-Hodgkin lymphoma	20.6	24.9	17.1	6.4	8.2	5.0	70.6	69.4	72.0
Myeloma	5.8	7.5	4.5	3.1	4.0	2.4	46.4	48.1	44.2
Leukemia:	14.0	17.9	10.9	7.2	9.7	5.4	58.9	59.8	57.7
Lymphocytic:	7.2	9.4	5.4	2.0	2.8	1.4	77.9	78.4	77.2
Acute lymphocytic	1.9	2.1	1.7	0.5	0.6	0.4	67.6	67.4	67.8
Chronic lymphocytic	4.9	6.6	3.5	1.4	2.1	0.9	81.8	81.8	81.8
Other lymphocytic	0.4	0.7	0.2	0.1	0.2	0.1	81.6	85.7	69.4
Myeloid & Monocytic:	6.2	7.8	5.0	3.5	4.6	2.7	36.5	36.3	36.7
Acute myeloid	4.1	5.0	3.4	2.9	3.8	2.3	25.2	24.0	26.5
Chronic myeloid	1.7	2.2	1.3	0.3	0.4	0.2	62.0	62.1	61.8
Acute monocytic	0.2	0.3	0.2	0.0	0.0	0.0	24.4	23.2	25.9
Other myeloid & monocytic	0.2	0.2	0.1	0.2	0.3	0.2	32.2	31.3	33.4
Other leukemia:	0.6	0.7	0.5	1.7	2.2	1.3	32.1	31.1	33.1
Other acute leukemia	0.2	0.3	0.2	0.6	0.8	0.5	17.6	17.6	17.8
Aleukemic, subleukemic & NOS	0.4	0.4	0.3	1.1	1.4	0.8	42.3	42.0	42.5
Kaposi Sarcoma[f]	0.5	0.9	0.1	-	-	-	77.8	76.7	86.2
Mesothelioma[f]	1.1	2.0	0.5	-	-	-	9.3	7.4	15.1
Ill-defined & unspecified	8.8	10.2	7.6	12.7	16.1	10.1	18.6	23.0	14.0

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).

[a] SEER 18 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, New Jersey and Georgia excluding ATL/RG).

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

[c] SEER 18 areas. Based on follow-up of patients into 2012.

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

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

[f] 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
Age-Adjusted SEER Incidence and U.S. Death Rates and 5-Year Relative Survival (Percent)
By Primary Cancer Site, Sex and Time Period

Blacks

Site	Incidence[a] (2008-2012) Total	Males	Females	US Mortality[b] (2008-2012) Total	Males	Females	Survival[c] (%) (2005-2011) Total	Males	Females
All Sites	478.0	590.1	401.2	202.0	261.5	166.3	60.5	63.5	57.2
Oral Cavity & Pharynx:	9.3	14.6	5.2	2.9	5.0	1.3	44.6	40.5	53.3
Lip	0.1	0.1	0.1	-	-	-	75.7	67.9	84.5
Tongue	2.2	3.6	1.1	0.5	0.9	0.3	38.3	36.8	41.0
Salivary gland	1.0	1.1	1.0	0.2	0.3	0.1	74.9	66.4	81.4
Floor of mouth	0.5	0.9	0.3	0.0	0.0	-	34.6	32.6	40.8
Gum & other oral cavity	1.4	1.7	1.1	0.3	0.5	0.2	53.3	46.5	60.6
Nasopharynx	0.6	1.1	0.3	0.3	0.4	0.1	52.4	50.5	57.6
Tonsil	1.7	3.0	0.6	0.3	0.5	0.1	52.1	53.1	47.6
Oropharynx	0.6	1.0	0.2	0.4	0.6	0.2	22.2	21.9	22.4
Hypopharynx	0.9	1.7	0.3	0.1	0.3	0.1	17.5	15.7	27.3
Other oral cavity & pharynx	0.3	0.4	0.2	0.8	1.5	0.3	22.2	25.4	15.3
Digestive System:	103.6	127.9	85.9	55.9	73.5	43.5	39.5	36.1	43.1
Esophagus	4.6	7.6	2.5	4.0	7.0	2.0	12.2	11.0	15.1
Stomach	10.9	14.6	8.4	6.3	9.2	4.4	28.2	24.9	32.2
Small intestine	3.6	4.4	3.1	0.6	0.7	0.5	63.4	61.6	64.9
Colon & Rectum:	52.3	61.2	46.0	21.4	26.9	17.8	58.1	56.6	59.5
Colon	39.1	44.6	35.3	-	-	-	56.5	55.4	57.4
Rectum	13.2	16.6	10.7	-	-	-	62.7	59.6	66.1
Anus, anal canal & anorectum	1.9	2.1	1.6	0.3	0.3	0.2	56.9	50.7	62.4
Liver & intrahepatic bile duct	9.8	16.2	4.8	7.9	12.5	4.3	12.4	11.2	15.7
Gallbladder	1.5	1.3	1.7	0.9	0.8	1.0	14.2	11.7	15.2
Other biliary	1.7	2.0	1.5	0.4	0.4	0.4	12.6	10.5	14.4
Pancreas	15.7	17.2	14.4	13.5	15.0	12.3	6.6	6.4	6.7
Retroperitoneum	0.4	0.4	0.4	0.0	0.0	0.0	49.1	49.7	48.3
Peritoneum, omentum & mesentery	0.4	0.1	0.6	0.2	0.1	0.2	34.1	41.4	31.9
Other digestive system	0.8	1.0	0.6	0.4	0.5	0.3	9.4	7.4	11.1
Respiratory System:	72.5	100.8	53.1	52.8	77.1	36.6	17.6	16.8	18.8
Nose, nasal cavity & middle ear	0.6	0.8	0.4	0.2	0.2	0.1	43.3	40.9	47.2
Larynx	4.7	8.8	1.7	1.8	3.6	0.6	53.3	53.8	51.2
Lung & bronchus	67.0	90.9	50.8	50.6	73.1	35.8	14.3	12.0	17.1
Pleura[d]	-	-	-	0.0	0.1	0.0	-	-	-
Trachea & other respiratory organs	0.2	0.3	0.1	0.1	0.1	0.1	51.5	54.0	46.6
Bones & joints	0.8	0.9	0.6	0.4	0.6	0.3	65.2	63.4	67.1
Soft tissue (including heart)	3.3	3.5	3.2	1.5	1.5	1.5	60.7	60.9	60.5
Skin (excl. basal & squamous):	2.2	2.3	2.0	0.8	1.2	0.6	83.8	82.5	84.3
Melanoma of the skin	1.1	1.2	1.0	0.4	0.5	0.4	69.4	60.9	75.0
Other non-epithelial skin	1.1	1.2	1.0	0.4	0.7	0.2	94.4	96.9	91.2
Breast	70.8	1.7	124.4	17.8	0.5	30.2	79.5	70.4	79.6
Breast (*in situ*)	17.2	0.3	30.6	-	-	-	100.0	91.6	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).

[a] SEER 18 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, New Jersey and Georgia excluding ATL/RG).

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

[c] SEER 18 areas. Based on follow-up of patients into 2012.

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

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

Table 1.7 - continued
Age-Adjusted SEER Incidence and U.S. Death Rates and 5-Year Relative Survival (Percent)
By Primary Cancer Site, Sex and Time Period

Blacks

Site	Incidence[a] (2008-2012) Total	Males	Females	US Mortality[b] (2008-2012) Total	Males	Females	Survival[c] (%) (2005-2011) Total	Males	Females
Female Genital System:	26.4	-	46.6	11.3	-	19.1	55.3	-	55.3
Cervix uteri	5.1	-	9.2	2.2	-	4.0	58.2	-	58.2
Corpus uteri	12.8	-	22.5	1.8	-	3.0	63.7	-	63.7
Uterus, NOS	0.9	-	1.5	2.8	-	4.7	22.1	-	22.1
Ovary[d]	5.6	-	9.8	3.9	-	6.7	35.7	-	35.7
Vagina	0.6	-	1.0	0.2	-	0.3	47.3	-	47.3
Vulva	1.0	-	1.8	0.2	-	0.3	73.5	-	73.5
Other female genital system	0.5	-	0.9	0.2	-	0.3	55.4	-	55.4
Male Genital System:	92.4	217.3	-	16.7	46.7	-	96.8	96.8	-
Prostate	91.2	214.5	-	16.6	46.3	-	96.9	96.9	-
Testis	0.7	1.5	-	0.1	0.1	-	92.3	92.3	-
Penis	0.4	1.0	-	0.1	0.2	-	66.7	66.7	-
Other male genital system	0.1	0.2	-	0.0	0.1	-	77.1	77.1	-
Urinary System:	31.4	47.5	20.2	7.5	11.1	5.2	68.4	69.8	66.0
Urinary bladder	12.6	21.4	6.9	3.5	5.3	2.5	64.3	69.2	54.7
Kidney & renal pelvis	18.1	25.1	12.8	3.8	5.6	2.5	71.6	70.6	73.1
Ureter	0.3	0.4	0.2	0.1	0.1	0.0	34.4	32.9	36.0
Other urinary system	0.4	0.6	0.3	0.1	0.1	0.1	40.5	51.8	29.9
Eye & Orbit	0.2	0.3	0.2	0.0	0.0	0.0	85.2	83.2	88.3
Brain & Nervous System:[e]	4.1	4.9	3.6	2.5	3.1	2.1	38.6	35.6	41.7
Brain	3.7	4.5	3.2	-	-	-	35.3	32.9	37.8
Cranial nerves & other nervous system	0.4	0.4	0.4	-	-	-	71.7	69.4	73.4
Endocrine System:	8.9	4.5	12.7	0.9	0.8	0.9	92.9	83.5	95.4
Thyroid	8.0	3.5	11.8	0.5	0.4	0.6	97.0	94.1	97.5
Other endocrine & thymus	0.9	1.0	0.9	0.4	0.4	0.3	61.1	54.8	67.3
Lymphoma:	17.3	20.8	14.4	4.7	6.1	3.7	66.9	63.2	71.1
Hodgkin lymphoma	2.7	3.0	2.4	0.3	0.4	0.3	83.1	79.8	86.6
Non-Hodgkin lymphoma	14.6	17.8	12.1	4.4	5.7	3.5	62.8	59.1	67.2
Myeloma	12.8	15.1	11.2	6.2	7.6	5.3	47.3	46.9	47.7
Leukemia:	10.6	13.5	8.5	6.0	7.9	4.7	52.3	54.0	50.4
Lymphocytic:	4.5	6.2	3.2	1.6	2.4	1.1	67.9	68.6	67.0
Acute lymphocytic	1.0	1.2	0.8	0.3	0.4	0.2	63.7	66.6	58.9
Chronic lymphocytic	3.2	4.6	2.3	1.2	1.9	0.8	70.8	69.6	72.3
Other lymphocytic	0.3	0.4	0.1	0.1	0.1	0.1	55.9	63.4	33.7
Myeloid & Monocytic:	5.4	6.4	4.7	2.7	3.4	2.2	41.2	41.3	41.0
Acute myeloid	3.5	4.0	3.1	2.2	2.7	1.8	28.3	27.7	28.7
Chronic myeloid	1.6	2.0	1.4	0.3	0.4	0.3	64.3	64.0	64.5
Acute monocytic	0.1	0.2	0.1	0.0	-	-	25.3	16.0	32.7
Other myeloid & monocytic	0.1	0.2	0.1	0.1	0.2	0.1	41.8	40.6	42.3
Other leukemia:	0.7	0.9	0.6	1.7	2.1	1.4	28.8	31.9	25.5
Other acute leukemia	0.2	0.3	0.2	0.5	0.6	0.4	25.3	26.4	23.9
Aleukemic, subleukemic & NOS	0.5	0.6	0.4	1.2	1.5	1.0	30.1	34.3	26.2
Kaposi Sarcoma[f]	1.1	2.2	0.2	-	-	-	58.3	58.4	55.7
Mesothelioma[f]	0.5	1.0	0.2	-	-	-	10.5	8.2	17.7
Ill-defined & unspecified	9.8	11.0	8.9	14.2	18.7	11.2	13.3	12.8	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).
[a] SEER 18 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, New Jersey and Georgia excluding ATL/RG).
[b] US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.
[c] SEER 18 areas. Based on follow-up of patients into 2012.
[d] Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.
[e] Due to coding changes, Brain & Nervous System mortality are no longer shown separately.
[f] 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 1.8
SEER Incidence and U.S. Mortality Trends by Primary Cancer Site and Sex
All Races, 2003-2012

Site	Incidence[a] Total APC	Incidence[a] Males APC	Incidence[a] Females APC	US Mortality[b] Total APC	US Mortality[b] Males APC	US Mortality[b] Females APC
All Sites	-0.7*	-1.3*	-0.1	-1.5*	-1.7*	-1.4*
Oral Cavity & Pharynx:	0.5*	0.5*	0.2	-0.7*	-0.5	-1.2*
Lip	-2.5*	-2.9*	-1.7*	-1.1	-1.4	-0.5
Tongue	2.0*	2.2*	1.2*	-0.5	-0.3	-0.8
Salivary gland	0.2	-0.3	0.7	0.6	0.7	0.2
Floor of mouth	-2.7*	-3.1*	-1.8	-8.5*	-8.3*	-8.1*
Gum & other oral cavity	-0.3	-0.5	0.0	-1.1*	-0.9	-1.5*
Nasopharynx	-1.0	-0.8	-1.4	-1.0*	-1.1*	-1.3
Tonsil	2.7*	2.9*	1.7*	2.0*	2.4*	0.5
Oropharynx	1.6*	1.8*	0.4	1.7*	1.6*	1.8
Hypopharynx	-2.6*	-2.5*	-3.3*	-1.8	-2.1	-0.3
Other oral cavity & pharynx	0.0	0.5	-1.8	-2.5*	-2.2*	-4.2*
Digestive System:	-1.2*	-1.3*	-1.2*	-0.9*	-0.9*	-1.2*
Esophagus	-1.2*	-1.0*	-2.4*	-0.8*	-0.8*	-1.7*
Stomach	-1.1*	-1.4*	-0.7*	-2.7*	-3.1*	-2.6*
Small intestine	2.0*	1.6*	2.4*	0.1	0.2	-0.1
Colon & Rectum:	-2.8*	-3.1*	-2.6*	-2.7*	-2.8*	-2.8*
Colon	-3.1*	-3.5*	-2.9*	-	-	-
Rectum	-2.0*	-2.3*	-1.8*	-	-	-
Anus, anal canal & anorectum	1.7*	0.7	2.4*	3.7*	4.9*	3.1*
Liver & intrahepatic bile duct	3.1*	3.2*	2.8*	2.6*	2.8*	2.0*
Gallbladder	-0.3	-0.1	-0.3	-0.9*	-0.3	-1.2*
Other biliary	0.8*	1.2*	0.0	-1.8*	-1.9*	-1.8*
Pancreas	0.7*	0.8*	0.6*	0.3*	0.3*	0.3*
Retroperitoneum	-0.5	0.1	-1.3	-2.2	-2.6*	-1.9
Peritoneum, omentum & mesentery	-2.5*	-1.4	-2.4*	0.3	2.1	0.0
Other digestive system	2.7*	3.0*	2.4*	1.7	2.3	1.1
Respiratory System:	-1.9*	-2.5*	-1.3*	-2.1*	-2.8*	-1.4*
Nose, nasal cavity & middle ear	-0.1	0.4	-1.0	-1.7	-1.7	-1.9
Larynx	-1.9*	-2.0*	-1.9*	-2.5*	-2.8*	-2.3*
Lung & bronchus	-1.9*	-2.6*	-1.2*	-2.1*	-2.8*	-1.4*
Pleura	0.4	-1.0	-	-3.7*	-4.4*	-1.8
Trachea & other respiratory organs	-1.8	-1.8	-2.2*	-2.4	-2.1	-2.8
Bones & joints	0.2	0.8	-0.6	-0.5	-0.3	-0.9
Soft tissue (including heart)	0.6	0.5	0.7	0.7*	1.0*	0.2
Skin (excl. basal & squamous):	1.2*	1.5*	0.7	0.4	0.5*	-0.3
Melanoma of the skin	1.2*	1.5*	0.7	0.0	0.2	-0.4
Other non-epithelial skin	1.0	1.5*	0.1	1.3*	1.4*	0.4
Breast	0.0	1.2*	0.1	-2.1*	-0.8	-1.9*
Breast (*in situ*)	0.8	1.7	0.9	-	-	-

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).

[a] SEER 18 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, New Jersey and Georgia excluding ATL/RG).

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

* 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
All Races, 2003-2012

Site	Incidence[a] Total APC	Incidence[a] Males APC	Incidence[a] Females APC	US Mortality[b] Total APC	US Mortality[b] Males APC	US Mortality[b] Females APC
Female Genital System:	0.1	-	0.3*	-1.1*	-	-0.8*
Cervix uteri	-1.5*	-	-1.5*	-1.1*	-	-0.9*
Corpus uteri	1.3*	-	1.5*	-0.6	-	-0.2
Uterus, NOS	3.1*	-	3.6*	1.8*	-	2.1*
Ovary[c]	-1.8*	-	-1.6*	-2.3*	-	-2.1*
Vagina	0.3	-	0.6	-1.0*	-	-0.6
Vulva	1.0*	-	1.2*	1.2*	-	1.6*
Other female genital system	6.9*	-	6.9*	4.5*	-	4.8*
Male Genital System:	-2.3*	-2.7*	-	-2.6*	-3.3*	-
Prostate	-2.4*	-2.9*	-	-2.6*	-3.4*	-
Testis	0.6*	0.6*	-	0.4	0.3	-
Penis	1.3	0.8	-	-0.9	-1.2	-
Other male genital system	1.4	1.3	-	3.6	3.2	-
Urinary System:	0.1	-0.2	0.1	-0.3*	-0.3*	-1.0*
Urinary bladder	-0.9*	-1.0*	-1.3*	0.1	0.0	-0.5*
Kidney & renal pelvis	1.5*	1.5*	1.3*	-0.9*	-0.7*	-1.4*
Ureter	-1.5*	-1.4	-2.3	-0.9	-0.4	-1.8*
Other urinary system	2.2*	1.7	2.4	2.2	2.7	0.8
Eye & Orbit	-0.1	-0.4	0.0	1.0	0.5	1.3
Brain & Nervous System:[d]	-0.6*	-0.4	-0.8*	0.0	0.1	-0.2
Brain	-0.5*	-0.3	-0.7*	-	-	-
Cranial nerves & other nervous system	-1.8*	-1.4	-2.1*	-	-	-
Endocrine System:	5.1*	4.3*	5.3*	0.5	1.0*	0.1
Thyroid	5.4*	5.1*	5.5*	0.9	1.6*	0.4
Other endocrine & thymus	-0.1	-0.7	0.3	-0.2	0.0	-0.3
Lymphoma:	-0.4	-0.2	-0.6*	-2.4*	-2.2*	-2.9*
Hodgkin lymphoma	-0.8	-0.9	-0.8	-3.0*	-2.6*	-3.6*
Non-Hodgkin lymphoma	-0.3	-0.2	-0.5*	-2.4*	-2.1*	-2.8*
Myeloma	1.1*	1.3*	0.8	-1.1*	-0.9*	-1.4*
Leukemia:	0.2	0.0	0.3	-0.9*	-0.9*	-1.0*
Lymphocytic:	-0.4	-0.6*	-0.3	-1.4*	-1.5*	-1.5*
Acute lymphocytic	0.9	0.4	1.7*	-1.3*	-1.6*	-0.7
Chronic lymphocytic	-0.8*	-0.9*	-0.9*	-1.5*	-1.5*	-1.9*
Other lymphocytic	-1.2*	-0.9	-2.4	-1.0	-2.1*	0.2
Myeloid & Monocytic:	1.4*	1.3*	1.4*	-0.2	-0.2	-0.4
Acute myeloid	2.1*	2.0*	2.3*	0.2	0.2	-0.1
Chronic myeloid	0.8*	0.6	1.0	-3.3*	-3.4*	-3.3*
Acute monocytic	-4.2*	-2.6	-6.0*	-3.6*	-5.5*	-2.2
Other myeloid & monocytic	-1.3	0.0	-3.2*	0.7	0.5	0.2
Other leukemia:	-4.1*	-3.8*	-4.6*	-1.5*	-1.5*	-1.7*
Other acute leukemia	-3.7*	-3.0*	-5.1*	-4.2*	-4.4*	-4.1*
Aleukemic, subleukemic & NOS	-4.2*	-4.3*	-4.3	0.2	0.4	-0.1
Kaposi Sarcoma[e]	-2.9*	-3.1*	-2.2*	-	-	-
Mesothelioma[e]	-1.5*	-1.9*	-0.3	-	-	-
Ill-defined & unspecified	-2.7*	-2.5*	-2.9*	-2.1*	-2.0*	-2.4*

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).

[a] SEER 18 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, New Jersey and Georgia excluding ATL/RG).

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

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

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

[e] 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
Whites, 2003-2012

Site	Incidence[a] Total APC	Incidence[a] Males APC	Incidence[a] Females APC	US Mortality[b] Total APC	US Mortality[b] Males APC	US Mortality[b] Females APC
All Sites	-0.7*	-1.3*	-0.1	-1.4*	-1.6*	-1.3*
Oral Cavity & Pharynx:	0.9*	0.9*	0.6*	-0.2	0.0	-1.1*
Lip	-2.3*	-2.8*	-1.4*	-1.0	-1.1	-1.0
Tongue	2.3*	2.5*	1.7*	0.0	0.2	-0.6
Salivary gland	0.5	0.0	0.8	0.7	0.7	0.3
Floor of mouth	-2.3*	-3.0*	-0.8	-7.4*	-6.7*	-8.2*
Gum & other oral cavity	-0.2	-0.5	0.2	-0.7	-0.2	-1.2
Nasopharynx	-0.6	-0.5	-1.0	-1.5*	-1.4*	-2.1
Tonsil	3.4*	3.6*	2.4*	2.9*	3.3*	1.0
Oropharynx	2.2*	2.5*	1.0	2.2*	2.2*	1.7*
Hypopharynx	-2.4*	-2.4*	-2.9	-1.4	-1.5	-0.6
Other oral cavity & pharynx	0.7	1.0	-1.2	-1.9*	-1.5*	-3.7*
Digestive System:	-1.2*	-1.2*	-1.2*	-0.8*	-0.8*	-1.1*
Esophagus	-0.5	-0.3	-2.0*	-0.2	-0.2	-1.1*
Stomach	-0.7*	-0.9*	-0.7*	-2.8*	-3.2*	-2.7*
Small intestine	2.0*	1.7*	2.4*	0.1	0.3	-0.2
Colon & Rectum:	-2.9*	-3.3*	-2.6*	-2.7*	-2.9*	-2.8*
Colon	-3.2*	-3.6*	-2.9*	-	-	-
Rectum	-2.2*	-2.6*	-1.9*	-	-	-
Anus, anal canal & anorectum	1.8*	0.5	2.7*	3.9*	4.7*	3.6*
Liver & intrahepatic bile duct	3.8*	3.8*	3.5*	2.8*	3.0*	2.2*
Gallbladder	-0.1	0.1	-0.1	-1.3*	-0.8	-1.5*
Other biliary	0.7*	1.0	-0.1	-1.9*	-1.9*	-1.9*
Pancreas	0.9*	0.9*	0.7*	0.5*	0.5*	0.4*
Retroperitoneum	-0.9	-0.5	-1.6	-1.7	-2.3	-1.4
Peritoneum, omentum & mesentery	-2.7*	-0.9	-2.7*	0.4	2.7*	0.1
Other digestive system	2.0*	2.1*	2.1*	1.8	2.5	1.0
Respiratory System:	-1.8*	-2.4*	-1.2*	-2.0*	-2.7*	-1.3*
Nose, nasal cavity & middle ear	0.0	0.9	-1.6	-1.8	-1.5	-2.5
Larynx	-1.7*	-1.8*	-1.9*	-2.2*	-2.5*	-2.1*
Lung & bronchus	-1.8*	-2.5*	-1.2*	-2.0*	-2.7*	-1.3*
Pleura	-0.5	-0.5	-	-3.8*	-4.4*	-1.9
Trachea & other respiratory organs	-1.9	-2.1	-2.0*	-2.6	-2.3	-3.2
Bones & joints	0.6	1.1*	-0.1	-0.4	-0.2	-0.7
Soft tissue (including heart)	0.8*	0.9*	0.6	0.7*	1.1*	0.1
Skin (excl. basal & squamous):	1.2*	1.4*	0.8	0.6*	0.7*	-0.1
Melanoma of the skin	1.2*	1.4*	0.8	0.2	0.4	-0.2
Other non-epithelial skin	1.2*	1.4*	0.6	1.7*	1.7*	0.7
Breast	-0.1	0.9	0.0	-2.1*	-0.9	-1.9*
Breast (*in situ*)	0.4	1.1	0.6	-	-	-

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).

[a] SEER 18 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, New Jersey and Georgia excluding ATL/RG).

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

* 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 - continued
SEER Incidence and U.S. Mortality Trends by Primary Cancer Site and Sex
Whites, 2003-2012

Site	Incidence[a] Total APC	Incidence[a] Males APC	Incidence[a] Females APC	US Mortality[b] Total APC	US Mortality[b] Males APC	US Mortality[b] Females APC
Female Genital System:	0.1	-	0.3*	-1.2*	-	-0.9*
Cervix uteri	-1.1*	-	-1.0*	-0.8*	-	-0.6*
Corpus uteri	1.1*	-	1.3*	-0.8*	-	-0.4
Uterus, NOS	2.1	-	2.7*	1.5*	-	1.9*
Ovary[c]	-1.8*	-	-1.6*	-2.3*	-	-2.1*
Vagina	0.5	-	0.9	-0.5	-	-0.1
Vulva	1.3*	-	1.5*	1.3*	-	1.8*
Other female genital system	7.0*	-	7.0*	5.0*	-	5.3*
Male Genital System:	-2.5*	-3.0*	-	-2.4*	-3.2*	-
Prostate	-2.7*	-3.2*	-	-2.5*	-3.3*	-
Testis	0.5*	0.5*	-	1.1	1.0	-
Penis	1.2	0.7	-	-0.7	-1.0	-
Other male genital system	1.4	1.3	-	3.6	3.4	-
Urinary System:	0.1	-0.2	0.1	-0.2*	-0.2*	-0.9*
Urinary bladder	-0.9*	-1.0*	-1.2*	0.3*	0.1	-0.3
Kidney & renal pelvis	1.5*	1.5*	1.3*	-0.8*	-0.6*	-1.4*
Ureter	-1.2	-1.1	-2.0	-0.9	-0.4	-1.7*
Other urinary system	2.6*	1.8	3.4*	2.8	2.9	1.9
Eye & Orbit	0.1	-0.3	0.4	1.0	0.4	1.4
Brain & Nervous System:[d]	-0.5*	-0.4	-0.7*	0.1	0.2	-0.2
Brain	-0.5	-0.3	-0.7*	-	-	-
Cranial nerves & other nervous system	-1.6*	-1.7*	-1.5	-	-	-
Endocrine System:	5.1*	4.4*	5.3*	0.3	0.7*	0.0
Thyroid	5.4*	5.1*	5.5*	0.7	1.4*	0.1
Other endocrine & thymus	-0.4	-0.8	-0.1	-0.4	-0.5	-0.3
Lymphoma:	-0.4	-0.3	-0.6*	-2.4*	-2.2*	-2.8*
Hodgkin lymphoma	-0.9	-1.0	-0.9	-2.9*	-2.5*	-3.5*
Non-Hodgkin lymphoma	-0.3	-0.2	-0.5*	-2.4*	-2.1*	-2.8*
Myeloma	1.1*	1.4*	0.5	-1.0*	-0.9*	-1.4*
Leukemia:	0.2	0.0	0.3	-0.8*	-0.8*	-0.9*
Lymphocytic:	-0.5*	-0.8*	-0.2	-1.3*	-1.4*	-1.3*
Acute lymphocytic	1.1*	0.4	2.1*	-1.1*	-1.4*	-0.6
Chronic lymphocytic	-1.0*	-1.2*	-1.1*	-1.4*	-1.3*	-1.7*
Other lymphocytic	-1.5*	-1.2	-2.8*	-0.8	-1.8*	0.4
Myeloid & Monocytic:	1.5*	1.4*	1.4*	-0.1	-0.1	-0.4
Acute myeloid	2.2*	2.0*	2.4*	0.2	0.2	-0.1
Chronic myeloid	0.8*	0.8	0.8	-3.2*	-3.2*	-3.4*
Acute monocytic	-3.9*	-2.0	-6.3*	-3.6*	-5.8*	-1.9
Other myeloid & monocytic	-0.8	0.3	-2.4	0.7	0.3	0.7
Other leukemia:	-3.8*	-3.9*	-4.1*	-1.5*	-1.4*	-1.7*
Other acute leukemia	-3.4*	-3.1*	-4.4*	-4.1*	-4.3*	-4.0*
Aleukemic, subleukemic & NOS	-4.1*	-4.4*	-4.0	0.3	0.4	-0.1
Kaposi Sarcoma[e]	-4.2*	-4.5*	-2.4	-	-	-
Mesothelioma[e]	-1.2	-1.6	-0.1	-	-	-
Ill-defined & unspecified	-2.6*	-2.3*	-3.0*	-1.9*	-1.8*	-2.3*

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).

[a] SEER 18 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, New Jersey and Georgia excluding ATL/RG).

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

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

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

[e] 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 1.10
SEER Incidence and U.S. Mortality Trends by Primary Cancer Site and Sex
Blacks, 2003-2012

Site	Incidence[a] Total APC	Incidence[a] Males APC	Incidence[a] Females APC	US Mortality[b] Total APC	US Mortality[b] Males APC	US Mortality[b] Females APC
All Sites	-1.1*	-2.1*	-0.2	-2.1*	-2.6*	-1.6*
Oral Cavity & Pharynx:	-2.3*	-2.4*	-2.3*	-3.4*	-3.8*	-2.3*
Lip	-	-	-	-	-	-
Tongue	-1.1	-0.8	-1.8	-3.5*	-4.4*	-1.8
Salivary gland	-1.8*	-2.7	-1.1	1.6	2.7	0.0
Floor of mouth	-3.8*	-3.3	-5.0*	-	-	-
Gum & other oral cavity	-3.0*	-4.0*	-2.1*	-5.2*	-5.8*	-4.3*
Nasopharynx	-2.6	-2.9	-1.8	-3.2*	-3.7*	-2.1
Tonsil	-0.5	-0.2	-1.6	-1.3	-1.2*	-1.7
Oropharynx	-2.2	-2.6	-	-0.1	-1.1	2.0
Hypopharynx	-5.1*	-5.0*	-5.9*	-3.8*	-5.3*	-
Other oral cavity & pharynx	-4.0	-3.9	-	-5.1*	-4.8*	-6.5*
Digestive System:	-1.6*	-1.7*	-1.6*	-1.6*	-1.5*	-1.9*
Esophagus	-4.8*	-5.0*	-4.5*	-4.5*	-4.5*	-4.8*
Stomach	-2.2*	-3.5*	-0.9	-3.0*	-3.3*	-2.8*
Small intestine	2.5*	3.1*	1.9	0.4	-0.3	0.8
Colon & Rectum:	-2.8*	-3.0*	-2.8*	-3.0*	-2.6*	-3.4*
Colon	-3.2*	-3.5*	-3.1*	-	-	-
Rectum	-1.7*	-1.5*	-2.0*	-	-	-
Anus, anal canal & anorectum	1.7*	2.4	0.9	3.8*	6.9*	0.8
Liver & intrahepatic bile duct	3.2*	3.4*	2.3*	2.5*	2.7*	1.6*
Gallbladder	0.6	2.4	0.2	1.5	3.5	0.8
Other biliary	1.8	2.0	1.7	-0.9	-0.9	-0.7
Pancreas	-0.3	-0.3	-0.3	-0.4*	-0.5	-0.2
Retroperitoneum	0.9	-	0.8	-7.0*	-	-
Peritoneum, omentum & mesentery	1.6	-	2.9	-0.4	-	-0.3
Other digestive system	4.7*	6.8	2.6	1.0	0.5	1.3
Respiratory System:	-2.2*	-3.0*	-1.2*	-2.7*	-3.4*	-1.8*
Nose, nasal cavity & middle ear	-0.9	-1.7	0.6	-1.4	-3.6	1.8
Larynx	-2.9*	-3.3*	-1.2	-3.8*	-4.2*	-2.7*
Lung & bronchus	-2.1*	-2.9*	-1.3*	-2.6*	-3.4*	-1.8*
Pleura	-	-	-	-	-	-
Trachea & other respiratory organs	-2.4	-	-	-0.3	-	-
Bones & joints	-1.1	1.7	-3.1	-0.7	-0.4	-1.5
Soft tissue (including heart)	-0.1	-0.9	0.6	0.7	0.1	1.1
Skin (excl. basal & squamous):	-0.9	-0.1	-1.7*	-1.8*	-1.7	-1.9
Melanoma of the skin	0.0	-0.4	0.0	-1.5*	-1.6	-1.6
Other non-epithelial skin	-1.8	0.2	-3.5*	-2.2	-1.7	-2.4
Breast	0.5	2.2	0.7*	-1.5*	-0.4	-1.4*
Breast (*in situ*)	1.8*	-	2.0*	-	-	-

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).

[a] SEER 18 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, New Jersey and Georgia excluding ATL/RG).

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

* 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 1.10 - continued
SEER Incidence and U.S. Mortality Trends by Primary Cancer Site and Sex
Blacks, 2003-2012

Site	Incidence[a] Total APC	Incidence[a] Males APC	Incidence[a] Females APC	US Mortality[b] Total APC	US Mortality[b] Males APC	US Mortality[b] Females APC
Female Genital System:	0.3	-	0.5	-0.6*	-	-0.4
Cervix uteri	-3.2*	-	-3.1*	-2.4*	-	-2.2*
Corpus uteri	2.5*	-	2.7*	-0.5	-	-0.2
Uterus, NOS	4.6*	-	4.9*	2.7*	-	2.9*
Ovary[c]	-1.6*	-	-1.4*	-1.7*	-	-1.6*
Vagina	0.0	-	-0.2	-3.3*	-	-3.0*
Vulva	0.1	-	0.2	1.8	-	2.1
Other female genital system	5.1*	-	4.9*	2.1	-	2.0
Male Genital System:	-2.4*	-2.9*	-	-3.3*	-3.9*	-
Prostate	-2.4*	-2.9*	-	-3.4*	-3.9*	-
Testis	3.2*	3.2*	-	-3.7	-3.9	-
Penis	1.1	1.0	-	-3.1	-4.0	-
Other male genital system	-	-	-	-	-	-
Urinary System:	1.0	0.8	1.1	-1.1*	-1.0*	-1.4*
Urinary bladder	-0.6	-0.3	-1.5	-0.9	-0.7	-1.5*
Kidney & renal pelvis	2.3*	1.7*	2.8*	-1.2*	-1.3*	-1.1
Ureter	-3.1*	-	-	0.2	-	-
Other urinary system	1.1	-	-	-2.4	-	-4.3
Eye & Orbit	0.1	-	-	-	-	-
Brain & Nervous System:[d]	-0.4	0.2	-0.8	0.1	0.0	0.4
Brain	0.0	0.3	-0.1	-	-	-
Cranial nerves & other nervous system	-3.8	-2.1	-5.1*	-	-	-
Endocrine System:	4.4*	2.6	5.0*	1.2	3.0*	0.1
Thyroid	4.9*	3.2*	5.3*	1.2	2.6	0.5
Other endocrine & thymus	1.0	0.5	1.3	1.3	3.3	-0.7
Lymphoma:	-0.4	-0.6	-0.1	-1.7*	-1.1	-2.3*
Hodgkin lymphoma	0.1	0.2	-0.5	-2.2	-2.0	-2.6*
Non-Hodgkin lymphoma	-0.4	-0.8	-0.1	-1.7*	-1.0	-2.3*
Myeloma	0.7*	0.1	1.1	-1.4*	-1.4*	-1.5*
Leukemia:	-0.3	-0.6	0.1	-1.4*	-1.6*	-1.3*
Lymphocytic:	-0.5	-0.7	-0.2	-2.1*	-2.5*	-1.6*
Acute lymphocytic	1.5	1.2	1.7	-2.1*	-3.1*	-0.4
Chronic lymphocytic	-1.1	-1.2	-0.9	-2.0*	-2.1	-2.2*
Other lymphocytic	-0.3	-	-	-3.3	-7.7	-
Myeloid & Monocytic:	0.7	0.1	1.2	-1.0*	-1.0	-1.2
Acute myeloid	1.7	1.5	2.1	-0.4	-0.2	-0.5
Chronic myeloid	-0.5	-2.7	1.3	-4.7*	-6.3*	-3.0
Acute monocytic	-3.1*	-	-	-	-	-
Other myeloid & monocytic	-	-	-	-0.7	2.7	-5.5
Other leukemia:	-5.1*	-4.6	-5.5	-1.4*	-1.5	-1.3
Other acute leukemia	-3.9	-	-	-4.0*	-4.8*	-3.5*
Aleukemic, subleukemic & NOS	-5.6	-6.0*	-4.8	-0.2	0.1	-0.4
Kaposi Sarcoma[e]	-0.5	-0.4	-	-	-	-
Mesothelioma[e]	-2.5	-3.3	-	-	-	-
Ill-defined & unspecified	-2.9*	-3.5*	-2.2*	-3.2*	-3.1*	-3.2*

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).

[a] SEER 18 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, New Jersey and Georgia excluding ATL/RG).

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

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

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

[e] 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 1.11

Age Distribution (%) of Incidence Cases by Site, 2008-2012

All Races, Both Sexes

Site	Age at Diagnosis <20	20-34	35-44	45-54	55-64	65-74	75-84	85+	All Ages	Cases
All Sites	1.0	2.7	5.2	14.0	24.3	25.8	19.2	7.9	100.0%	2,021,319
Oral Cavity & Pharynx:	0.6	2.0	5.4	19.4	29.9	22.4	14.2	6.1	100.0%	50,243
Lip	0.2	1.3	5.1	15.1	19.4	23.2	22.6	13.3	100.0%	2,949
Tongue	0.1	1.7	4.9	19.1	33.2	23.8	12.7	4.5	100.0%	15,001
Salivary gland	2.1	6.2	7.8	14.1	20.1	19.5	19.5	10.8	100.0%	5,640
Floor of mouth	0.1	0.3	2.7	19.9	32.6	25.8	13.8	4.8	100.0%	2,542
Gum & other oral cavity	0.6	2.1	4.5	12.5	23.0	24.6	20.8	11.8	100.0%	6,743
Nasopharynx	3.3	6.1	13.2	24.6	25.6	15.5	9.4	2.4	100.0%	2,833
Tonsil	0.0	0.5	5.8	29.3	38.7	17.8	6.3	1.6	100.0%	8,842
Oropharynx	0.1	0.2	3.9	19.7	33.2	25.7	13.2	4.1	100.0%	1,869
Hypopharynx	0.0	0.1	1.3	16.8	32.2	28.3	16.9	4.5	100.0%	2,840
Other oral cavity & pharynx	0.3	0.9	2.7	17.2	29.0	27.4	14.8	7.6	100.0%	984
Digestive System:	0.2	1.1	3.5	13.5	23.4	24.6	22.5	11.2	100.0%	369,672
Esophagus	0.0	0.3	1.9	11.5	27.3	28.2	22.0	8.7	100.0%	19,533
Stomach	0.1	1.7	4.4	12.3	20.6	25.2	23.8	11.9	100.0%	32,533
Small intestine	0.1	1.6	5.0	15.9	25.5	25.1	19.5	7.4	100.0%	9,711
Colon & Rectum:	0.1	1.3	4.1	14.5	21.5	23.9	22.6	12.1	100.0%	187,380
Colon	0.1	1.1	3.5	12.2	19.8	24.5	25.0	13.9	100.0%	132,251
Rectum	0.1	1.7	5.7	20.1	25.4	22.5	16.9	7.6	100.0%	55,129
Colon & Rectum (Male)	0.1	1.3	4.1	15.3	23.9	25.7	20.9	8.8	100.0%	96,805
Colon & Rectum (Female)	0.1	1.3	4.2	13.7	18.8	22.0	24.4	15.5	100.0%	90,575
Anus, anal canal & anorectum	0.0	1.1	6.8	24.3	27.9	19.8	13.9	6.3	100.0%	8,154
Liver & intrahepatic bile duct	0.9	0.8	2.1	15.8	35.0	22.7	16.7	6.0	100.0%	37,716
Gallbladder	0.0	0.3	2.6	8.4	19.6	26.9	27.6	14.5	100.0%	5,034
Other biliary	0.1	0.6	2.4	8.3	20.0	26.2	28.1	14.3	100.0%	8,183
Pancreas	0.1	0.5	2.1	9.2	21.9	26.8	26.1	13.5	100.0%	54,521
Retroperitoneum	8.8	4.6	6.4	15.7	24.0	21.6	14.6	4.4	100.0%	1,734
Peritoneum, omentum & mesentery	0.4	1.2	2.2	10.6	24.0	33.1	22.8	5.7	100.0%	2,632
Other digestive system	0.2	0.9	2.7	10.5	21.0	23.8	27.3	13.7	100.0%	2,541
Respiratory System:	0.1	0.4	1.4	8.8	22.0	31.6	26.9	8.9	100.0%	274,851
Nose, nasal cavity & middle ear	1.5	3.6	7.3	14.7	23.9	22.4	17.8	8.8	100.0%	3,044
Larynx	0.0	0.5	2.6	15.0	31.2	28.9	16.9	4.9	100.0%	14,778
Lung & bronchus	0.0	0.3	1.2	8.4	21.4	31.9	27.6	9.1	100.0%	256,093
Lung & bronchus (Male)	0.0	0.2	1.1	8.1	22.5	32.6	27.2	8.3	100.0%	134,952
Lung & bronchus (Female)	0.0	0.3	1.4	8.7	20.2	31.2	28.1	10.1	100.0%	121,141
Pleura	4.3	1.4	4.3	9.4	16.7	20.3	27.5	15.9	100.0%	138
Trachea & other respiratory organs	16.2	19.4	8.5	11.2	14.0	14.0	11.3	5.4	100.0%	798
Bones & joints	27.6	15.7	9.6	12.3	12.6	10.6	8.1	3.6	100.0%	4,016
Soft tissue (including heart)	8.9	9.0	9.3	14.8	18.3	16.7	15.5	7.5	100.0%	14,716
Skin (excl. basal & squamous):	0.6	5.9	8.7	16.3	21.5	21.0	17.6	8.4	100.0%	103,847
Melanoma of the skin	0.5	6.0	8.9	16.9	22.1	21.1	16.8	7.7	100.0%	95,285
Other non-epithelial skin	1.4	5.5	6.4	9.5	14.8	19.9	25.8	16.9	100.0%	8,562
Breast (Female)	0.0	1.8	9.1	21.6	25.6	21.9	14.2	5.7	100.0%	298,318
Breast (Female -*in situ*)	0.0	0.7	10.2	28.0	27.3	21.1	10.6	2.1	100.0%	75,327

Source: SEER 18 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, New Jersey and Georgia excluding ATL/RG).
Percents may not sum to 100 due to rounding.

Table 1.11 - continued

Age Distribution (%) of Incidence Cases by Site, 2008-2012

All Races, Both Sexes

Site	Age at Diagnosis <20	20-34	35-44	45-54	55-64	65-74	75-84	85+	All Ages	Cases
Female Genital System:	0.4	4.1	8.7	18.6	28.2	21.3	12.9	5.8	100.0%	118,185
Cervix uteri	0.1	14.0	24.4	24.0	17.9	11.0	5.8	2.8	100.0%	17,107
Corpus uteri	0.0	1.6	5.6	17.9	34.4	24.4	12.0	4.1	100.0%	59,987
Uterus, NOS	0.2	1.5	5.4	15.3	25.7	21.4	16.5	14.1	100.0%	1,787
Ovary[a]	1.3	3.8	7.2	18.4	23.8	21.1	16.2	8.1	100.0%	29,084
Vagina	0.8	2.0	4.9	13.7	24.0	22.4	20.3	11.9	100.0%	1,819
Vulva	0.2	2.0	6.1	15.3	19.8	19.8	22.1	14.9	100.0%	5,868
Other female genital system	0.8	5.4	5.4	14.4	25.5	24.6	16.8	7.2	100.0%	2,533
Male Genital System:	0.3	2.0	1.5	9.9	31.8	35.4	15.5	3.6	100.0%	301,241
Prostate	0.0	0.0	0.6	9.7	33.0	36.9	16.1	3.7	100.0%	287,020
Testis	6.4	49.2	23.5	13.4	5.2	1.3	0.7	0.3	100.0%	11,956
Penis	0.1	1.7	5.6	12.5	22.5	25.4	22.2	10.0	100.0%	1,729
Other male genital system	2.6	2.6	6.5	12.5	22.6	19.6	20.5	13.1	100.0%	536
Urinary System:	0.5	1.0	3.4	10.9	21.9	27.2	24.4	10.6	100.0%	161,675
Urinary bladder	0.1	0.4	1.4	6.8	18.6	28.2	30.1	14.4	100.0%	88,150
Kidney & renal pelvis	1.2	1.8	6.0	16.4	26.3	25.8	16.8	5.6	100.0%	69,802
Ureter	0.0	0.1	0.5	4.1	14.9	29.4	35.6	15.4	100.0%	2,344
Other urinary system	0.0	0.6	1.4	7.4	16.9	26.0	30.8	16.9	100.0%	1,379
Eye & Orbit	12.8	3.2	6.3	14.3	20.2	20.8	15.5	6.9	100.0%	3,589
Brain & Nervous System:	12.9	9.0	8.1	14.3	20.1	17.4	13.2	5.0	100.0%	28,221
Brain	12.1	8.9	7.9	14.2	20.4	17.8	13.6	5.1	100.0%	26,479
Cranial nerves & other nervous system	24.9	11.0	11.7	15.2	14.9	11.4	7.9	3.0	100.0%	1,742
Endocrine System:	2.9	14.6	18.8	23.5	20.1	12.8	5.8	1.4	100.0%	62,383
Thyroid	1.8	15.1	19.4	24.1	20.1	12.6	5.6	1.4	100.0%	59,113
Other endocrine & thymus	21.7	7.3	8.3	13.5	19.6	17.2	9.8	2.7	100.0%	3,270
Lymphoma:	3.0	7.0	6.9	12.9	19.7	21.9	20.0	8.5	100.0%	97,842
Hodgkin lymphoma	12.9	31.5	14.0	12.8	11.0	9.0	6.5	2.3	100.0%	11,615
Non-Hodgkin lymphoma	1.6	3.7	6.0	12.9	20.9	23.7	21.8	9.4	100.0%	86,227
Myeloma	0.0	0.6	3.1	11.3	23.2	28.2	24.3	9.3	100.0%	27,833
Leukemia:	9.6	4.5	5.0	10.3	17.3	21.2	21.2	10.9	100.0%	57,796
Lymphocytic:	14.4	2.8	3.3	9.2	18.1	21.6	20.3	10.2	100.0%	28,909
Acute lymphocytic	57.6	10.2	5.9	7.2	7.8	5.7	4.0	1.5	100.0%	7,207
Chronic lymphocytic	0.0	0.2	1.7	9.2	21.2	27.6	26.4	13.6	100.0%	19,914
Other lymphocytic	0.5	2.0	9.9	18.5	24.7	18.7	18.0	7.8	100.0%	1,788
Myeloid & Monocytic:	4.8	6.4	7.1	11.7	16.8	21.1	21.8	10.3	100.0%	26,264
Acute myeloid	5.5	6.2	6.0	10.5	16.6	22.0	22.9	10.2	100.0%	17,132
Chronic myeloid	2.4	7.3	9.5	14.3	17.8	19.6	19.4	9.7	100.0%	7,441
Acute monocytic	9.9	5.7	7.4	11.8	17.4	18.0	19.9	9.7	100.0%	998
Other myeloid & monocytic	4.3	5.5	6.8	10.5	12.4	22.2	21.4	16.9	100.0%	693
Other leukemia:	4.5	3.8	4.2	7.4	12.9	16.2	25.5	25.5	100.0%	2,623
Other acute leukemia	7.9	4.4	3.6	7.8	11.8	15.2	24.1	25.2	100.0%	1,027
Aleukemic, subleukemic & NOS	2.3	3.4	4.6	7.1	13.7	16.9	26.4	25.6	100.0%	1,596
Kaposi Sarcoma	0.4	21.2	24.3	22.1	10.0	7.5	8.1	6.4	100.0%	2,269
Mesothelioma	0.1	0.6	1.7	6.2	15.8	27.6	33.1	14.9	100.0%	4,276
Ill-defined & unspecified	0.5	0.9	2.3	9.1	18.5	22.6	26.6	19.6	100.0%	37,934

Source: SEER 18 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, New Jersey and Georgia excluding ATL/RG).
Percents may not sum to 100 due to rounding.

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

Table 1.12
Median Age of Cancer Patients at Diagnosis[a], 2008-2012
By Primary Cancer Site, Race and Sex

Site	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
All Sites	65.0	66.0	65.0	66.0	67.0	65.0	62.0	63.0	62.0
Oral Cavity & Pharynx:	62.0	61.0	64.0	63.0	62.0	66.0	59.0	59.0	58.0
Lip	68.0	67.0	72.0	68.0	68.0	72.0	60.0	62.0	54.0
Tongue	62.0	61.0	64.0	62.0	61.0	64.0	59.0	60.0	58.0
Salivary gland	64.0	67.0	61.0	66.0	68.0	63.0	55.5	56.0	55.0
Floor of mouth	63.0	62.0	66.0	63.0	62.0	67.0	60.0	60.0	60.0
Gum & other oral cavity	67.0	65.0	71.0	68.0	66.0	72.0	60.5	60.0	62.0
Nasopharynx	55.0	55.0	55.0	58.0	58.0	59.0	54.0	54.0	54.0
Tonsil	58.0	58.0	60.0	58.0	58.0	60.0	58.0	58.0	58.0
Oropharynx	62.0	62.0	65.0	63.0	62.0	66.0	60.0	59.5	60.0
Hypopharynx	64.0	64.0	66.0	65.0	64.0	67.0	60.0	60.0	61.0
Other oral cavity & pharynx	64.0	63.0	70.0	65.0	63.0	70.0	62.0	61.0	68.0
Digestive System:	68.0	66.0	70.0	69.0	67.0	71.0	64.0	63.0	65.0
Esophagus	67.0	66.0	71.0	68.0	67.0	73.0	64.0	63.0	64.0
Stomach	69.0	68.0	71.0	69.0	68.0	71.0	67.0	66.0	69.0
Small intestine	65.0	65.0	66.0	66.0	65.0	66.0	63.0	63.0	63.0
Colon & Rectum:	68.0	66.0	70.0	69.0	67.0	72.0	64.0	63.0	65.0
Colon	70.0	68.0	72.0	71.0	69.0	74.0	65.0	64.0	66.0
Rectum	63.0	63.0	64.0	64.0	64.0	65.0	60.0	60.0	61.0
Anus, anal canal & anorectum	61.0	59.0	62.0	61.0	60.0	62.0	54.0	52.0	58.0
Liver & intrahepatic bile duct	63.0	62.0	68.0	63.0	62.0	69.0	60.0	60.0	62.0
Gallbladder	72.0	71.0	72.0	73.0	72.0	73.0	66.0	69.0	65.0
Other biliary	72.0	70.0	74.0	72.0	71.0	74.0	68.0	67.0	70.0
Pancreas	71.0	68.0	73.0	71.0	69.0	74.0	66.0	64.0	69.0
Retroperitoneum	61.0	60.0	61.0	61.0	61.0	62.0	59.0	56.0	59.5
Peritoneum, omentum & mesentery	68.0	66.0	68.0	68.0	66.0	69.0	63.5	58.0	64.0
Other digestive system	71.0	70.0	72.0	72.0	71.0	72.0	66.0	65.0	66.0
Respiratory System:	70.0	70.0	71.0	70.0	70.0	71.0	66.0	65.0	67.0
Nose, nasal cavity & middle ear	64.0	63.0	66.0	65.0	64.0	68.0	57.0	57.0	57.0
Larynx	65.0	65.0	63.0	65.0	65.0	64.0	62.0	62.0	60.0
Lung & bronchus	70.0	70.0	71.0	71.0	71.0	71.0	66.0	66.0	67.0
Pleura	72.0	72.0	67.0	73.5	73.0	75.0	-	-	-
Trachea & other respiratory organs	49.5	44.0	59.0	51.0	45.0	60.0	52.5	47.0	58.0
Bones & joints	42.0	40.0	44.0	43.5	41.0	45.0	35.0	31.0	37.0
Soft tissue (including heart)	59.0	60.0	58.0	61.0	61.0	60.0	51.0	50.0	53.0
Skin (excl. basal & squamous):	63.0	66.0	59.0	64.0	66.0	59.0	57.0	57.0	57.0
Melanoma of the skin	63.0	65.0	58.0	63.0	65.0	59.0	63.0	63.0	63.0
Other non-epithelial skin	71.0	72.0	69.0	72.0	73.0	71.0	51.0	51.0	50.5
Breast	61.0	68.0	61.0	62.0	68.0	62.0	58.0	64.0	58.0
Breast (*in situ*)	59.0	62.0	59.0	59.0	62.0	59.0	59.0	66.0	59.0

[a] SEER 18 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, New Jersey and Georgia excluding ATL/RG).

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

Table 1.12 - continued
Median Age of Cancer Patients at Diagnosis[a], 2008-2012
By Primary Cancer Site, Race and Sex

Site	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
Female Genital System:	61.0	-	61.0	62.0	-	62.0	61.0	-	61.0
Cervix uteri	49.0	-	49.0	48.0	-	48.0	51.0	-	51.0
Corpus uteri	62.0	-	62.0	62.0	-	62.0	63.0	-	63.0
Uterus, NOS	65.0	-	65.0	66.0	-	66.0	64.0	-	64.0
Ovary[b]	63.0	-	63.0	63.0	-	63.0	62.0	-	62.0
Vagina	67.0	-	67.0	67.0	-	67.0	63.0	-	63.0
Vulva	68.0	-	68.0	69.0	-	69.0	57.0	-	57.0
Other female genital system	64.0	-	64.0	65.0	-	65.0	61.0	-	61.0
Male Genital System:	66.0	66.0	-	66.0	66.0	-	63.0	63.0	-
Prostate	66.0	66.0	-	66.0	66.0	-	63.0	63.0	-
Testis	33.0	33.0	-	33.0	33.0	-	35.0	35.0	-
Penis	68.0	68.0	-	68.0	68.0	-	65.0	65.0	-
Other male genital system	66.0	66.0	-	67.0	67.0	-	55.0	55.0	-
Urinary System:	69.0	69.0	69.0	69.0	69.0	69.0	64.0	64.0	66.0
Urinary bladder	73.0	72.0	73.0	73.0	73.0	74.0	70.0	69.0	72.0
Kidney & renal pelvis	64.0	63.0	65.0	64.0	64.0	65.0	61.0	60.0	63.0
Ureter	75.0	74.0	76.0	75.0	74.0	76.0	73.0	75.0	70.0
Other urinary system	73.0	75.0	72.0	74.0	75.0	73.0	67.0	70.0	64.0
Eye & Orbit	61.0	61.0	61.0	62.0	62.0	61.0	3.5	6.0	2.0
Brain & Nervous System:	58.0	57.0	59.0	59.0	58.0	60.0	50.0	50.0	50.0
Brain	58.0	57.0	59.0	59.0	58.0	60.0	51.0	51.0	50.5
Cranial nerves & other nervous system	46.0	45.0	47.0	47.0	46.0	48.5	45.0	41.0	46.0
Endocrine System:	51.0	54.0	49.0	51.0	55.0	49.0	51.0	54.0	51.0
Thyroid	50.0	54.0	49.0	51.0	55.0	49.0	51.0	55.0	51.0
Other endocrine & thymus	54.0	52.0	56.0	55.0	53.0	57.0	50.5	49.0	51.0
Lymphoma:	65.0	64.0	66.0	66.0	65.0	67.0	55.0	54.0	57.0
Hodgkin lymphoma	38.0	40.0	36.0	40.0	41.0	37.0	37.0	38.0	35.0
Non-Hodgkin lymphoma	66.0	65.0	68.0	67.0	66.0	69.0	58.0	56.0	61.0
Myeloma	69.0	68.0	69.0	70.0	69.0	70.0	65.0	65.0	66.0
Leukemia:	66.0	66.0	67.0	67.0	66.0	68.0	61.0	60.0	62.0
Lymphocytic:	65.0	65.0	67.0	66.0	65.0	67.0	63.0	62.0	65.0
Acute lymphocytic	14.0	15.0	13.0	15.0	16.0	13.0	14.0	14.0	14.0
Chronic lymphocytic	71.0	70.0	73.0	71.0	70.0	73.0	69.0	68.0	71.0
Other lymphocytic	62.0	61.0	67.0	62.0	61.0	67.0	63.0	61.5	68.5
Myeloid & Monocytic:	66.0	66.0	66.0	67.0	67.0	67.0	59.0	59.0	60.0
Acute myeloid	67.0	67.0	67.0	68.0	68.0	68.0	60.0	60.0	61.0
Chronic myeloid	64.0	64.0	64.0	66.0	65.0	66.0	56.0	56.0	57.0
Acute monocytic	63.0	65.0	60.0	64.0	65.0	61.0	55.0	62.0	51.0
Other myeloid & monocytic	70.0	70.0	69.0	70.0	70.5	70.0	64.0	64.0	63.5
Other leukemia:	75.0	72.0	78.0	76.0	74.0	79.0	66.0	64.0	70.0
Other acute leukemia	74.0	71.0	78.0	76.0	72.0	79.0	65.0	62.0	76.0
Aleukemic, subleukemic & NOS	75.0	73.0	78.0	77.0	75.0	79.0	67.0	65.5	69.5
Kaposi Sarcoma	46.0	45.0	76.0	49.0	47.0	80.0	39.0	38.0	46.0
Mesothelioma	74.0	75.0	71.0	74.0	75.0	71.0	70.0	70.0	65.0
Ill-defined & unspecified	73.0	70.0	76.0	74.0	71.0	76.0	67.0	65.0	69.0

[a] SEER 18 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, New Jersey and Georgia excluding ATL/RG).

[b] 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.

Table 1.13

Age Distribution (%) of Deaths by Site, 2008-2012

All Races, Both Sexes

Site	Age at Death <20	20-34	35-44	45-54	55-64	65-74	75-84	85+	All Ages	Deaths
All Sites	0.3	0.8	2.1	8.7	19.0	25.3	27.4	16.4	100.0%	2,867,104
Oral Cavity & Pharynx:	0.1	0.8	2.6	13.5	26.0	24.2	20.4	12.4	100.0%	41,996
Lip	0.3	0.9	1.7	7.2	12.6	19.3	28.2	29.9	100.0%	348
Tongue	0.1	1.1	3.3	14.0	26.9	24.1	19.7	11.0	100.0%	10,392
Salivary gland	0.1	0.9	2.7	9.2	16.9	21.2	26.8	22.2	100.0%	4,029
Floor of mouth	0.0	0.0	1.5	12.8	33.3	27.0	17.4	8.0	100.0%	460
Gum & other oral cavity	0.1	0.4	1.8	8.9	19.2	21.7	25.6	22.3	100.0%	5,983
Nasopharynx	0.8	3.5	6.0	18.6	27.0	21.1	15.8	7.3	100.0%	3,304
Tonsil	0.0	0.3	2.5	19.4	34.9	24.0	13.9	5.1	100.0%	3,976
Oropharynx	0.0	0.3	2.2	14.8	28.9	25.9	18.6	9.3	100.0%	4,012
Hypopharynx	0.0	0.3	1.0	14.1	27.2	29.1	20.8	7.4	100.0%	1,575
Other oral cavity & pharynx	0.0	0.1	1.5	12.9	28.2	27.5	20.1	9.7	100.0%	7,917
Digestive System:	0.1	0.5	2.1	9.4	20.8	24.2	26.2	16.7	100.0%	711,940
Esophagus	0.0	0.3	1.6	10.3	25.2	27.7	24.0	10.9	100.0%	71,207
Stomach	0.0	1.3	3.7	10.4	18.1	22.7	26.1	17.6	100.0%	56,152
Small intestine	0.0	0.8	2.6	9.4	20.2	24.3	26.7	16.1	100.0%	6,154
Colon & Rectum:	0.0	0.7	2.5	9.3	17.9	22.1	26.6	21.0	100.0%	260,049
Colon & Rectum (Male)	0.0	0.7	2.7	10.1	20.5	24.8	25.9	15.2	100.0%	134,482
Colon & Rectum (Female)	0.0	0.6	2.3	8.3	15.1	19.2	27.3	27.1	100.0%	125,567
Anus, anal canal & anorectum	0.0	0.6	5.4	19.0	25.5	20.5	17.7	11.4	100.0%	4,101
Liver & intrahepatic bile duct	0.3	0.5	1.6	12.3	28.9	23.5	22.5	10.4	100.0%	102,449
Gallbladder	0.0	0.2	1.4	6.8	18.0	27.2	28.8	17.6	100.0%	10,327
Other biliary	0.0	0.3	1.3	6.5	15.9	23.1	30.8	22.1	100.0%	7,309
Pancreas	0.0	0.2	1.3	7.7	19.9	26.5	28.3	16.1	100.0%	183,891
Retroperitoneum	0.6	1.3	2.4	9.4	20.7	25.6	26.0	14.1	100.0%	1,040
Peritoneum, omentum & mesentery	0.1	0.6	1.7	7.2	19.3	29.9	28.9	12.5	100.0%	4,217
Other digestive system	0.0	0.4	1.9	7.4	16.8	22.5	29.5	21.5	100.0%	5,044
Respiratory System:	0.0	0.1	0.9	7.7	19.9	30.7	29.2	11.5	100.0%	812,340
Nose, nasal cavity & middle ear	0.1	2.1	4.8	12.9	19.3	22.6	23.1	15.1	100.0%	2,415
Larynx	0.0	0.1	1.2	10.9	26.4	29.1	22.9	9.4	100.0%	18,475
Lung & bronchus	0.0	0.1	0.9	7.6	19.8	30.8	29.4	11.5	100.0%	789,297
Lung & bronchus (Male)	0.0	0.1	0.8	7.5	21.1	31.7	28.8	10.0	100.0%	437,358
Lung & bronchus (Female)	0.0	0.1	1.0	7.7	18.1	29.7	30.1	13.3	100.0%	351,939
Pleura	0.3	0.4	1.1	3.1	15.1	26.1	35.9	18.0	100.0%	1,056
Trachea & other respiratory organs	1.2	4.7	4.3	11.5	19.4	20.9	23.2	14.9	100.0%	1,097
Bones & joints	12.7	15.1	5.9	10.5	12.9	14.4	16.1	12.4	100.0%	6,941
Soft tissue (including heart)	3.7	6.0	6.3	13.2	19.5	19.8	19.7	11.6	100.0%	21,679
Skin (excl. basal & squamous):	0.1	1.8	4.0	10.9	19.2	21.5	24.8	17.7	100.0%	60,461
Melanoma of the skin	0.1	2.3	4.9	12.1	20.4	22.0	24.0	14.2	100.0%	45,355
Other non-epithelial skin	0.0	0.4	1.3	7.2	15.7	19.9	27.3	28.1	100.0%	15,106
Breast (Female)	0.0	0.9	5.1	14.3	21.9	21.0	20.5	16.4	100.0%	204,342

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 - continued

Age Distribution (%) of Deaths by Site, 2008-2012

All Races, Both Sexes

Site	Age at Death <20	20-34	35-44	45-54	55-64	65-74	75-84	85+	All Ages	Deaths
Female Genital System:	0.0	1.2	3.9	11.5	21.6	24.5	23.1	14.1	100.0%	142,832
Cervix uteri	0.0	5.0	14.0	24.1	23.0	16.1	11.4	6.3	100.0%	20,022
Corpus uteri	0.0	0.3	1.8	7.2	24.0	28.9	24.0	13.8	100.0%	17,939
Uterus, NOS	0.0	0.5	2.0	8.6	22.0	26.9	23.7	16.2	100.0%	23,403
Ovary	0.1	0.7	2.4	10.5	21.3	25.4	25.4	14.2	100.0%	72,120
Vagina	0.1	0.8	2.8	6.9	15.8	19.6	27.9	26.2	100.0%	2,095
Vulva	0.1	0.5	2.0	7.6	13.0	17.7	29.4	29.8	100.0%	4,865
Other female genital system	0.1	1.2	2.3	9.0	21.4	27.7	24.3	14.0	100.0%	2,388
Male Genital System:	0.0	0.5	0.4	2.0	8.9	20.3	35.4	32.6	100.0%	143,725
Prostate	0.0	0.0	0.1	1.6	8.8	20.4	35.9	33.2	100.0%	140,333
Testis	2.0	34.8	19.7	18.7	11.3	5.3	5.1	3.2	100.0%	1,899
Penis	0.1	0.8	4.5	11.0	20.1	24.9	22.7	15.9	100.0%	1,250
Other male genital system	0.4	0.8	3.3	9.1	11.1	23.0	28.0	24.3	100.0%	243
Urinary System:	0.2	0.3	1.1	6.4	16.0	23.3	30.1	22.6	100.0%	143,260
Urinary bladder	0.0	0.1	0.6	3.9	11.7	21.1	33.7	29.0	100.0%	73,226
Kidney & renal pelvis	0.4	0.5	1.8	9.3	21.2	25.7	25.7	15.4	100.0%	66,186
Ureter	0.1	0.2	0.3	3.3	9.8	24.3	36.7	25.3	100.0%	1,791
Other urinary system	0.0	0.1	1.5	5.3	12.3	21.8	34.6	24.4	100.0%	2,057
Eye & Orbit	2.1	2.0	4.3	11.1	20.3	22.6	21.9	15.6	100.0%	1,382
Brain & Nervous System:	3.7	3.5	5.7	13.9	23.7	23.4	18.6	7.4	100.0%	71,831
Endocrine System:	6.3	2.5	3.8	9.7	17.9	22.4	23.2	14.2	100.0%	13,179
Thyroid	0.2	0.8	2.2	7.8	17.5	24.6	28.2	18.6	100.0%	8,479
Other endocrine & thymus	17.3	5.6	6.8	13.1	18.5	18.4	14.3	6.1	100.0%	4,700
Lymphoma:	0.4	1.9	2.6	6.4	14.4	22.2	31.3	20.7	100.0%	107,706
Hodgkin lymphoma	1.3	11.8	9.7	11.1	15.2	18.7	21.3	11.0	100.0%	5,950
Non-Hodgkin lymphoma	0.4	1.4	2.2	6.2	14.4	22.4	31.9	21.3	100.0%	101,756
Myeloma	0.0	0.1	0.9	5.6	16.4	26.5	32.7	17.8	100.0%	55,550
Leukemia:	2.4	2.9	2.7	6.1	13.1	22.1	30.3	20.4	100.0%	114,295
Lymphocytic:	3.8	3.5	2.2	4.8	11.4	19.5	29.1	25.8	100.0%	31,753
Acute lymphocytic	16.4	15.1	8.1	11.2	14.4	15.0	13.0	6.9	100.0%	7,123
Chronic lymphocytic	0.0	0.1	0.4	2.7	10.5	20.9	33.9	31.5	100.0%	22,644
Other lymphocytic	1.4	1.4	1.4	5.1	10.7	19.8	31.9	28.4	100.0%	1,986
Myeloid & Monocytic:	1.8	2.8	3.3	7.5	15.1	24.4	30.0	15.0	100.0%	55,587
Acute myeloid	2.0	2.9	3.3	7.6	15.7	25.2	29.8	13.5	100.0%	46,310
Chronic myeloid	0.4	3.2	4.6	8.6	11.9	18.0	28.8	24.4	100.0%	5,130
Acute monocytic	1.7	1.2	2.1	6.0	11.2	24.4	33.1	20.3	100.0%	483
Other myeloid & monocytic	1.3	1.1	1.9	4.8	12.7	23.7	33.5	21.0	100.0%	3,664
Other leukemia:	2.1	2.2	2.1	4.9	11.0	20.3	32.5	25.1	100.0%	26,955
Other acute leukemia	1.3	2.4	2.1	4.7	11.1	21.1	33.4	23.9	100.0%	9,767
Aleukemic, subleukemic & NOS	2.5	2.1	2.1	4.9	10.9	19.8	31.9	25.7	100.0%	17,188
Ill-defined & unspecified	0.2	0.7	1.8	7.9	17.8	23.5	28.3	19.8	100.0%	211,521

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 1.14
Median Age of Cancer Patients at Death[a], 2008-2012
By Primary Cancer Site, Race and Sex

Site	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
All Sites	72.0	72.0	73.0	73.0	72.0	74.0	67.0	67.0	68.0
Oral Cavity & Pharynx:	67.0	65.0	73.0	68.0	66.0	74.0	62.0	62.0	63.0
Lip	78.0	75.0	85.0	78.0	75.0	85.0	-	-	-
Tongue	66.0	64.0	72.0	67.0	65.0	72.0	61.0	62.0	60.0
Salivary gland	74.0	73.0	76.0	75.0	74.0	77.0	64.0	62.5	66.0
Floor of mouth	66.0	63.0	71.0	67.0	64.0	71.0	62.0	61.5	-
Gum & other oral cavity	74.0	68.0	80.0	75.0	69.0	81.0	64.0	62.5	68.0
Nasopharynx	62.0	61.0	65.0	65.0	63.0	70.0	58.0	58.0	58.0
Tonsil	62.0	62.0	67.0	63.0	62.0	67.5	61.0	61.0	61.0
Oropharynx	66.0	64.0	71.0	67.0	65.0	72.0	62.0	61.0	62.0
Hypopharynx	67.0	66.0	69.0	68.0	67.0	70.0	61.0	61.0	63.0
Other oral cavity & pharynx	67.0	66.0	71.0	68.0	67.0	71.0	63.0	63.0	65.0
Digestive System:	72.0	69.0	75.0	73.0	70.0	76.0	67.0	64.0	70.0
Esophagus	69.0	68.0	74.0	69.0	68.0	75.0	64.0	64.0	66.0
Stomach	72.0	70.0	75.0	73.0	71.0	76.0	69.0	67.0	73.0
Small intestine	72.0	70.0	74.0	73.0	71.0	75.0	65.0	63.0	67.0
Colon & Rectum	73.0	71.0	76.0	74.0	72.0	77.0	68.0	66.0	70.0
Anus, anal canal & anorectum	64.0	61.0	66.0	65.0	63.0	66.0	57.0	54.0	61.0
Liver & intrahepatic bile duct	67.0	64.0	73.0	68.0	66.0	74.0	62.0	61.0	67.0
Gallbladder	73.0	72.0	74.0	74.0	73.0	75.0	69.0	70.0	68.0
Other biliary	75.0	74.0	77.0	76.0	75.0	78.0	71.0	69.0	73.0
Pancreas	73.0	70.0	75.0	73.0	71.0	76.0	69.0	66.0	72.0
Retroperitoneum	71.0	69.0	72.0	71.0	69.5	73.0	66.0	65.0	67.5
Peritoneum, omentum & mesentery	72.0	68.0	72.0	72.0	68.0	73.0	68.0	64.0	69.0
Other digestive system	75.0	72.5	78.0	76.0	74.0	79.0	69.0	66.0	74.0
Respiratory System:	72.0	71.0	72.0	72.0	71.0	73.0	68.0	67.0	69.0
Nose, nasal cavity & middle ear	69.0	67.0	73.0	70.0	68.0	75.0	63.0	63.0	63.0
Larynx	68.0	68.0	69.0	69.0	69.0	70.0	65.0	65.0	64.0
Lung & bronchus	72.0	71.0	72.0	72.0	72.0	73.0	68.0	67.0	69.0
Pleura	76.0	76.0	74.0	76.0	76.0	73.5	72.0	68.0	78.5
Trachea & other respiratory organs	69.0	66.0	73.0	70.0	66.0	74.0	61.5	61.0	64.0
Bones & joints	59.0	57.0	63.0	61.0	59.0	65.0	52.0	50.0	55.0
Soft tissue (including heart)	65.0	65.0	65.0	66.0	66.0	67.0	58.0	56.0	60.0
Skin (excl. basal & squamous):	71.0	71.0	72.0	71.0	71.0	72.0	64.0	62.0	68.0
Melanoma of the skin	69.0	69.0	69.0	69.0	69.0	69.0	67.0	65.0	69.0
Other non-epithelial skin	77.0	75.0	81.0	78.0	76.0	82.0	61.0	60.0	64.0
Breast	68.0	70.0	68.0	69.0	71.0	69.0	62.0	65.0	62.0

[a] 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 - continued
Median Age of Cancer Patients at Death[a], 2008-2012
By Primary Cancer Site, Race and Sex

Site	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
Female Genital System:	69.0	-	69.0	70.0	-	70.0	66.0	-	66.0
Cervix uteri	57.0	-	57.0	58.0	-	58.0	57.0	-	57.0
Corpus uteri	70.0	-	70.0	71.0	-	71.0	68.0	-	68.0
Uterus, NOS	71.0	-	71.0	72.0	-	72.0	68.0	-	68.0
Ovary	70.0	-	70.0	71.0	-	71.0	67.0	-	67.0
Vagina	77.0	-	77.0	78.0	-	78.0	71.0	-	71.0
Vulva	78.0	-	78.0	79.0	-	79.0	68.0	-	68.0
Other female genital system	70.0	-	70.0	71.0	-	71.0	66.0	-	66.0
Male Genital System:	80.0	80.0	-	81.0	81.0	-	77.0	77.0	-
Prostate	80.0	80.0	-	81.0	81.0	-	77.0	77.0	-
Testis	41.0	41.0	-	41.0	41.0	-	42.0	42.0	-
Penis	70.0	70.0	-	70.5	70.5	-	68.0	68.0	-
Other male genital system	75.0	75.0	-	78.0	78.0	-	69.0	69.0	-
Urinary System:	76.0	74.0	78.0	76.0	75.0	78.0	70.0	68.0	73.0
Urinary bladder	79.0	78.0	80.0	79.0	78.0	81.0	75.0	73.0	77.0
Kidney & renal pelvis	71.0	69.0	74.0	72.0	70.0	75.0	67.0	65.0	70.0
Ureter	78.0	77.0	80.0	78.0	77.0	80.0	74.0	73.5	76.0
Other urinary system	78.0	77.0	78.0	78.0	78.0	79.0	68.0	72.0	66.0
Eye & Orbit	69.0	67.0	71.0	69.0	68.0	71.0	54.0	50.0	59.5
Brain & Nervous System	64.0	63.0	66.0	65.0	63.0	66.0	60.0	59.0	61.0
Endocrine System:	69.0	66.0	72.0	70.0	67.0	73.0	63.0	60.0	65.0
Thyroid	73.0	70.0	76.0	74.0	71.0	76.0	69.0	67.0	70.0
Other endocrine & thymus	58.0	57.0	60.0	59.0	58.0	61.0	53.0	53.0	54.0
Lymphoma:	75.0	73.0	78.0	76.0	74.0	78.0	65.0	62.0	68.0
Hodgkin lymphoma	65.0	63.0	67.0	67.0	65.0	69.0	51.0	50.0	52.0
Non-Hodgkin lymphoma	76.0	74.0	78.0	76.0	74.0	79.0	66.0	63.0	69.0
Myeloma	75.0	74.0	76.0	76.0	74.0	77.0	71.0	69.0	72.0
Leukemia:	75.0	74.0	76.0	76.0	74.0	77.0	68.0	66.0	70.0
Lymphocytic:	77.0	75.0	79.0	77.0	75.0	80.0	70.0	68.0	74.0
Acute lymphocytic	54.0	51.0	57.0	55.0	53.0	58.0	45.5	41.0	52.0
Chronic lymphocytic	80.0	78.0	83.0	80.0	78.0	83.0	74.0	72.0	78.0
Other lymphocytic	78.0	76.0	81.0	79.0	76.0	82.0	74.0	68.0	79.0
Myeloid & Monocytic:	73.0	72.0	73.0	73.0	73.0	74.0	65.0	64.0	67.0
Acute myeloid	72.0	72.0	72.0	73.0	72.0	73.0	66.0	65.0	67.0
Chronic myeloid	76.0	74.0	79.0	77.0	75.0	80.0	61.0	59.0	63.0
Acute monocytic	76.0	75.0	77.0	77.0	76.0	77.0	68.0	-	-
Other myeloid & monocytic	76.0	75.0	78.0	77.0	76.0	78.0	70.0	67.0	75.0
Other leukemia:	77.0	76.0	79.0	78.0	77.0	80.0	70.0	68.0	72.0
Other acute leukemia	77.0	76.0	79.0	78.0	76.0	79.0	70.0	69.0	72.0
Aleukemic, subleukemic & NOS	77.0	76.0	79.0	78.0	77.0	80.0	70.0	67.0	72.0
Ill-defined & unspecified	74.0	72.0	76.0	75.0	73.0	77.0	68.0	66.0	70.0

[a] 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 1.15

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

Both Sexes, 18 SEER Areas, 2010-2012

Site	All Races	Whites	Blacks
	Percent (95% C.I.)	Percent (95% C.I.)	Percent (95% C.I.)
All Sites	39.65 (39.57, 39.74)	39.83 (39.74, 39.93)	37.29 (37.03, 37.54)
Invasive and In Situ	42.00 (41.91, 42.09)	42.19 (42.09, 42.29)	38.62 (38.36, 38.88)
Oral Cavity and Pharynx	1.10 (1.09, 1.12)	1.15 (1.13, 1.16)	0.81 (0.77, 0.84)
Esophagus	0.50 (0.49, 0.51)	0.52 (0.51, 0.53)	0.44 (0.41, 0.47)
Stomach	0.85 (0.84, 0.87)	0.76 (0.74, 0.77)	1.06 (1.01, 1.10)
Colon and Rectum	4.51 (4.48, 4.54)	4.41 (4.38, 4.44)	4.76 (4.67, 4.85)
Invasive and In Situ	4.67 (4.65, 4.70)	4.56 (4.53, 4.59)	4.97 (4.87, 5.07)
Liver and Intrahepatic Bile Duct	0.91 (0.90, 0.93)	0.81 (0.80, 0.83)	0.96 (0.92, 1.00)
Pancreas	1.52 (1.50, 1.54)	1.50 (1.48, 1.52)	1.61 (1.56, 1.67)
Larynx	0.35 (0.34, 0.36)	0.36 (0.35, 0.36)	0.44 (0.42, 0.47)
Invasive and In Situ	0.38 (0.37, 0.38)	0.38 (0.37, 0.39)	0.47 (0.44, 0.50)
Lung and Bronchus	6.57 (6.53, 6.61)	6.72 (6.68, 6.76)	6.36 (6.25, 6.47)
Melanoma of the Skin	2.09 (2.07, 2.11)	2.45 (2.42, 2.47)	0.11 (0.09, 0.12)
Invasive and In Situ	3.54 (3.52, 3.57)	4.04 (4.01, 4.07)	0.14 (0.13, 0.16)
Breast	6.37 (6.34, 6.40)	6.46 (6.42, 6.50)	5.97 (5.87, 6.07)
Invasive and In Situ	7.56 (7.53, 7.60)	7.63 (7.59, 7.67)	7.15 (7.05, 7.26)
Urinary Bladder (Invasive and In Situ)	2.41 (2.39, 2.43)	2.62 (2.59, 2.64)	1.28 (1.23, 1.34)
Kidney and Renal Pelvis	1.60 (1.59, 1.62)	1.65 (1.64, 1.67)	1.59 (1.54, 1.64)
Brain and Other Nervous System	0.61 (0.60, 0.62)	0.68 (0.66, 0.69)	0.35 (0.33, 0.38)
Thyroid	1.15 (1.14, 1.17)	1.21 (1.20, 1.23)	0.66 (0.64, 0.69)
Hodgkin Lymphoma	0.22 (0.21, 0.22)	0.23 (0.23, 0.24)	0.19 (0.18, 0.21)
Non-Hodgkin Lymphoma	2.12 (2.10, 2.14)	2.22 (2.20, 2.24)	1.30 (1.26, 1.35)
Myeloma	0.74 (0.73, 0.75)	0.68 (0.67, 0.69)	1.27 (1.23, 1.32)
Leukemia	1.47 (1.46, 1.49)	1.54 (1.53, 1.56)	1.02 (0.98, 1.06)
Acute Lymphocytic Leukemia	0.13 (0.13, 0.14)	0.14 (0.14, 0.15)	0.08 (0.07, 0.09)
Chronic Lymphocytic Leukemia	0.56 (0.55, 0.57)	0.59 (0.58, 0.60)	0.36 (0.33, 0.39)
Acute Myeloid Leukemia	0.46 (0.46, 0.47)	0.48 (0.47, 0.49)	0.35 (0.32, 0.37)
Chronic Myeloid Leukemia	0.18 (0.18, 0.19)	0.19 (0.18, 0.20)	0.14 (0.13, 0.16)
Kaposi Sarcoma	0.05 (0.04, 0.05)	0.04 (0.04, 0.04)	0.08 (0.07, 0.09)
Mesothelioma	0.12 (0.12, 0.13)	0.13 (0.13, 0.14)	0.06 (0.05, 0.07)

Devcan Version 6.8.0, August 2014, National Cancer Institute (http://surveillance.cancer.gov/devcan/).
Source: SEER 18 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, New Jersey, and Georgia excluding ATL/RG).
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

Both Sexes, 18 SEER Areas, 2010-2012

Site	Asian/Pacific Islanders Percent (95% C.I.)	American Indian/ Alaska Natives[a] Percent (95% C.I.)	Hispanics[b] Percent (95% C.I.)
All Sites	34.50 (34.17, 34.85)	28.75 (27.60, 30.00)	36.25 (35.95, 36.56)
Invasive and In Situ	35.91 (35.57, 36.25)	29.62 (28.45, 30.87)	37.48 (37.17, 37.79)
Oral Cavity and Pharynx	0.89 (0.84, 0.95)	0.89 (0.72, 1.18)	0.79 (0.75, 0.84)
Esophagus	0.33 (0.30, 0.38)	0.27 (0.19, 0.50)	0.37 (0.35, 0.41)
Stomach	1.71 (1.63, 1.80)	1.18 (0.95, 1.52)	1.43 (1.37, 1.50)
Colon and Rectum	4.89 (4.76, 5.03)	4.18 (3.74, 4.72)	4.40 (4.29, 4.51)
Invasive and In Situ	5.05 (4.91, 5.19)	4.26 (3.82, 4.81)	4.53 (4.42, 4.65)
Liver and Intrahepatic Bile Duct	1.87 (1.79, 1.95)	1.38 (1.16, 1.71)	1.61 (1.55, 1.67)
Pancreas	1.65 (1.57, 1.74)	1.25 (0.97, 1.65)	1.59 (1.52, 1.66)
Larynx	0.18 (0.16, 0.21)	0.21 (0.13, 0.43)	0.28 (0.25, 0.31)
Invasive and In Situ	0.20 (0.18, 0.24)	0.22 (0.15, 0.45)	0.30 (0.27, 0.33)
Lung and Bronchus	5.49 (5.35, 5.63)	4.47 (4.01, 5.04)	4.12 (4.01, 4.24)
Melanoma of the Skin	0.16 (0.14, 0.19)	0.39 (0.29, 0.63)	0.51 (0.48, 0.55)
Invasive and In Situ	0.24 (0.21, 0.27)	0.63 (0.49, 0.90)	0.81 (0.76, 0.87)
Breast	5.56 (5.44, 5.68)	4.16 (3.77, 4.64)	5.15 (5.04, 5.26)
Invasive and In Situ	6.87 (6.75, 7.00)	4.78 (4.37, 5.27)	6.04 (5.93, 6.15)
Urinary Bladder (Invasive and In Situ)	1.47 (1.39, 1.55)	1.00 (0.77, 1.36)	1.61 (1.54, 1.69)
Kidney and Renal Pelvis	1.04 (0.99, 1.11)	1.81 (1.55, 2.17)	1.75 (1.69, 1.82)
Brain and Other Nervous System	0.40 (0.37, 0.44)	0.29 (0.21, 0.51)	0.52 (0.49, 0.55)
Thyroid	1.24 (1.20, 1.30)	0.77 (0.64, 1.02)	1.08 (1.04, 1.12)
Hodgkin Lymphoma	0.12 (0.11, 0.15)	0.10 (0.05, 0.31)	0.21 (0.19, 0.23)
Non-Hodgkin Lymphoma	1.84 (1.76, 1.92)	1.26 (1.05, 1.57)	2.18 (2.10, 2.25)
Myeloma	0.54 (0.50, 0.59)	0.54 (0.38, 0.82)	0.79 (0.74, 0.84)
Leukemia	0.99 (0.94, 1.06)	0.81 (0.64, 1.10)	1.22 (1.17, 1.28)
Acute Lymphocytic Leukemia	0.11 (0.09, 0.13)	0.11 (0.07, 0.31)	0.19 (0.18, 0.21)
Chronic Lymphocytic Leukemia	0.18 (0.15, 0.21)	0.20 (0.11, 0.45)	0.30 (0.27, 0.33)
Acute Myeloid Leukemia	0.47 (0.43, 0.51)	0.25 (0.16, 0.48)	0.44 (0.40, 0.47)
Chronic Myeloid Leukemia	0.14 (0.12, 0.17)	0.15 (0.09, 0.36)	0.18 (0.16, 0.21)
Kaposi Sarcoma	0.02 (0.01, 0.04)	0.02 (0.00, 0.24)	0.08 (0.07, 0.11)
Mesothelioma	0.05 (0.04, 0.07)	0.07 (0.03, 0.30)	0.11 (0.10, 0.14)

Devcan Version 6.8.0, August 2014, National Cancer Institute (http://surveillance.cancer.gov/devcan/).

Source: SEER 18 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, New Jersey, and Georgia excluding ATL/RG).

Note: Invasive cancer only unless specified otherwise.

[a] Underlying incidence data for American Indian/Alaska Native 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. 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

Males, 18 SEER Areas, 2010-2012

Site	All Races	Whites	Blacks
	Percent (95% C.I.)	Percent (95% C.I.)	Percent (95% C.I.)
All Sites	42.05 (41.92, 42.18)	41.71 (41.56, 41.85)	40.77 (40.37, 41.17)
Invasive and In Situ	43.54 (43.40, 43.67)	43.21 (43.07, 43.36)	41.10 (40.70, 41.51)
Oral Cavity and Pharynx	1.55 (1.53, 1.58)	1.62 (1.59, 1.64)	1.18 (1.12, 1.25)
Esophagus	0.80 (0.78, 0.82)	0.84 (0.82, 0.86)	0.63 (0.59, 0.69)
Stomach	1.07 (1.05, 1.09)	0.97 (0.95, 0.99)	1.20 (1.13, 1.28)
Colon and Rectum	4.69 (4.65, 4.74)	4.57 (4.53, 4.62)	4.87 (4.74, 5.02)
Invasive and In Situ	4.87 (4.83, 4.92)	4.74 (4.70, 4.79)	5.11 (4.97, 5.26)
Liver and Intrahepatic Bile Duct	1.31 (1.28, 1.33)	1.16 (1.14, 1.19)	1.45 (1.39, 1.52)
Pancreas	1.54 (1.51, 1.56)	1.54 (1.51, 1.57)	1.49 (1.41, 1.57)
Larynx	0.59 (0.57, 0.60)	0.59 (0.57, 0.60)	0.75 (0.70, 0.81)
Invasive and In Situ	0.63 (0.61, 0.64)	0.63 (0.61, 0.64)	0.79 (0.74, 0.85)
Lung and Bronchus	7.19 (7.14, 7.24)	7.20 (7.14, 7.26)	7.52 (7.34, 7.70)
Melanoma of the Skin	2.62 (2.58, 2.65)	3.03 (2.99, 3.07)	0.10 (0.08, 0.12)
Invasive and In Situ	4.37 (4.33, 4.41)	4.94 (4.89, 4.98)	0.13 (0.11, 0.16)
Breast	0.13 (0.12, 0.14)	0.13 (0.12, 0.14)	0.16 (0.14, 0.19)
Invasive and In Situ	0.14 (0.14, 0.15)	0.14 (0.13, 0.15)	0.18 (0.16, 0.21)
Prostate	13.97 (13.89, 14.04)	13.15 (13.07, 13.23)	18.15 (17.90, 18.41)
Testis	0.38 (0.38, 0.39)	0.46 (0.44, 0.47)	0.10 (0.09, 0.12)
Urinary Bladder (Invasive and In Situ)	3.84 (3.80, 3.88)	4.16 (4.12, 4.21)	1.86 (1.77, 1.96)
Kidney and Renal Pelvis	2.03 (2.01, 2.06)	2.09 (2.06, 2.12)	1.96 (1.88, 2.04)
Brain and Other Nervous System	0.69 (0.68, 0.71)	0.76 (0.74, 0.78)	0.40 (0.36, 0.44)
Thyroid	0.59 (0.58, 0.60)	0.63 (0.62, 0.65)	0.27 (0.25, 0.31)
Hodgkin Lymphoma	0.24 (0.23, 0.25)	0.25 (0.24, 0.26)	0.21 (0.19, 0.24)
Non-Hodgkin Lymphoma	2.37 (2.34, 2.40)	2.47 (2.44, 2.51)	1.43 (1.36, 1.50)
Myeloma	0.85 (0.84, 0.87)	0.81 (0.79, 0.83)	1.33 (1.26, 1.41)
Leukemia	1.75 (1.73, 1.78)	1.84 (1.81, 1.87)	1.14 (1.07, 1.21)
Acute Lymphocytic Leukemia	0.14 (0.14, 0.15)	0.16 (0.15, 0.16)	0.08 (0.07, 0.10)
Chronic Lymphocytic Leukemia	0.69 (0.67, 0.71)	0.73 (0.71, 0.74)	0.43 (0.39, 0.49)
Acute Myeloid Leukemia	0.53 (0.52, 0.55)	0.55 (0.53, 0.57)	0.36 (0.32, 0.40)
Chronic Myeloid Leukemia	0.22 (0.21, 0.23)	0.23 (0.22, 0.24)	0.15 (0.12, 0.17)
Kaposi Sarcoma	0.08 (0.07, 0.08)	0.06 (0.06, 0.07)	0.16 (0.14, 0.18)
Mesothelioma	0.20 (0.19, 0.21)	0.22 (0.21, 0.23)	0.09 (0.07, 0.12)

Devcan Version 6.8.0, August 2014, National Cancer Institute (http://surveillance.cancer.gov/devcan/).
Source: SEER 18 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, New Jersey, and Georgia excluding ATL/RG).
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 1.16 - continued

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

Males, 18 SEER Areas, 2010-2012

Site	Asian/Pacific Islanders Percent (95% C.I.)	American Indian/ Alaska Natives[a] Percent (95% C.I.)	Hispanics[b] Percent (95% C.I.)
All Sites	36.15 (35.64, 36.68)	28.31 (26.68, 30.15)	38.84 (38.37, 39.33)
Invasive and In Situ	36.48 (35.97, 37.01)	28.61 (26.97, 30.46)	39.29 (38.81, 39.78)
Oral Cavity and Pharynx	1.21 (1.12, 1.31)	1.37 (1.05, 1.95)	1.12 (1.05, 1.21)
Esophagus	0.55 (0.48, 0.63)	0.42 (0.27, 0.91)	0.62 (0.57, 0.69)
Stomach	2.05 (1.92, 2.20)	1.43 (1.06, 2.07)	1.70 (1.60, 1.82)
Colon and Rectum	5.27 (5.07, 5.48)	4.42 (3.80, 5.26)	4.72 (4.56, 4.90)
Invasive and In Situ	5.44 (5.24, 5.65)	4.48 (3.86, 5.33)	4.87 (4.71, 5.05)
Liver and Intrahepatic Bile Duct	2.56 (2.43, 2.70)	1.76 (1.40, 2.37)	2.25 (2.15, 2.37)
Pancreas	1.58 (1.48, 1.70)	1.20 (0.84, 1.85)	1.50 (1.40, 1.62)
Larynx	0.33 (0.28, 0.40)	0.33 (0.20, 0.81)	0.53 (0.47, 0.60)
Invasive and In Situ	0.38 (0.32, 0.45)	0.36 (0.22, 0.83)	0.56 (0.50, 0.63)
Lung and Bronchus	6.81 (6.57, 7.05)	4.85 (4.16, 5.78)	4.80 (4.61, 5.01)
Melanoma of the Skin	0.20 (0.17, 0.26)	0.29 (0.17, 0.77)	0.51 (0.46, 0.58)
Invasive and In Situ	0.30 (0.25, 0.37)	0.50 (0.33, 0.99)	0.80 (0.73, 0.89)
Breast	0.08 (0.06, 0.13)	0.03 (0.01, 0.50)	0.08 (0.06, 0.12)
Invasive and In Situ	0.09 (0.07, 0.14)	0.05 (0.02, 0.53)	0.09 (0.07, 0.13)
Prostate	9.39 (9.15, 9.64)	6.53 (5.81, 7.48)	12.96 (12.71, 13.22)
Testis	0.15 (0.13, 0.18)	0.32 (0.24, 0.76)	0.35 (0.33, 0.39)
Urinary Bladder (Invasive and In Situ)	2.34 (2.20, 2.50)	1.67 (1.21, 2.42)	2.58 (2.44, 2.74)
Kidney and Renal Pelvis	1.39 (1.30, 1.49)	2.21 (1.83, 2.83)	2.14 (2.03, 2.25)
Brain and Other Nervous System	0.45 (0.40, 0.52)	0.35 (0.24, 0.81)	0.55 (0.51, 0.61)
Thyroid	0.61 (0.56, 0.68)	0.35 (0.24, 0.81)	0.48 (0.44, 0.53)
Hodgkin Lymphoma	0.14 (0.12, 0.18)	0.10 (0.04, 0.57)	0.23 (0.20, 0.28)
Non-Hodgkin Lymphoma	2.09 (1.98, 2.23)	1.37 (1.05, 1.95)	2.39 (2.28, 2.51)
Myeloma	0.62 (0.55, 0.70)	0.49 (0.28, 1.03)	0.93 (0.85, 1.02)
Leukemia	1.20 (1.11, 1.31)	0.90 (0.64, 1.45)	1.40 (1.31, 1.51)
Acute Lymphocytic Leukemia	0.13 (0.11, 0.17)	0.09 (0.05, 0.56)	0.19 (0.18, 0.23)
Chronic Lymphocytic Leukemia	0.27 (0.22, 0.34)	0.20 (0.07, 0.70)	0.36 (0.31, 0.43)
Acute Myeloid Leukemia	0.52 (0.46, 0.59)	0.29 (0.17, 0.77)	0.49 (0.43, 0.56)
Chronic Myeloid Leukemia	0.19 (0.16, 0.24)	0.16 (0.07, 0.63)	0.21 (0.18, 0.26)
Kaposi Sarcoma	0.04 (0.03, 0.07)	0.04 (0.00, 0.52)	0.11 (0.09, 0.16)
Mesothelioma	0.08 (0.06, 0.13)	0.16 (0.06, 0.64)	0.18 (0.16, 0.24)

Devcan Version 6.8.0, August 2014, National Cancer Institute (http://surveillance.cancer.gov/devcan/).

Source: SEER 18 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, New Jersey, and Georgia excluding ATL/RG).

Note: Invasive cancer only unless specified otherwise.

[a] Underlying incidence data for American Indian/Alaska Native 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. 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 1.17

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

Females, 18 SEER Areas, 2010-2012

Site	All Races	Whites	Blacks
	Percent (95% C.I.)	Percent (95% C.I.)	Percent (95% C.I.)
All Sites	37.58 (37.47, 37.70)	38.25 (38.12, 38.38)	34.30 (33.96, 34.64)
Invasive and In Situ	40.80 (40.68, 40.92)	41.49 (41.35, 41.62)	36.56 (36.21, 36.90)
Oral Cavity and Pharynx	0.67 (0.66, 0.69)	0.69 (0.68, 0.71)	0.48 (0.45, 0.52)
Esophagus	0.22 (0.21, 0.23)	0.22 (0.21, 0.23)	0.26 (0.24, 0.30)
Stomach	0.66 (0.65, 0.68)	0.56 (0.54, 0.58)	0.94 (0.88, 1.00)
Colon and Rectum	4.35 (4.31, 4.39)	4.25 (4.21, 4.30)	4.68 (4.55, 4.81)
Invasive and In Situ	4.49 (4.45, 4.53)	4.39 (4.34, 4.43)	4.86 (4.73, 4.99)
Liver and Intrahepatic Bile Duct	0.54 (0.53, 0.56)	0.47 (0.46, 0.49)	0.51 (0.47, 0.56)
Pancreas	1.50 (1.48, 1.53)	1.47 (1.44, 1.49)	1.71 (1.63, 1.79)
Larynx	0.13 (0.13, 0.14)	0.14 (0.13, 0.14)	0.17 (0.15, 0.20)
Invasive and In Situ	0.14 (0.14, 0.15)	0.15 (0.14, 0.15)	0.18 (0.16, 0.21)
Lung and Bronchus	6.04 (5.99, 6.09)	6.31 (6.26, 6.36)	5.40 (5.26, 5.54)
Melanoma of the Skin	1.63 (1.61, 1.66)	1.93 (1.90, 1.95)	0.11 (0.10, 0.14)
Invasive and In Situ	2.82 (2.79, 2.85)	3.24 (3.21, 3.28)	0.15 (0.13, 0.18)
Breast	12.32 (12.26, 12.39)	12.64 (12.57, 12.71)	11.14 (10.97, 11.33)
Invasive and In Situ	14.67 (14.60, 14.73)	14.96 (14.89, 15.04)	13.37 (13.18, 13.57)
Cervix Uteri	0.64 (0.62, 0.65)	0.62 (0.61, 0.64)	0.77 (0.73, 0.82)
Corpus and Uterus, NOS	2.78 (2.75, 2.81)	2.86 (2.83, 2.89)	2.53 (2.45, 2.62)
Invasive and In Situ	2.80 (2.77, 2.83)	2.88 (2.85, 2.92)	2.56 (2.47, 2.65)
Ovary[a]	1.31 (1.29, 1.33)	1.37 (1.35, 1.40)	0.99 (0.93, 1.05)
Urinary Bladder (Invasive and In Situ)	1.14 (1.12, 1.16)	1.21 (1.19, 1.24)	0.81 (0.75, 0.87)
Kidney and Renal Pelvis	1.20 (1.18, 1.22)	1.24 (1.21, 1.26)	1.26 (1.20, 1.33)
Brain and Other Nervous System	0.54 (0.53, 0.55)	0.60 (0.58, 0.61)	0.32 (0.29, 0.35)
Thyroid	1.72 (1.70, 1.74)	1.81 (1.79, 1.84)	1.02 (0.98, 1.07)
Hodgkin Lymphoma	0.20 (0.19, 0.20)	0.21 (0.20, 0.22)	0.18 (0.16, 0.20)
Non-Hodgkin Lymphoma	1.89 (1.87, 1.92)	1.99 (1.96, 2.02)	1.19 (1.13, 1.26)
Myeloma	0.64 (0.62, 0.65)	0.57 (0.55, 0.58)	1.23 (1.17, 1.30)
Leukemia	1.22 (1.20, 1.24)	1.28 (1.26, 1.30)	0.92 (0.86, 0.98)
Acute Lymphocytic Leukemia	0.12 (0.11, 0.12)	0.13 (0.13, 0.14)	0.07 (0.06, 0.09)
Chronic Lymphocytic Leukemia	0.44 (0.43, 0.45)	0.47 (0.46, 0.49)	0.30 (0.26, 0.33)
Acute Myeloid Leukemia	0.41 (0.39, 0.42)	0.42 (0.40, 0.43)	0.34 (0.30, 0.37)
Chronic Myeloid Leukemia	0.15 (0.14, 0.16)	0.15 (0.14, 0.16)	0.14 (0.12, 0.16)
Kaposi Sarcoma	0.01 (0.01, 0.02)	0.01 (0.01, 0.02)	0.01 (0.01, 0.02)
Mesothelioma	0.05 (0.05, 0.06)	0.06 (0.05, 0.06)	0.03 (0.02, 0.04)

Devcan Version 6.8.0, August 2014, National Cancer Institute (http://surveillance.cancer.gov/devcan/).
Source: SEER 18 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, New Jersey, and Georgia excluding ATL/RG).
Note: Invasive cancer only unless specified otherwise.
[a] 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 - continued

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

Females, 18 SEER Areas, 2010-2012

Site	Asian/Pacific Islanders Percent (95% C.I.)	American Indian/ Alaska Natives[a] Percent (95% C.I.)	Hispanics[b] Percent (95% C.I.)
All Sites	33.28 (32.83, 33.73)	29.40 (27.77, 31.21)	34.38 (33.99, 34.79)
Invasive and In Situ	35.62 (35.17, 36.08)	30.83 (29.18, 32.66)	36.36 (35.95, 36.77)
Oral Cavity and Pharynx	0.63 (0.56, 0.70)	0.45 (0.31, 0.87)	0.49 (0.45, 0.55)
Esophagus	0.15 (0.12, 0.20)	0.13 (0.06, 0.54)	0.16 (0.13, 0.20)
Stomach	1.43 (1.32, 1.55)	0.97 (0.70, 1.48)	1.21 (1.13, 1.30)
Colon and Rectum	4.57 (4.39, 4.77)	3.96 (3.34, 4.79)	4.11 (3.96, 4.26)
Invasive and In Situ	4.72 (4.53, 4.91)	4.06 (3.43, 4.90)	4.23 (4.08, 4.39)
Liver and Intrahepatic Bile Duct	1.29 (1.19, 1.39)	1.03 (0.77, 1.53)	1.03 (0.96, 1.11)
Pancreas	1.71 (1.59, 1.83)	1.29 (0.89, 1.95)	1.66 (1.57, 1.77)
Larynx	0.06 (0.04, 0.09)	0.08 (0.03, 0.49)	0.07 (0.05, 0.10)
Invasive and In Situ	0.06 (0.04, 0.10)	0.10 (0.03, 0.50)	0.07 (0.06, 0.10)
Lung and Bronchus	4.41 (4.25, 4.59)	4.16 (3.55, 4.98)	3.61 (3.47, 3.75)
Melanoma of the Skin	0.13 (0.11, 0.17)	0.49 (0.33, 0.92)	0.52 (0.47, 0.58)
Invasive and In Situ	0.18 (0.15, 0.22)	0.75 (0.54, 1.22)	0.84 (0.77, 0.91)
Breast	10.25 (10.05, 10.47)	8.15 (7.41, 9.08)	9.81 (9.62, 10.01)
Invasive and In Situ	12.70 (12.47, 12.94)	9.36 (8.59, 10.32)	11.54 (11.34, 11.75)
Cervix Uteri	0.64 (0.59, 0.71)	0.58 (0.44, 0.98)	0.90 (0.85, 0.96)
Corpus and Uterus, NOS	2.25 (2.15, 2.35)	1.93 (1.62, 2.45)	2.42 (2.33, 2.52)
Invasive and In Situ	2.26 (2.17, 2.37)	1.96 (1.65, 2.48)	2.43 (2.35, 2.53)
Ovary[c]	1.08 (1.01, 1.16)	1.16 (0.84, 1.73)	1.29 (1.22, 1.37)
Urinary Bladder (Invasive and In Situ)	0.75 (0.67, 0.85)	0.42 (0.26, 0.86)	0.80 (0.73, 0.88)
Kidney and Renal Pelvis	0.76 (0.69, 0.84)	1.44 (1.10, 2.00)	1.42 (1.34, 1.50)
Brain and Other Nervous System	0.35 (0.31, 0.41)	0.22 (0.12, 0.63)	0.48 (0.44, 0.53)
Thyroid	1.81 (1.73, 1.90)	1.18 (0.96, 1.64)	1.67 (1.61, 1.75)
Hodgkin Lymphoma	0.11 (0.09, 0.14)	0.10 (0.04, 0.50)	0.18 (0.16, 0.22)
Non-Hodgkin Lymphoma	1.63 (1.53, 1.74)	1.16 (0.90, 1.66)	1.99 (1.89, 2.10)
Myeloma	0.48 (0.43, 0.55)	0.59 (0.38, 1.07)	0.67 (0.62, 0.74)
Leukemia	0.82 (0.74, 0.90)	0.74 (0.52, 1.20)	1.07 (1.00, 1.15)
Acute Lymphocytic Leukemia	0.09 (0.07, 0.12)	0.12 (0.07, 0.51)	0.18 (0.16, 0.21)
Chronic Lymphocytic Leukemia	0.11 (0.08, 0.14)	0.21 (0.10, 0.64)	0.25 (0.21, 0.29)
Acute Myeloid Leukemia	0.43 (0.38, 0.49)	0.20 (0.09, 0.62)	0.40 (0.36, 0.45)
Chronic Myeloid Leukemia	0.11 (0.08, 0.15)	0.14 (0.07, 0.53)	0.15 (0.12, 0.19)
Kaposi Sarcoma	0.00 (0.00, 0.03)	0.01 (0.00, 0.43)	0.05 (0.03, 0.09)
Mesothelioma	0.03 (0.02, 0.06)	0.00 (0.00, 0.42)	0.05 (0.04, 0.08)

Source: Devcan Version 6.8.0, August 2014, National Cancer Institute (http://surveillance.cancer.gov/devcan/).
SEER 18 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, New Jersey, and Georgia excluding ATL/RG).

Note: Invasive cancer only unless specified otherwise.

[a] Underlying incidence data for American Indian/Alaska Native 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. Underlying incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

[c] 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 1.18

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

Both Sexes, Total U.S., 2010-2012

Site	All Races	Whites	Blacks
	Percent (95% C.I.)	Percent (95% C.I.)	Percent (95% C.I.)
All Sites	20.68 (20.65, 20.71)	20.78 (20.75, 20.81)	21.06 (20.97, 21.16)
Oral Cavity and Pharynx	0.29 (0.28, 0.29)	0.29 (0.28, 0.29)	0.29 (0.28, 0.30)
Esophagus	0.49 (0.48, 0.49)	0.51 (0.51, 0.52)	0.40 (0.38, 0.41)
Stomach	0.40 (0.39, 0.40)	0.35 (0.34, 0.35)	0.66 (0.64, 0.68)
Colon and Rectum	1.90 (1.89, 1.91)	1.85 (1.84, 1.86)	2.25 (2.22, 2.28)
Liver and Intrahepatic Bile Duct	0.71 (0.70, 0.71)	0.66 (0.66, 0.67)	0.81 (0.79, 0.83)
Pancreas	1.35 (1.35, 1.36)	1.35 (1.34, 1.36)	1.44 (1.42, 1.47)
Larynx	0.12 (0.12, 0.12)	0.12 (0.12, 0.12)	0.18 (0.17, 0.19)
Lung and Bronchus	5.56 (5.55, 5.58)	5.68 (5.67, 5.70)	5.18 (5.13, 5.23)
Melanoma of the Skin	0.31 (0.31, 0.32)	0.36 (0.36, 0.36)	0.04 (0.04, 0.05)
Breast	1.42 (1.41, 1.43)	1.39 (1.38, 1.40)	1.78 (1.75, 1.81)
Urinary Bladder	0.61 (0.60, 0.61)	0.64 (0.63, 0.64)	0.42 (0.41, 0.44)
Kidney and Renal Pelvis	0.47 (0.47, 0.48)	0.49 (0.48, 0.49)	0.39 (0.37, 0.40)
Brain and Other Nervous System	0.46 (0.45, 0.46)	0.49 (0.49, 0.50)	0.24 (0.23, 0.25)
Thyroid	0.06 (0.06, 0.06)	0.06 (0.06, 0.06)	0.05 (0.05, 0.06)
Hodgkin Lymphoma	0.04 (0.04, 0.04)	0.04 (0.04, 0.04)	0.03 (0.03, 0.03)
Non-Hodgkin Lymphoma	0.77 (0.76, 0.77)	0.81 (0.80, 0.81)	0.45 (0.44, 0.47)
Myeloma	0.43 (0.42, 0.43)	0.40 (0.40, 0.41)	0.68 (0.66, 0.70)
Leukemia	0.86 (0.86, 0.87)	0.90 (0.89, 0.91)	0.62 (0.60, 0.64)
Acute Lymphocytic Leukemia	0.04 (0.04, 0.04)	0.04 (0.04, 0.05)	0.03 (0.02, 0.03)
Chronic Lymphocytic Leukemia	0.19 (0.19, 0.19)	0.20 (0.20, 0.20)	0.14 (0.13, 0.15)
Acute Myeloid Leukemia	0.33 (0.33, 0.34)	0.35 (0.34, 0.35)	0.21 (0.20, 0.22)
Chronic Myeloid Leukemia	0.04 (0.04, 0.04)	0.04 (0.04, 0.04)	0.03 (0.03, 0.04)

Source: Devcan Version 6.8.0, August 2014, National Cancer Institute (http://surveillance.cancer.gov/devcan/).
NCHS public use data file for the total US.
A percent or confidence interval value of 0.00 represents a value that is below 0.005.

Table 1.18 - continued

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

Both Sexes, Total U.S., 2010-2012

Site	Asian/Pacific Islanders Percent (95% C.I.)	American Indian/ Alaska Natives[a] Percent (95% C.I.)	Hispanics[b] Percent (95% C.I.)
All Sites	18.56 (18.34, 18.79)	17.08 (16.60, 17.59)	17.71 (17.57, 17.85)
Oral Cavity and Pharynx	0.30 (0.27, 0.34)	0.26 (0.20, 0.34)	0.22 (0.20, 0.24)
Esophagus	0.29 (0.26, 0.33)	0.36 (0.29, 0.46)	0.34 (0.32, 0.36)
Stomach	1.06 (1.00, 1.13)	0.59 (0.49, 0.71)	0.77 (0.74, 0.80)
Colon and Rectum	2.05 (1.96, 2.14)	1.86 (1.68, 2.06)	1.88 (1.83, 1.93)
Liver and Intrahepatic Bile Duct	1.59 (1.53, 1.66)	1.07 (0.96, 1.21)	1.24 (1.20, 1.27)
Pancreas	1.43 (1.36, 1.50)	0.98 (0.86, 1.13)	1.33 (1.29, 1.37)
Larynx	0.07 (0.06, 0.09)	0.09 (0.06, 0.15)	0.12 (0.11, 0.13)
Lung and Bronchus	4.23 (4.12, 4.34)	4.18 (3.94, 4.45)	2.99 (2.93, 3.05)
Melanoma of the Skin	0.06 (0.05, 0.07)	0.10 (0.07, 0.18)	0.11 (0.10, 0.13)
Breast	0.96 (0.91, 1.02)	0.87 (0.76, 1.01)	1.13 (1.09, 1.17)
Urinary Bladder	0.41 (0.37, 0.46)	0.26 (0.20, 0.37)	0.42 (0.40, 0.45)
Kidney and Renal Pelvis	0.33 (0.30, 0.37)	0.74 (0.63, 0.87)	0.51 (0.48, 0.53)
Brain and Other Nervous System	0.27 (0.24, 0.30)	0.21 (0.17, 0.28)	0.35 (0.33, 0.37)
Thyroid	0.12 (0.10, 0.14)	0.04 (0.02, 0.11)	0.09 (0.08, 0.10)
Hodgkin Lymphoma	0.02 (0.02, 0.04)	0.02 (0.00, 0.08)	0.05 (0.05, 0.06)
Non-Hodgkin Lymphoma	0.74 (0.69, 0.80)	0.48 (0.40, 0.59)	0.76 (0.73, 0.79)
Myeloma	0.31 (0.28, 0.34)	0.27 (0.21, 0.36)	0.43 (0.41, 0.46)
Leukemia	0.67 (0.62, 0.71)	0.52 (0.43, 0.64)	0.68 (0.65, 0.71)
Acute Lymphocytic Leukemia	0.04 (0.03, 0.06)	0.03 (0.02, 0.09)	0.07 (0.06, 0.08)
Chronic Lymphocytic Leukemia	0.06 (0.05, 0.08)	0.09 (0.05, 0.17)	0.09 (0.08, 0.10)
Acute Myeloid Leukemia	0.33 (0.30, 0.36)	0.21 (0.16, 0.30)	0.25 (0.24, 0.27)
Chronic Myeloid Leukemia	0.03 (0.02, 0.05)	0.03 (0.01, 0.09)	0.04 (0.03, 0.04)

Source: Devcan Version 6.8.0, August 2014, National Cancer Institute (http://surveillance.cancer.gov/devcan/).
NCHS public use data file for the total US.

[a] Underlying mortality data for American Indian/Alaska Native 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.

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

Males, Total U.S., 2010-2012

Site	All Races	Whites	Blacks
	Percent (95% C.I.)	Percent (95% C.I.)	Percent (95% C.I.)
All Sites	22.62 (22.58, 22.67)	22.68 (22.63, 22.72)	23.42 (23.27, 23.56)
Oral Cavity and Pharynx	0.40 (0.39, 0.40)	0.39 (0.39, 0.40)	0.45 (0.43, 0.47)
Esophagus	0.79 (0.78, 0.80)	0.83 (0.82, 0.84)	0.60 (0.57, 0.62)
Stomach	0.48 (0.47, 0.49)	0.42 (0.41, 0.43)	0.80 (0.77, 0.84)
Colon and Rectum	1.99 (1.98, 2.01)	1.95 (1.93, 1.96)	2.40 (2.35, 2.46)
Liver and Intrahepatic Bile Duct	0.94 (0.93, 0.95)	0.87 (0.86, 0.88)	1.14 (1.11, 1.17)
Pancreas	1.37 (1.36, 1.38)	1.38 (1.37, 1.40)	1.36 (1.32, 1.40)
Larynx	0.20 (0.20, 0.21)	0.19 (0.19, 0.20)	0.31 (0.30, 0.33)
Lung and Bronchus	6.33 (6.31, 6.36)	6.39 (6.36, 6.41)	6.40 (6.32, 6.48)
Melanoma of the Skin	0.43 (0.42, 0.44)	0.49 (0.48, 0.50)	0.04 (0.03, 0.05)
Breast	0.03 (0.03, 0.03)	0.03 (0.03, 0.03)	0.04 (0.04, 0.05)
Prostate	2.58 (2.56, 2.60)	2.41 (2.39, 2.43)	4.43 (4.35, 4.51)
Testis	0.02 (0.02, 0.02)	0.02 (0.02, 0.02)	0.01 (0.01, 0.02)
Urinary Bladder	0.92 (0.91, 0.93)	0.98 (0.97, 0.99)	0.52 (0.49, 0.54)
Kidney and Renal Pelvis	0.62 (0.61, 0.62)	0.64 (0.63, 0.65)	0.49 (0.47, 0.51)
Brain and Other Nervous System	0.51 (0.51, 0.52)	0.56 (0.55, 0.57)	0.26 (0.25, 0.28)
Thyroid	0.06 (0.05, 0.06)	0.06 (0.05, 0.06)	0.03 (0.03, 0.04)
Hodgkin Lymphoma	0.04 (0.04, 0.05)	0.05 (0.04, 0.05)	0.03 (0.03, 0.04)
Non-Hodgkin Lymphoma	0.86 (0.85, 0.87)	0.91 (0.90, 0.92)	0.50 (0.47, 0.52)
Myeloma	0.47 (0.47, 0.48)	0.45 (0.45, 0.46)	0.69 (0.66, 0.72)
Leukemia	1.03 (1.02, 1.04)	1.07 (1.06, 1.08)	0.68 (0.65, 0.71)
Acute Lymphocytic Leukemia	0.05 (0.04, 0.05)	0.05 (0.05, 0.05)	0.03 (0.02, 0.04)
Chronic Lymphocytic Leukemia	0.24 (0.23, 0.24)	0.25 (0.24, 0.26)	0.17 (0.16, 0.19)
Acute Myeloid Leukemia	0.39 (0.39, 0.40)	0.41 (0.40, 0.42)	0.23 (0.21, 0.25)
Chronic Myeloid Leukemia	0.04 (0.04, 0.05)	0.05 (0.04, 0.05)	0.03 (0.03, 0.04)

Devcan Version 6.8.0, August 2014, National Cancer Institute (http://surveillance.cancer.gov/devcan/).
Source: NCHS public use data file for the total US.
A percent or confidence interval value of 0.00 represents a value that is below 0.005.

Table 1.19 - continued

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

Males, Total U.S., 2010-2012

Site	Asian/Pacific Islanders Percent (95% C.I.)	American Indian/ Alaska Natives[a] Percent (95% C.I.)	Hispanics[b] Percent (95% C.I.)
All Sites	20.84 (20.48, 21.20)	18.45 (17.70, 19.27)	20.13 (19.91, 20.36)
Oral Cavity and Pharynx	0.41 (0.36, 0.47)	0.37 (0.27, 0.58)	0.29 (0.27, 0.32)
Esophagus	0.45 (0.40, 0.52)	0.46 (0.35, 0.67)	0.57 (0.53, 0.61)
Stomach	1.25 (1.15, 1.35)	0.78 (0.61, 1.05)	0.92 (0.88, 0.98)
Colon and Rectum	2.13 (2.01, 2.27)	1.80 (1.56, 2.13)	2.11 (2.03, 2.19)
Liver and Intrahepatic Bile Duct	2.07 (1.97, 2.18)	1.37 (1.19, 1.64)	1.60 (1.55, 1.67)
Pancreas	1.35 (1.26, 1.45)	0.87 (0.73, 1.11)	1.30 (1.24, 1.36)
Larynx	0.13 (0.11, 0.17)	0.15 (0.09, 0.32)	0.23 (0.20, 0.26)
Lung and Bronchus	5.36 (5.18, 5.55)	4.69 (4.31, 5.14)	3.88 (3.78, 3.99)
Melanoma of the Skin	0.07 (0.05, 0.10)	0.15 (0.09, 0.33)	0.15 (0.12, 0.18)
Breast	0.03 (0.01, 0.06)	0.02 (0.00, 0.20)	0.03 (0.01, 0.04)
Prostate	2.11 (1.96, 2.27)	2.30 (1.95, 2.73)	2.98 (2.86, 3.10)
Testis	0.01 (0.00, 0.03)	0.02 (0.01, 0.20)	0.02 (0.02, 0.04)
Urinary Bladder	0.64 (0.56, 0.73)	0.46 (0.31, 0.71)	0.63 (0.58, 0.69)
Kidney and Renal Pelvis	0.42 (0.37, 0.48)	0.84 (0.68, 1.09)	0.65 (0.61, 0.69)
Brain and Other Nervous System	0.31 (0.27, 0.36)	0.26 (0.20, 0.44)	0.38 (0.35, 0.41)
Thyroid	0.08 (0.06, 0.12)	0.03 (0.01, 0.21)	0.06 (0.05, 0.08)
Hodgkin Lymphoma	0.03 (0.02, 0.06)	0.03 (0.01, 0.21)	0.07 (0.05, 0.08)
Non-Hodgkin Lymphoma	0.83 (0.76, 0.92)	0.58 (0.45, 0.81)	0.82 (0.78, 0.87)
Myeloma	0.36 (0.32, 0.42)	0.29 (0.20, 0.50)	0.47 (0.44, 0.51)
Leukemia	0.78 (0.72, 0.86)	0.69 (0.54, 0.95)	0.79 (0.75, 0.84)
Acute Lymphocytic Leukemia	0.05 (0.03, 0.07)	0.03 (0.02, 0.21)	0.07 (0.06, 0.09)
Chronic Lymphocytic Leukemia	0.08 (0.06, 0.12)	0.15 (0.08, 0.36)	0.11 (0.09, 0.13)
Acute Myeloid Leukemia	0.37 (0.33, 0.42)	0.24 (0.17, 0.43)	0.28 (0.26, 0.31)
Chronic Myeloid Leukemia	0.04 (0.03, 0.07)	0.05 (0.02, 0.22)	0.04 (0.03, 0.05)

Source: Devcan Version 6.8.0, August 2014, National Cancer Institute (http://surveillance.cancer.gov/devcan/).
NCHS public use data file for the total US.

[a] Underlying mortality data for American Indian/Alaska Native 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.

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

Table 1.20

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

Females, Total U.S., 2010-2012

Site	All Races	Whites	Blacks
	Percent (95% C.I.)	Percent (95% C.I.)	Percent (95% C.I.)
All Sites	19.13 (19.09, 19.17)	19.25 (19.21, 19.30)	19.37 (19.25, 19.50)
Oral Cavity and Pharynx	0.18 (0.18, 0.19)	0.19 (0.18, 0.19)	0.15 (0.14, 0.16)
Esophagus	0.21 (0.21, 0.22)	0.21 (0.21, 0.22)	0.22 (0.21, 0.24)
Stomach	0.32 (0.32, 0.33)	0.28 (0.28, 0.29)	0.54 (0.52, 0.57)
Colon and Rectum	1.81 (1.80, 1.82)	1.77 (1.75, 1.78)	2.13 (2.09, 2.18)
Liver and Intrahepatic Bile Duct	0.49 (0.48, 0.49)	0.46 (0.45, 0.47)	0.52 (0.50, 0.54)
Pancreas	1.34 (1.32, 1.35)	1.32 (1.30, 1.33)	1.51 (1.48, 1.55)
Larynx	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	0.07 (0.06, 0.07)
Lung and Bronchus	4.89 (4.86, 4.91)	5.06 (5.04, 5.09)	4.17 (4.11, 4.23)
Melanoma of the Skin	0.21 (0.21, 0.22)	0.24 (0.24, 0.25)	0.05 (0.04, 0.05)
Breast	2.69 (2.68, 2.71)	2.66 (2.64, 2.67)	3.26 (3.21, 3.32)
Cervix Uteri	0.23 (0.22, 0.23)	0.21 (0.20, 0.21)	0.38 (0.36, 0.39)
Corpus and Uterus, NOS	0.58 (0.58, 0.59)	0.55 (0.54, 0.55)	0.93 (0.90, 0.96)
Ovary	0.97 (0.96, 0.98)	1.01 (1.00, 1.02)	0.77 (0.74, 0.79)
Urinary Bladder	0.34 (0.34, 0.35)	0.35 (0.34, 0.35)	0.35 (0.33, 0.37)
Kidney and Renal Pelvis	0.34 (0.34, 0.35)	0.35 (0.35, 0.36)	0.31 (0.29, 0.32)
Brain and Other Nervous System	0.40 (0.39, 0.41)	0.43 (0.43, 0.44)	0.22 (0.21, 0.23)
Thyroid	0.07 (0.07, 0.07)	0.07 (0.06, 0.07)	0.06 (0.06, 0.07)
Hodgkin Lymphoma	0.03 (0.03, 0.03)	0.03 (0.03, 0.04)	0.02 (0.02, 0.03)
Non-Hodgkin Lymphoma	0.68 (0.68, 0.69)	0.72 (0.71, 0.73)	0.42 (0.40, 0.44)
Myeloma	0.39 (0.38, 0.39)	0.35 (0.35, 0.36)	0.68 (0.65, 0.70)
Leukemia	0.72 (0.71, 0.73)	0.74 (0.74, 0.75)	0.57 (0.55, 0.59)
Acute Lymphocytic Leukemia	0.04 (0.04, 0.04)	0.04 (0.04, 0.04)	0.03 (0.02, 0.03)
Chronic Lymphocytic Leukemia	0.15 (0.14, 0.15)	0.15 (0.15, 0.16)	0.12 (0.11, 0.13)
Acute Myeloid Leukemia	0.28 (0.27, 0.28)	0.29 (0.28, 0.30)	0.20 (0.19, 0.22)
Chronic Myeloid Leukemia	0.04 (0.03, 0.04)	0.04 (0.03, 0.04)	0.03 (0.03, 0.04)

Devcan Version 6.8.0, August 2014, National Cancer Institute (http://surveillance.cancer.gov/devcan/).
Source: NCHS public use data file for the total US.
A percent or confidence interval value of 0.00 represents a value that is below 0.005.

Table 1.20 - continued

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

Females, Total U.S., 2010-2012

Site	Asian/Pacific Islanders Percent (95% C.I.)	American Indian/ Alaska Natives[a] Percent (95% C.I.)	Hispanics[b] Percent (95% C.I.)
All Sites	16.79 (16.49, 17.10)	16.07 (15.42, 16.76)	15.92 (15.74, 16.10)
Oral Cavity and Pharynx	0.21 (0.17, 0.25)	0.15 (0.10, 0.27)	0.15 (0.13, 0.18)
Esophagus	0.16 (0.12, 0.20)	0.26 (0.18, 0.41)	0.15 (0.13, 0.17)
Stomach	0.92 (0.84, 1.00)	0.43 (0.32, 0.58)	0.64 (0.61, 0.69)
Colon and Rectum	1.98 (1.86, 2.10)	1.89 (1.64, 2.20)	1.69 (1.62, 1.76)
Liver and Intrahepatic Bile Duct	1.20 (1.11, 1.29)	0.79 (0.65, 0.98)	0.92 (0.87, 0.96)
Pancreas	1.49 (1.40, 1.59)	1.06 (0.88, 1.29)	1.36 (1.30, 1.42)
Larynx	0.02 (0.01, 0.05)	0.03 (0.01, 0.13)	0.03 (0.02, 0.04)
Lung and Bronchus	3.33 (3.20, 3.46)	3.77 (3.45, 4.12)	2.26 (2.19, 2.34)
Melanoma of the Skin	0.05 (0.04, 0.08)	0.07 (0.03, 0.17)	0.09 (0.08, 0.11)
Breast	1.74 (1.64, 1.84)	1.66 (1.46, 1.91)	2.08 (2.01, 2.15)
Cervix Uteri	0.25 (0.22, 0.29)	0.32 (0.24, 0.47)	0.31 (0.28, 0.33)
Corpus and Uterus, NOS	0.46 (0.41, 0.52)	0.48 (0.38, 0.63)	0.52 (0.49, 0.56)
Ovary	0.66 (0.61, 0.72)	0.79 (0.64, 0.98)	0.81 (0.77, 0.86)
Urinary Bladder	0.23 (0.19, 0.29)	0.11 (0.07, 0.22)	0.26 (0.24, 0.30)
Kidney and Renal Pelvis	0.25 (0.21, 0.31)	0.63 (0.48, 0.83)	0.39 (0.36, 0.43)
Brain and Other Nervous System	0.23 (0.20, 0.27)	0.16 (0.11, 0.27)	0.32 (0.30, 0.35)
Thyroid	0.15 (0.12, 0.18)	0.06 (0.02, 0.16)	0.11 (0.09, 0.13)
Hodgkin Lymphoma	0.02 (0.01, 0.04)	0.01 (0.00, 0.11)	0.04 (0.03, 0.05)
Non-Hodgkin Lymphoma	0.67 (0.61, 0.75)	0.39 (0.29, 0.54)	0.72 (0.68, 0.76)
Myeloma	0.26 (0.23, 0.31)	0.25 (0.18, 0.39)	0.40 (0.37, 0.43)
Leukemia	0.57 (0.52, 0.64)	0.38 (0.28, 0.53)	0.60 (0.56, 0.63)
Acute Lymphocytic Leukemia	0.04 (0.03, 0.06)	0.02 (0.01, 0.12)	0.06 (0.05, 0.07)
Chronic Lymphocytic Leukemia	0.05 (0.03, 0.08)	0.04 (0.01, 0.15)	0.07 (0.06, 0.09)
Acute Myeloid Leukemia	0.29 (0.26, 0.34)	0.19 (0.12, 0.32)	0.23 (0.21, 0.25)
Chronic Myeloid Leukemia	0.03 (0.01, 0.05)	0.01 (0.00, 0.11)	0.03 (0.02, 0.04)

Source: Devcan Version 6.8.0, August 2014, National Cancer Institute (http://surveillance.cancer.gov/devcan/).
NCHS public use data file for the total US.

[a] Underlying mortality data for American Indian/Alaska Native 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.

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

Table 1.21
U.S. and SEER Death Rates by Primary Cancer Site and Race/Ethnicity, 2008-2012

		Total United States[a]							SEER 18 Areas[ab]						
Site		Total	White	Black	AI/AN[c]	API[d]	Hisp[e]	W-NHisp[e]	Total	White	Black	AI/AN[c]	API[d]	Hisp[e]	W-NHisp[e]
All Sites	Both Sexes	171.2	170.9	202.0	156.1	106.6	119.3	174.8	165.4	167.4	202.0	133.2	112.4	120.0	173.2
	Male	207.9	206.4	261.5	186.7	128.4	148.0	210.6	199.0	200.2	258.5	159.4	136.4	146.7	206.4
	Female	145.4	145.6	166.3	133.9	91.2	99.4	149.2	142.0	144.4	167.8	114.4	95.6	101.5	149.9
Oral Cavity & Pharynx	Both Sexes	2.5	2.4	2.9	2.2	1.9	1.5	2.5	2.4	2.4	2.9	1.8	2.1	1.5	2.5
	Male	3.8	3.7	5.0	3.6	2.9	2.4	3.8	3.7	3.6	5.0	3.1	3.2	2.4	3.8
	Female	1.4	1.3	1.3	1.2	1.2	0.8	1.4	1.4	1.4	1.4	-	1.2	0.9	1.5
Esophagus	Both Sexes	4.2	4.3	4.0	3.4	1.7	2.3	4.5	3.8	4.1	3.9	2.5	1.8	2.3	4.3
	Male	7.5	7.7	7.0	5.6	2.8	4.3	8.0	6.7	7.2	6.6	4.0	3.0	4.3	7.6
	Female	1.5	1.5	2.0	1.8	0.8	0.8	1.6	1.5	1.5	1.9	1.4	0.8	0.8	1.6
Stomach	Both Sexes	3.4	2.9	6.3	5.2	6.0	5.5	2.6	3.9	3.3	6.5	6.2	6.2	6.0	2.8
	Male	4.6	4.0	9.2	7.4	7.9	7.2	3.6	5.2	4.5	9.0	8.4	8.0	7.8	3.9
	Female	2.4	2.1	4.4	3.6	4.7	4.2	1.8	2.8	2.4	4.9	4.4	4.9	4.7	1.9
Colon & Rectum	Both Sexes	15.5	15.0	21.4	17.1	11.0	12.2	15.2	15.1	14.8	21.6	15.8	11.5	11.8	15.1
	Male	18.6	18.0	26.9	18.8	13.0	15.6	18.2	18.0	17.6	26.7	18.6	13.7	15.2	17.8
	Female	13.1	12.7	17.8	15.6	9.4	9.6	12.9	12.9	12.5	18.2	13.6	9.8	9.2	13.0
Liver & Intrahepatic Bile Duct	Both Sexes	6.0	5.5	7.9	9.8	9.8	8.9	5.2	6.4	5.8	7.9	9.0	10.0	9.1	5.3
	Male	8.8	8.1	12.5	13.9	14.5	12.9	7.6	9.5	8.5	12.5	12.5	14.9	13.2	7.7
	Female	3.5	3.3	4.3	6.3	6.1	5.6	3.1	3.8	3.5	4.3	6.1	6.1	5.8	3.2
Pancreas	Both Sexes	10.9	10.8	13.5	8.5	7.8	8.7	11.0	10.9	10.9	13.5	9.1	8.4	9.1	11.1
	Male	12.6	12.5	15.0	9.3	8.4	9.8	12.7	12.5	12.6	15.0	10.6	9.2	10.1	12.9
	Female	9.6	9.4	12.3	7.8	7.3	7.7	9.5	9.6	9.6	12.2	7.8	7.8	8.3	9.7
Larynx	Both Sexes	1.1	1.0	1.8	0.9	0.4	0.8	1.0	1.0	1.0	1.6	-	0.4	0.7	1.0
	Male	1.9	1.8	3.6	1.7	0.8	1.7	1.8	1.7	1.7	3.1	-	0.9	1.4	1.7
	Female	0.4	0.4	0.6	-	0.1	0.2	0.4	0.4	0.4	0.6	-	0.1	0.2	0.4
Lung & Bronchus	Both Sexes	47.2	47.9	50.6	39.4	24.8	20.4	50.4	42.9	44.1	50.0	28.1	26.0	19.2	47.6
	Male	59.8	59.7	73.1	49.1	34.0	29.5	62.2	53.6	53.8	71.0	36.0	36.4	26.9	57.4
	Female	37.8	39.1	35.8	32.1	18.2	13.7	41.4	34.9	36.8	36.0	22.1	18.6	13.6	40.2
Melanoma of the Skin	Both Sexes	2.7	3.1	0.4	1.0	0.4	0.8	3.4	2.6	3.1	0.4	0.8	0.4	0.8	3.5
	Male	4.1	4.6	0.5	1.5	0.4	1.0	5.0	3.8	4.6	0.5	-	0.5	1.0	5.2
	Female	1.7	2.0	0.4	0.7	0.3	0.6	2.1	1.6	2.0	0.3	-	0.3	0.6	2.2
Breast	Female	21.9	21.3	30.2	15.0	11.4	14.5	21.9	21.9	21.9	30.8	13.2	12.4	14.5	22.9

[a] 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).

[b] The SEER 18 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, New Jersey and Georgia excluding ATL/RG.

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

[d] Asian/Pacific Islander.

[e] Hispanic (Hisp) and White Non-Hispanic (W-NHisp) are not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives.

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

Table 1.21 - continued
U.S. and SEER Death Rates by Primary Cancer Site and Race/Ethnicity, 2008-2012

		Total United States[a]							SEER 18 Areas[ab]						
Site		Total	White	Black	AI/AN[c]	API[d]	Hisp[e]	W-NHisp[e]	Total	White	Black	AI/AN[c]	API[d]	Hisp[e]	W-NHisp[e]
Cervix	Female	2.3	2.1	4.0	3.5	1.8	2.7	2.0	2.3	2.2	3.7	3.0	1.8	2.7	2.0
Corpus & Uterus, NOS	Female	4.4	4.1	7.7	3.5	2.8	3.5	4.1	4.4	4.1	7.4	3.2	3.2	3.5	4.2
Ovary	Female	7.7	8.0	6.7	6.7	4.6	5.6	8.2	7.7	8.2	6.7	6.1	4.7	6.0	8.5
Prostate	Male	21.4	19.8	46.3	20.2	9.4	17.8	19.9	21.5	20.5	46.1	18.0	10.0	18.2	20.7
Testis	Male	0.3	0.3	0.1	0.3	0.1	0.3	0.3	0.3	0.3	0.1	-	0.1	0.3	0.3
Urinary	Both Sexes	4.4	4.6	3.5	2.3	1.7	2.3	4.8	4.3	4.6	3.7	2.0	1.8	2.3	4.9
Bladder	Male	7.7	8.1	5.3	4.2	3.0	3.9	8.4	7.4	8.1	5.5	3.4	3.1	3.8	8.6
	Female	2.2	2.2	2.5	1.1	0.9	1.3	2.3	2.2	2.2	2.6	-	0.9	1.3	2.4
Kidney &	Both Sexes	3.9	4.0	3.8	6.6	1.9	3.5	4.0	3.7	3.9	3.8	6.2	2.1	3.6	3.9
Renal	Male	5.7	5.9	5.6	8.7	2.9	5.0	5.9	5.5	5.7	5.7	8.0	3.1	5.1	5.7
Pelvis	Female	2.5	2.6	2.5	4.7	1.2	2.4	2.6	2.4	2.5	2.5	4.6	1.3	2.5	2.4
Brain &	Both Sexes	4.3	4.7	2.5	2.5	2.0	2.8	4.9	4.3	4.8	2.7	2.0	2.0	3.0	5.1
Nervous	Male	5.3	5.7	3.1	3.2	2.4	3.4	6.0	5.2	5.8	3.3	2.6	2.5	3.5	6.2
System	Female	3.5	3.8	2.1	1.9	1.6	2.4	3.9	3.4	3.8	2.3	1.5	1.7	2.5	4.1
Thyroid	Both Sexes	0.5	0.5	0.5	0.4	0.7	0.6	0.5	0.5	0.5	0.5	-	0.8	0.6	0.5
	Male	0.5	0.5	0.4	-	0.5	0.5	0.5	0.5	0.5	0.3	-	0.6	0.4	0.5
	Female	0.5	0.5	0.6	0.5	0.8	0.7	0.5	0.6	0.5	0.5	-	0.9	0.7	0.5
Hodgkin	Both Sexes	0.4	0.4	0.3	-	0.1	0.4	0.4	0.4	0.4	0.3	-	0.2	0.4	0.4
Lymphoma	Male	0.5	0.5	0.4	-	0.2	0.5	0.5	0.5	0.5	0.5	-	0.2	0.6	0.5
	Female	0.3	0.3	0.3	-	0.1	0.3	0.3	0.3	0.3	0.3	-	0.1	0.3	0.3
Non-Hodgkin	Both Sexes	6.2	6.4	4.4	4.6	4.1	5.2	6.5	6.0	6.4	4.4	3.8	4.3	5.3	6.4
Lymphoma	Male	7.9	8.2	5.7	5.7	5.0	6.3	8.3	7.7	8.1	5.9	4.2	5.3	6.6	8.2
	Female	4.8	5.0	3.5	3.6	3.4	4.3	5.0	4.7	5.0	3.3	3.4	3.6	4.3	5.0
Myeloma	Both Sexes	3.3	3.1	6.2	2.7	1.7	2.8	3.1	3.3	3.1	6.3	2.0	1.8	2.9	3.1
	Male	4.2	4.0	7.6	3.2	2.2	3.5	4.0	4.2	4.1	7.8	2.7	2.4	3.6	4.1
	Female	2.7	2.4	5.3	2.3	1.4	2.3	2.4	2.6	2.4	5.4	1.5	1.4	2.4	2.4
Leukemia	Both Sexes	7.0	7.2	6.0	4.6	4.0	4.9	7.3	6.7	7.1	6.0	3.8	4.3	4.8	7.2
	Male	9.4	9.7	7.9	6.7	5.1	6.1	9.9	8.9	9.5	7.8	5.6	5.3	6.1	9.7
	Female	5.2	5.4	4.7	3.2	3.2	4.0	5.4	5.1	5.3	4.9	2.6	3.5	3.9	5.3

[a] 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).

[b] The SEER 18 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, New Jersey and Georgia excluding ATL/RG.

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

[d] Asian/Pacific Islander.

[e] Hispanic (Hisp) and White Non-Hispanic (W-NHisp) are not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives.

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

Table 1.22
U.S. Prevalence Counts, Invasive Cancers Only, January 1, 2012[a]
Using Different Tumor Inclusion Criteria[b]

Site	Sex	5-Year Limited Duration: 1st Invasive Tumor Ever[c]	5-Year Limited Duration: 1st Per Site in Previous 37 Years[d]	5-Year Limited Duration: 1st Per Site in Previous 5 Years[e]	37-year Limited Duration: 1st Invasive Tumor Ever[c]	37-year Limited Duration: 1st Per Site in Previous 37 Years[d]
All Sites	Both Sexes	4,660,390	4,751,475	5,238,866	13,405,317	13,624,510
	Male	2,395,057	2,430,935	2,669,928	6,387,558	6,462,521
	Female	2,265,333	2,320,540	2,568,938	7,017,759	7,161,989
Oral Cavity & Pharynx	Both Sexes	108,762	126,337	131,109	282,380	312,792
	Male	76,856	88,637	91,609	188,848	207,488
	Female	31,906	37,700	39,500	93,532	105,304
Esophagus	Both Sexes	21,344	26,589	26,680	35,667	42,388
	Male	16,607	20,581	20,639	27,750	32,814
	Female	4,737	6,008	6,041	7,917	9,574
Stomach	Both Sexes	37,369	45,065	45,492	75,640	87,222
	Male	22,014	27,032	27,269	43,300	50,402
	Female	15,355	18,033	18,223	32,340	36,820
Colon & Rectum	Both Sexes	398,737	458,984	468,251	1,149,814	1,279,479
	Male	204,170	234,705	239,034	573,302	635,108
	Female	194,567	224,279	229,217	576,512	644,371
Liver & Intrahepatic Bile Duct	Both Sexes	36,620	41,939	41,976	50,271	56,613
	Male	27,039	30,599	30,620	35,990	40,166
	Female	9,581	11,340	11,356	14,281	16,447
Pancreas	Both Sexes	34,042	41,747	41,771	45,432	54,507
	Male	17,628	21,807	21,819	22,666	27,478
	Female	16,414	19,940	19,952	22,766	27,029
Larynx	Both Sexes	31,457	37,206	37,786	87,479	98,015
	Male	25,542	30,220	30,728	70,303	78,592
	Female	5,915	6,986	7,058	17,176	19,423
Lung & Bronchus	Both Sexes	233,827	301,827	311,522	402,326	498,404
	Male	107,351	140,977	144,670	180,530	225,061
	Female	126,476	160,850	166,852	221,796	273,343
Melanoma of the Skin	Both Sexes	285,569	326,073	342,024	962,438	1,041,311
	Male	153,364	179,735	189,728	478,737	525,778
	Female	132,205	146,338	152,296	483,701	515,533
Breast	Female	872,541	944,632	1,005,580	2,928,546	3,104,561
Cervix	Female	39,323	41,561	41,655	214,008	220,136
Corpus & Uterus, NOS	Female	183,434	205,521	205,655	598,766	653,998
Ovary[f]	Female	59,878	68,736	68,817	177,706	199,493

[a] U.S. 2012 cancer prevalence counts are based on 2012 cancer prevalence proportions from the SEER 9 registries and 1/1/2012 U.S. population estimates based on the average of 2011 and 2012 population estimates from the U.S. Bureau of the Census.

[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] (c) First invasive tumor ever

[d] (d) First invasive tumor for each cancer site diagnosed during the previous 37 years (1975-2011)

[e] (e) First invasive tumor for each cancer site diagnosed during the previous 5 years (2007-2011)

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 2007; Melanoma in 2008.
In method (c) the melanoma is the woman's first cancer, and is counted for the melanoma and all sites 37-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 1/1/2012.
In method (d) the 1981 melanoma is counted for the melanoma and all sites 37-year limited duration prevalence. The 2007 breast cancer is counted for the breast 5-year and 37-year limited duration prevalence.
In method (e) the 2007 breast cancer is counted for the breast cancer and all sites 5-year limited duration prevalence. The 2008 melanoma is counted for 5-year limited duration prevalence for melanoma.

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

Table 1.22 - continued
U.S. Prevalence Counts, Invasive Cancers Only, January 1, 2012[a]
Using Different Tumor Inclusion Criteria[b]

Site	Sex	5-Year Limited Duration: 1st Invasive Tumor Ever[c]	5-Year Limited Duration: 1st Per Site in Previous 37 Years[d]	5-Year Limited Duration: 1st Per Site in Previous 5 Years[e]	37-year Limited Duration: 1st Invasive Tumor Ever[c]	37-year Limited Duration: 1st Per Site in Previous 37 Years[d]
Prostate	Male	1,044,262	1,128,141	1,128,224	2,794,570	2,976,626
Testis	Male	42,435	43,354	44,013	218,903	221,980
Urinary Bladder	Both Sexes	201,191	253,322	258,716	567,531	664,041
	Male	153,198	193,786	198,124	424,112	496,868
	Female	47,993	59,536	60,592	143,419	167,173
Kidney & Renal Pelvis	Both Sexes	154,353	188,076	190,370	365,660	427,078
	Male	94,867	117,507	119,055	217,927	257,221
	Female	59,486	70,569	71,315	147,733	169,857
Brain & Nervous System	Both Sexes	45,479	48,676	49,045	136,100	140,756
	Male	24,643	26,423	26,633	72,270	74,764
	Female	20,836	22,253	22,412	63,830	65,992
Thyroid	Both Sexes	185,714	207,444	208,227	563,884	604,543
	Male	40,645	47,892	48,044	121,802	134,236
	Female	145,069	159,552	160,183	442,082	470,307
Hodgkin Lymphoma	Both Sexes	38,167	40,722	40,777	176,990	181,967
	Male	20,781	22,226	22,270	91,797	94,359
	Female	17,386	18,496	18,507	85,193	87,608
Non-Hodgkin Lymphoma	Both Sexes	205,597	242,575	245,938	541,393	606,972
	Male	110,512	131,592	133,324	284,672	319,941
	Female	95,085	110,983	112,614	256,721	287,031
Myeloma	Both Sexes	56,508	67,424	67,605	89,416	103,463
	Male	30,245	36,895	36,980	47,990	56,338
	Female	26,263	30,529	30,625	41,426	47,125
Leukemia	Both Sexes	120,252	139,986	140,426	312,923	345,422
	Male	70,027	82,564	82,799	177,810	197,506
	Female	50,225	57,422	57,627	135,113	147,916
Acute Lymphocytic Leukemia	Both Sexes	17,081	17,590	17,590	71,898	72,647
	Male	9,480	9,693	9,693	39,375	39,666
	Female	7,601	7,897	7,897	32,523	32,981
Childhood (Ages 0-19)	Both Sexes	65,893	65,980	66,533	326,769	327,259
	Male	34,508	34,555	34,858	167,928	168,153
	Female	31,385	31,425	31,675	158,841	159,106
Kaposi Sarcoma	Both Sexes	7,384	7,975	7,975	26,300	27,684
	Male	6,836	7,367	7,367	24,829	26,079
	Female	548	608	608	1,471	1,605
Mesothelioma	Both Sexes	3,247	4,116	4,116	4,957	5,962
	Male	2,341	2,982	2,982	3,042	3,748
	Female	906	1,134	1,134	1,915	2,214

[a] U.S. 2012 cancer prevalence counts are based on 2012 cancer prevalence proportions from the SEER 9 registries and 1/1/2012 U.S. population estimates based on the average of 2011 and 2012 population estimates from the U.S. Bureau of the Census.

[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] (c) First invasive tumor ever

[d] (d) First invasive tumor for each cancer site diagnosed during the previous 37 years (1975-2011)

[e] (e) First invasive tumor for each cancer site diagnosed during the previous 5 years (2007-2011)

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 2007; Melanoma in 2008.
In method (c) the melanoma is the woman's first cancer, and is counted for the melanoma and all sites 37-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 1/1/2012.
In method (d) the 1981 melanoma is counted for the melanoma and all sites 37-year limited duration prevalence. The 2007 breast cancer is counted for the breast 5-year and 37-year limited duration prevalence.
In method (e) the 2007 breast cancer is counted for the breast cancer and all sites 5-year limited duration prevalence. The 2008 melanoma is counted for 5-year limited duration prevalence for melanoma.

Table 1.23
U.S. Complete Prevalence Counts, Invasive Cancers Only, January 1, 2012[a]
By Age at Prevalence

Site/Sex	Age at Prevalence								
	All Ages[c]	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70+
All Sites									
Males	6,464,529	19,057	42,522	87,325	156,133	356,474	907,855	1,732,881	3,162,283
Females	7,311,722	17,006	36,354	89,937	229,430	636,759	1,353,262	1,832,064	3,116,909
Oral Cavity & Pharynx									
Males	193,779	73	416	1,506	3,443	14,067	46,864	62,089	65,320
Females	97,329	96	569	1,562	3,831	8,690	18,524	24,531	39,526
Esophagus									
Males	27,808	0	0	34	126	993	4,575	10,168	11,912
Females	7,973	0	0	11	11	207	1,315	2,059	4,369
Stomach									
Males	43,975	0	46	105	596	2,524	7,100	12,229	21,374
Females	32,854	3	23	172	691	2,440	4,745	7,157	17,623
Colon & Rectum									
Males	579,901	11	93	1,215	5,831	26,335	84,353	142,161	319,901
Females	589,028	0	105	1,463	5,773	23,768	72,770	115,560	369,590
Liver & Intrahep									
Males	36,063	560	460	615	605	1,716	11,082	13,605	7,421
Females	14,671	438	522	404	506	925	3,227	4,037	4,612
Pancreas									
Males	22,783	34	18	152	297	1,722	4,835	7,158	8,566
Females	22,919	0	33	237	479	1,550	4,120	6,272	10,228
Larynx									
Males	71,414	0	0	91	244	1,657	10,356	21,554	37,512
Females	17,438	0	0	47	128	806	3,474	4,783	8,200
Lung & Bronchus									
Males	184,230	34	75	504	1,243	5,258	24,519	55,147	97,451
Females	224,578	34	92	414	1,489	6,994	30,650	60,573	124,332
Melanoma of the Skin									
Males	489,614	45	685	5,156	17,606	45,367	99,463	137,601	183,691
Females	506,973	102	812	10,505	34,549	73,225	119,346	119,937	148,497

[a] U.S. 2012 cancer prevalence counts are based on 2012 cancer prevalence proportions from the SEER 9 registries (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta) and 1/1/2012 U.S. population estimates based on the average of 2011 and 2012 population estimates from the U.S. Bureau of the Census. Prevalence was calculated using the First Malignant Primary Only for a person.

[b] Cases diagnosed more than 37 years ago were estimated using the completeness index method (Capocaccia et. al. 1997, Merrill et. al. 2000).

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

Table 1.23 - continued
U.S. Complete Prevalence Counts, Invasive Cancers Only, January 1, 2012[a]
By Age at Prevalence

Site/Sex	Age at Prevalence								
	All Ages[c]	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70+
Breast									
Males	15,499	0	0	11	134	699	1,855	4,533	8,267
Females	2,975,314	11	35	3,037	35,604	214,136	559,716	824,053	1,338,721
Cervix									
Females	249,512	0	68	2,062	15,420	41,029	59,636	58,895	72,402
Corpus & Uterus, NOS									
Females	621,612	11	23	614	5,890	24,821	91,757	174,495	324,000
Ovary[d]									
Females	192,446	77	1,080	3,491	6,874	18,099	42,498	51,208	69,119
Prostate									
Males	2,795,592	34	47	102	293	20,286	240,483	807,991	1,726,357
Urinary Bladder									
Males	430,485	56	117	541	2,355	10,502	43,269	104,139	269,506
Females	146,918	45	34	208	1,046	4,028	13,688	31,217	96,652
Kidney & Renal Pelvis									
Males	223,683	1,445	2,452	2,765	4,922	19,349	43,876	64,800	84,074
Females	152,242	1,519	2,612	2,882	4,794	12,658	26,698	37,929	63,150
Hodgkin Lymphoma									
Males	98,082	237	2,413	9,323	16,360	23,948	22,943	15,053	7,806
Females	91,544	39	1,969	9,432	16,470	22,866	20,748	12,271	7,749
Non-Hodgkin Lymphoma									
Males	289,004	794	3,674	8,038	13,729	29,671	55,734	74,542	102,823
Females	260,621	475	1,812	4,755	8,981	21,174	43,182	63,503	116,739
Myeloma									
Males	48,074	0	6	121	521	3,285	8,685	16,099	19,356
Females	41,584	0	0	28	392	2,271	7,446	12,033	19,413
Leukemia									
Males	180,231	6,723	13,446	13,043	11,701	14,648	25,247	36,927	58,495
Females	138,158	5,979	10,128	12,020	10,156	10,667	16,951	24,384	47,873
Acute Lymphocytic Leuk									
Males	41,055	5,618	11,450	9,948	6,685	4,256	1,672	861	564
Females	34,121	5,033	8,635	8,663	5,668	3,311	1,318	916	579

[a] U.S. 2012 cancer prevalence counts are based on 2012 cancer prevalence proportions from the SEER 9 registries (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta) and 1/1/2012 U.S. population estimates based on the average of 2011 and 2012 population estimates from the U.S. Bureau of the Census. Prevalence was calculated using the First Malignant Primary Only for a person.

[b] Cases diagnosed more than 37 years ago were estimated using the completeness index method (Capocaccia et. al. 1997, Merrill et. al. 2000).

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

Table 1.24
Age-Adjusted SEER Incidence Rates and Trends for the Top 15 Cancer Sites[a] by Race/Ethnicity

Both Sexes

All Races

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	454.8	-0.7*
Breast	67.2	0.0
Prostate[f]	62.7	-2.4*
Lung and Bronchus	58.7	-1.9*
Colon and Rectum	42.4	-2.8*
Melanoma of the Skin	21.6	1.2*
Urinary Bladder	20.3	-0.9*
Non-Hodgkin Lymphoma	19.7	-0.3
Kidney and Renal Pelvis	15.6	1.5*
Thyroid	13.5	5.4*
Corpus and Uterus, NOS[f]	13.4	1.3*
Leukemia	13.3	0.2
Pancreas	12.4	0.7*
Oral Cavity and Pharynx	11.0	0.5*
Liver & IBD[g]	8.2	3.1*
Stomach	7.4	-1.1*

White

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	463.3	-0.7*
Breast	68.1	-0.1
Lung and Bronchus	60.2	-1.8*
Prostate[f]	60.0	-2.7*
Colon and Rectum	41.5	-2.9*
Melanoma of the Skin	25.6	1.2*
Urinary Bladder	22.2	-0.9*
Non-Hodgkin Lymphoma	20.6	-0.3
Kidney and Renal Pelvis	16.1	1.5*
Thyroid	14.3	5.4*
Leukemia	14.0	0.2
Corpus and Uterus, NOS[f]	13.6	1.1*
Pancreas	12.3	0.9*
Oral Cavity and Pharynx	11.5	0.9*
Liver & IBD[g]	7.2	3.8*
Brain and ONS[g]	7.1	-0.5*

Black

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	478.0	-1.1*
Prostate[f]	91.2	-2.4*
Breast	70.8	0.5
Lung and Bronchus	67.0	-2.1*
Colon and Rectum	52.3	-2.8*
Kidney and Renal Pelvis	18.1	2.3*
Pancreas	15.7	-0.3
Non-Hodgkin Lymphoma	14.6	-0.4
Corpus and Uterus, NOS[f]	13.6	2.6*
Myeloma	12.8	0.7*
Urinary Bladder	12.6	-0.6
Stomach	10.9	-2.2*
Leukemia	10.6	-0.3
Liver & IBD[g]	9.8	3.2*
Oral Cavity and Pharynx	9.3	-2.3*
Thyroid	8.0	4.9*

Asian/Pacific Islander

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	306.8	-0.9*
Breast	53.1	1.0*
Lung and Bronchus	37.1	-1.5*
Colon and Rectum	36.1	-2.2*
Prostate[f]	32.3	-4.6*
Liver & IBD[g]	13.7	-1.3*
Non-Hodgkin Lymphoma	13.6	-0.1
Thyroid	13.2	5.2*
Stomach	11.2	-3.6*
Corpus and Uterus, NOS[f]	10.9	2.6*
Pancreas	9.9	1.0*
Urinary Bladder	9.0	-1.6*
Kidney and Renal Pelvis	8.2	1.3
Leukemia	7.8	0.0
Oral Cavity and Pharynx	7.6	-0.7
Ovary[fh]	5.1	-1.2*

American Indian/Alaska Native[d]

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	319.7	-1.3*
Breast	44.1	-0.1
Colon and Rectum	40.3	-1.6*
Lung and Bronchus	39.9	-3.9*
Prostate[f]	29.8	-4.7*
Kidney and Renal Pelvis	18.8	-0.3
Liver & IBD[g]	13.6	1.7
Non-Hodgkin Lymphoma	12.6	0.2
Corpus and Uterus, NOS[f]	10.5	1.8
Pancreas	9.9	-2.1
Stomach	9.5	-2.0
Oral Cavity and Pharynx	8.8	2.5
Urinary Bladder	8.5	-0.9
Thyroid	8.5	6.2*
Leukemia	8.4	1.3
Ovary[fh]	5.5	-2.1

Hispanic[e]

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	349.9	-1.0*
Prostate[f]	50.7	-3.6*
Breast	49.4	0.1
Colon and Rectum	35.8	-2.2*
Lung and Bronchus	30.4	-2.4*
Non-Hodgkin Lymphoma	17.8	0.0
Kidney and Renal Pelvis	15.4	1.2*
Liver & IBD[g]	12.5	2.7*
Thyroid	11.5	5.3*
Urinary Bladder	11.2	-1.4*
Pancreas	11.1	-0.1
Corpus and Uterus, NOS[f]	11.0	2.2*
Stomach	10.9	-2.1*
Leukemia	10.5	0.1
Oral Cavity and Pharynx	6.8	1.1*
Ovary[fh]	5.9	-1.4*

Source: SEER 18 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, New Jersey and Georgia excluding ATL/RG).

[a] Top 15 cancer sites selected based on 2008-2012 age-adjusted rates for the race/ethnic group.

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

[c] 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).

[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.

[h] 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.

Table 1.25
Age-Adjusted SEER Incidence Rates and Trends for the Top 15 Cancer Sites[a] by Race/Ethnicity

Males

All Races

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	516.6	-1.3*
Prostate	137.9	-2.9*
Lung and Bronchus	70.1	-2.6*
Colon and Rectum	48.9	-3.1*
Urinary Bladder	35.8	-1.0*
Melanoma of the Skin	28.2	1.5*
Non-Hodgkin Lymphoma	23.9	-0.2
Kidney and Renal Pelvis	21.3	1.5*
Leukemia	17.0	0.0
Oral Cavity and Pharynx	16.5	0.5*
Pancreas	14.0	0.8*
Liver & IBD[f]	12.7	3.2*
Stomach	10.1	-1.4*
Myeloma	7.9	1.3*
Brain and ONS[f]	7.7	-0.4
Esophagus	7.6	-1.0*

White

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	519.8	-1.3*
Prostate	130.4	-3.2*
Lung and Bronchus	70.3	-2.5*
Colon and Rectum	47.8	-3.3*
Urinary Bladder	39.0	-1.0*
Melanoma of the Skin	33.0	1.4*
Non-Hodgkin Lymphoma	24.9	-0.2
Kidney and Renal Pelvis	21.9	1.5*
Leukemia	17.9	0.0
Oral Cavity and Pharynx	17.1	0.9*
Pancreas	14.0	0.9*
Liver & IBD[f]	11.2	3.8*
Stomach	9.2	-0.9*
Brain and ONS[f]	8.4	-0.4
Esophagus	8.0	-0.3
Myeloma	7.5	1.4*

Black

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	590.1	-2.1*
Prostate	214.5	-2.9*
Lung and Bronchus	90.9	-2.9*
Colon and Rectum	61.2	-3.0*
Kidney and Renal Pelvis	25.1	1.7*
Urinary Bladder	21.4	-0.3
Non-Hodgkin Lymphoma	17.8	-0.8
Pancreas	17.2	-0.3
Liver & IBD[f]	16.2	3.4*
Myeloma	15.1	0.1
Oral Cavity and Pharynx	14.6	-2.4*
Stomach	14.6	-3.5*
Leukemia	13.5	-0.6
Larynx	8.8	-3.3*
Esophagus	7.6	-5.0*
Brain and ONS[f]	4.9	0.2

Asian/Pacific Islander

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	325.4	-2.1*
Prostate	74.0	-4.8*
Lung and Bronchus	49.0	-2.3*
Colon and Rectum	42.2	-2.2*
Liver & IBD[f]	20.9	-1.2
Non-Hodgkin Lymphoma	16.6	0.1
Urinary Bladder	15.8	-1.6*
Stomach	14.5	-3.9*
Kidney and Renal Pelvis	11.6	1.6
Oral Cavity and Pharynx	11.0	-0.1
Pancreas	10.8	0.4
Leukemia	9.8	0.3
Thyroid	6.2	6.4*
Myeloma	4.6	0.9
Brain and ONS[f]	4.3	0.3
Esophagus	3.6	-2.8

American Indian/Alaska Native[d]

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	340.8	-1.8*
Prostate	67.1	-5.0*
Lung and Bronchus	47.6	-3.7*
Colon and Rectum	46.3	0.0
Kidney and Renal Pelvis	24.8	1.0
Liver & IBD[f]	19.9	1.3
Urinary Bladder	15.6	-1.0
Non-Hodgkin Lymphoma	14.6	1.1
Oral Cavity and Pharynx	13.2	4.5
Stomach	12.3	-4.1
Pancreas	11.1	-
Leukemia	10.1	2.8
Esophagus	4.9	-
Testis	4.8	-
Myeloma	4.6	-
Larynx	4.3	-

Hispanic[e]

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	395.0	-1.9*
Prostate	114.7	-4.0*
Colon and Rectum	43.3	-2.4*
Lung and Bronchus	37.9	-3.3*
Non-Hodgkin Lymphoma	20.6	0.3
Kidney and Renal Pelvis	20.2	0.6
Urinary Bladder	19.6	-1.5*
Liver & IBD[f]	19.1	2.8*
Stomach	14.2	-2.4*
Leukemia	12.6	-0.3
Pancreas	11.9	0.1
Oral Cavity and Pharynx	10.1	1.1
Myeloma	7.3	0.7
Brain and ONS[f]	5.8	-2.0*
Esophagus	5.2	-1.2
Testis	4.9	2.8*

Source: SEER 18 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, New Jersey and Georgia excluding ATL/RG).

[a] Top 15 cancer sites selected based on 2008-2012 age-adjusted rates for the race/ethnic group.

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

[c] 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).

[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] 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 1.26
Age-Adjusted SEER Incidence Rates and Trends for the Top 15 Cancer Sites[a] by Race/Ethnicity

Females

All Races

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	411.2	-0.1
Breast	124.8	0.1
Lung and Bronchus	50.2	-1.2*
Colon and Rectum	37.1	-2.6*
Corpus and Uterus, NOS	25.1	1.6*
Thyroid	20.0	5.5*
Melanoma of the Skin	16.8	0.7
Non-Hodgkin Lymphoma	16.3	-0.5*
Ovary[g]	12.1	-1.6*
Pancreas	11.0	0.6*
Kidney and Renal Pelvis	10.8	1.3*
Leukemia	10.4	0.3
Urinary Bladder	8.7	-1.3*
Cervix Uteri	7.7	-1.5*
Oral Cavity and Pharynx	6.3	0.2
Brain and ONS[f]	5.4	-0.8*

White

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	423.9	-0.1
Breast	127.9	0.0
Lung and Bronchus	52.7	-1.2*
Colon and Rectum	36.3	-2.6*
Corpus and Uterus, NOS	25.8	1.4*
Thyroid	21.3	5.5*
Melanoma of the Skin	20.2	0.8
Non-Hodgkin Lymphoma	17.1	-0.5*
Ovary[g]	12.8	-1.6*
Kidney and Renal Pelvis	11.1	1.3*
Leukemia	10.9	0.3
Pancreas	10.8	0.7*
Urinary Bladder	9.4	-1.2*
Cervix Uteri	7.7	-1.0*
Oral Cavity and Pharynx	6.4	0.6*
Brain and ONS[f]	5.9	-0.7*

Black

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	401.2	-0.2
Breast	124.4	0.7*
Lung and Bronchus	50.8	-1.3*
Colon and Rectum	46.0	-2.8*
Corpus and Uterus, NOS	24.0	2.9*
Pancreas	14.4	-0.3
Kidney and Renal Pelvis	12.8	2.8*
Non-Hodgkin Lymphoma	12.1	-0.1
Thyroid	11.8	5.3*
Myeloma	11.2	1.1
Ovary[g]	9.8	-1.4*
Cervix Uteri	9.2	-3.1*
Leukemia	8.5	0.1
Stomach	8.4	-0.9
Urinary Bladder	6.9	-1.5
Oral Cavity and Pharynx	5.2	-2.3*

Asian/Pacific Islander

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	297.5	0.1
Breast	96.3	0.9*
Colon and Rectum	31.3	-2.2*
Lung and Bronchus	28.5	-0.3
Corpus and Uterus, NOS	19.9	2.6*
Thyroid	19.3	4.9*
Non-Hodgkin Lymphoma	11.3	-0.4
Ovary[g]	9.4	-1.2*
Pancreas	9.3	1.5*
Stomach	8.8	-3.3*
Liver & IBD[f]	7.9	-1.4
Leukemia	6.3	-0.4
Cervix Uteri	6.3	-3.2*
Kidney and Renal Pelvis	5.5	0.8
Oral Cavity and Pharynx	4.9	-1.4
Urinary Bladder	4.0	-1.5

American Indian/Alaska Native[d]

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	308.8	-0.8
Breast	82.0	0.0
Colon and Rectum	35.7	-3.1*
Lung and Bronchus	34.5	-4.1*
Corpus and Uterus, NOS	19.8	2.1
Kidney and Renal Pelvis	13.9	-1.9
Thyroid	12.9	6.9*
Non-Hodgkin Lymphoma	11.1	-1.2
Ovary[g]	10.0	-2.1
Pancreas	8.9	-2.6
Liver & IBD[f]	8.4	2.2
Stomach	7.5	1.5
Cervix Uteri	7.5	-1.2
Leukemia	7.2	0.6
Oral Cavity and Pharynx	5.2	-
Melanoma of the Skin	4.5	-

Hispanic[e]

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	322.2	-0.2
Breast	92.1	0.2
Colon and Rectum	30.0	-2.0*
Lung and Bronchus	25.1	-1.3*
Corpus and Uterus, NOS	20.7	2.4*
Thyroid	18.1	5.5*
Non-Hodgkin Lymphoma	15.5	-0.3
Kidney and Renal Pelvis	11.6	2.0*
Ovary[g]	11.0	-1.1
Pancreas	10.3	-0.2
Cervix Uteri	9.9	-4.4*
Leukemia	8.9	0.4
Stomach	8.4	-1.8*
Liver & IBD[f]	7.0	2.4*
Urinary Bladder	5.1	-1.6*
Myeloma	4.8	-0.7

Source: SEER 18 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, New Jersey and Georgia excluding ATL/RG).

[a] Top 15 cancer sites selected based on 2008-2012 age-adjusted rates for the race/ethnic group.

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

[c] 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).

[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] IBD = Intrahepatic Bile Duct. ONS = Other Nervous System.

[g] 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.

Table 1.27
Age-Adjusted U.S. Death Rates and Trends for the Top 15 Cancer Sites[a] by Race/Ethnicity

Both Sexes

All Races

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	171.2	-1.5*
Lung and Bronchus	47.2	-2.1*
Colon and Rectum	15.5	-2.7*
Breast	12.2	-2.1*
Pancreas	10.9	0.3*
Prostate[f]	8.5	-2.6*
Leukemia	7.0	-0.9*
Non-Hodgkin Lymphoma	6.2	-2.4*
Liver & IBD[g]	6.0	2.6*
Urinary Bladder	4.4	0.1
Brain and ONS[g]	4.3	0.0
Ovary[f]	4.3	-2.3*
Esophagus	4.2	-0.8*
Kidney and Renal Pelvis	3.9	-0.9*
Stomach	3.4	-2.7*
Myeloma	3.3	-1.1*

White

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	170.9	-1.4*
Lung and Bronchus	47.9	-2.0*
Colon and Rectum	15.0	-2.7*
Breast	11.8	-2.1*
Pancreas	10.8	0.5*
Prostate[f]	7.9	-2.5*
Leukemia	7.2	-0.8*
Non-Hodgkin Lymphoma	6.4	-2.4*
Liver & IBD[g]	5.5	2.8*
Brain and ONS[g]	4.7	0.1
Urinary Bladder	4.6	0.3*
Ovary[f]	4.4	-2.3*
Esophagus	4.3	-0.2
Kidney and Renal Pelvis	4.0	-0.8*
Melanoma of the Skin	3.1	0.2
Myeloma	3.1	-1.0*

Black

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	202.0	-2.1*
Lung and Bronchus	50.6	-2.6*
Colon and Rectum	21.4	-3.0*
Breast	17.8	-1.5*
Prostate[f]	16.6	-3.4*
Pancreas	13.5	-0.4*
Liver & IBD[g]	7.9	2.5*
Stomach	6.3	-3.0*
Myeloma	6.2	-1.4*
Leukemia	6.0	-1.4*
Corpus and Uterus, NOS[f]	4.5	1.4*
Non-Hodgkin Lymphoma	4.4	-1.7*
Esophagus	4.0	-4.5*
Ovary[f]	3.9	-1.7*
Kidney and Renal Pelvis	3.8	-1.2*
Urinary Bladder	3.5	-0.9

Asian/Pacific Islander

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	106.6	-1.1*
Lung and Bronchus	24.8	-1.4*
Colon and Rectum	11.0	-1.2*
Liver & IBD[g]	9.8	-0.9
Pancreas	7.8	0.5
Breast	6.4	-1.3*
Stomach	6.0	-3.8*
Non-Hodgkin Lymphoma	4.1	-2.0*
Leukemia	4.0	1.2*
Prostate[f]	3.7	-3.5*
Ovary[f]	2.6	-1.4*
Brain and ONS[g]	2.0	0.3
Oral Cavity and Pharynx	1.9	-1.4
Kidney and Renal Pelvis	1.9	0.9
Urinary Bladder	1.7	0.2
Myeloma	1.7	1.0

American Indian/Alaska Native[d]

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	156.1	-1.1*
Lung and Bronchus	39.4	-1.1
Colon and Rectum	17.1	-0.3
Liver & IBD[g]	9.8	2.1
Pancreas	8.5	-0.3
Breast	8.4	-3.8*
Prostate[f]	8.1	-2.1
Kidney and Renal Pelvis	6.6	0.6
Stomach	5.2	-3.1*
Non-Hodgkin Lymphoma	4.6	-2.6*
Leukemia	4.6	-1.8
Ovary[f]	3.8	-1.1
Esophagus	3.4	-2.7*
Myeloma	2.7	-6.5*
Brain and ONS[g]	2.5	1.5
Urinary Bladder	2.3	1.8

Hispanic[e]

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	119.3	-1.2*
Lung and Bronchus	20.4	-2.4*
Colon and Rectum	12.2	-1.7*
Liver & IBD[g]	8.9	1.6*
Pancreas	8.7	0.1
Breast	8.1	-1.5*
Prostate[f]	7.1	-2.5*
Stomach	5.5	-2.8*
Non-Hodgkin Lymphoma	5.2	-1.1*
Leukemia	4.9	-0.5
Kidney and Renal Pelvis	3.5	-1.0
Ovary[f]	3.1	-1.6*
Brain and ONS[g]	2.8	0.2
Myeloma	2.8	-0.5
Urinary Bladder	2.3	-1.0*
Esophagus	2.3	-0.4

Source: US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.
[a] Top 15 cancer sites selected based on 2008-2012 age-adjusted rates for the race/ethnic group.
[b] Rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
[c] 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).
[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.
[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.
* 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[a] by Race/Ethnicity

Males

All Races

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	207.9	-1.7*
Lung and Bronchus	59.8	-2.8*
Prostate	21.4	-3.4*
Colon and Rectum	18.6	-2.8*
Pancreas	12.6	0.3*
Leukemia	9.4	-0.9*
Liver & IBD[f]	8.8	2.8*
Non-Hodgkin Lymphoma	7.9	-2.1*
Urinary Bladder	7.7	0.0
Esophagus	7.5	-0.8*
Kidney and Renal Pelvis	5.7	-0.7*
Brain and ONS[f]	5.3	0.1
Stomach	4.6	-3.1*
Myeloma	4.2	-0.9*
Melanoma of the Skin	4.1	0.2
Oral Cavity and Pharynx	3.8	-0.5

White

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	206.4	-1.6*
Lung and Bronchus	59.7	-2.7*
Prostate	19.8	-3.3*
Colon and Rectum	18.0	-2.9*
Pancreas	12.5	0.5*
Leukemia	9.7	-0.8*
Non-Hodgkin Lymphoma	8.2	-2.1*
Liver & IBD[f]	8.1	3.0*
Urinary Bladder	8.1	0.1
Esophagus	7.7	-0.2
Kidney and Renal Pelvis	5.9	-0.6*
Brain and ONS[f]	5.7	0.2
Melanoma of the Skin	4.6	0.4
Myeloma	4.0	-0.9*
Stomach	4.0	-3.2*
Oral Cavity and Pharynx	3.7	0.0

Black

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	261.5	-2.6*
Lung and Bronchus	73.1	-3.4*
Prostate	46.3	-3.9*
Colon and Rectum	26.9	-2.6*
Pancreas	15.0	-0.5
Liver & IBD[f]	12.5	2.7*
Stomach	9.2	-3.3*
Leukemia	7.9	-1.6*
Myeloma	7.6	-1.4*
Esophagus	7.0	-4.5*
Non-Hodgkin Lymphoma	5.7	-1.0
Kidney and Renal Pelvis	5.6	-1.3*
Urinary Bladder	5.3	-0.7
Oral Cavity and Pharynx	5.0	-3.8*
Larynx	3.6	-4.2*
Brain and ONS[f]	3.1	0.0

Asian/Pacific Islander

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	128.4	-1.5*
Lung and Bronchus	34.0	-2.0*
Liver & IBD[f]	14.5	-0.6
Colon and Rectum	13.0	-1.1*
Prostate	9.4	-3.5*
Pancreas	8.4	0.0
Stomach	7.9	-4.3*
Leukemia	5.1	0.7
Non-Hodgkin Lymphoma	5.0	-2.2*
Urinary Bladder	3.0	1.1
Oral Cavity and Pharynx	2.9	-1.5
Kidney and Renal Pelvis	2.9	1.5
Esophagus	2.8	-2.4
Brain and ONS[f]	2.4	0.2
Myeloma	2.2	1.6
Soft Tissue including Heart	1.0	2.2

American Indian/Alaska Native[d]

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	186.7	-1.1
Lung and Bronchus	49.1	-0.9
Prostate	20.2	-2.8*
Colon and Rectum	18.8	-2.5
Liver & IBD[f]	13.9	4.2*
Pancreas	9.3	-1.6
Kidney and Renal Pelvis	8.7	-0.9
Stomach	7.4	-3.2
Leukemia	6.7	1.6
Non-Hodgkin Lymphoma	5.7	0.5
Esophagus	5.6	-4.9*
Urinary Bladder	4.2	3.4
Oral Cavity and Pharynx	3.6	0.5
Myeloma	3.2	-6.8*
Brain and ONS[f]	3.2	1.6
Larynx	1.7	-

Hispanic[e]

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	148.0	-1.5*
Lung and Bronchus	29.5	-3.1*
Prostate	17.8	-3.0*
Colon and Rectum	15.6	-1.5*
Liver & IBD[f]	12.9	1.7*
Pancreas	9.8	0.2
Stomach	7.2	-3.1*
Non-Hodgkin Lymphoma	6.3	-1.1*
Leukemia	6.1	-0.7
Kidney and Renal Pelvis	5.0	-1.4
Esophagus	4.3	0.1
Urinary Bladder	3.9	-1.2
Myeloma	3.5	0.2
Brain and ONS[f]	3.4	0.3
Oral Cavity and Pharynx	2.4	-1.4*
Larynx	1.7	-2.9*

Source: US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.
[a] Top 15 cancer sites selected based on 2008-2012 age-adjusted rates for the race/ethnic group.
[b] Rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
[c] 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).
[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.
[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 1.29
Age-Adjusted U.S. Death Rates and Trends for the Top 15 Cancer Sites[a] by Race/Ethnicity

Females

All Races

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	145.4	-1.4*
Lung and Bronchus	37.8	-1.4*
Breast	21.9	-1.9*
Colon and Rectum	13.1	-2.8*
Pancreas	9.6	0.3*
Ovary	7.7	-2.1*
Leukemia	5.2	-1.0*
Non-Hodgkin Lymphoma	4.8	-2.8*
Corpus and Uterus, NOS	4.4	1.1*
Liver & IBD[f]	3.5	2.0*
Brain and ONS[f]	3.5	-0.2
Myeloma	2.7	-1.4*
Kidney and Renal Pelvis	2.5	-1.4*
Stomach	2.4	-2.6*
Cervix Uteri	2.3	-0.9*
Urinary Bladder	2.2	-0.5*

White

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	145.6	-1.3*
Lung and Bronchus	39.1	-1.3*
Breast	21.3	-1.9*
Colon and Rectum	12.7	-2.8*
Pancreas	9.4	0.4*
Ovary	8.0	-2.1*
Leukemia	5.4	-0.9*
Non-Hodgkin Lymphoma	5.0	-2.8*
Corpus and Uterus, NOS	4.1	0.9*
Brain and ONS[f]	3.8	-0.2
Liver & IBD[f]	3.3	2.2*
Kidney and Renal Pelvis	2.6	-1.4*
Myeloma	2.4	-1.4*
Urinary Bladder	2.2	-0.3
Cervix Uteri	2.1	-0.6*
Stomach	2.1	-2.7*

Black

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	166.3	-1.6*
Lung and Bronchus	35.8	-1.8*
Breast	30.2	-1.4*
Colon and Rectum	17.8	-3.4*
Pancreas	12.3	-0.2
Corpus and Uterus, NOS	7.7	1.6*
Ovary	6.7	-1.6*
Myeloma	5.3	-1.5*
Leukemia	4.7	-1.3*
Stomach	4.4	-2.8*
Liver & IBD[f]	4.3	1.6*
Cervix Uteri	4.0	-2.2*
Non-Hodgkin Lymphoma	3.5	-2.3*
Kidney and Renal Pelvis	2.5	-1.1
Urinary Bladder	2.5	-1.5*
Brain and ONS[f]	2.1	0.4

Asian/Pacific Islander

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	91.2	-0.8*
Lung and Bronchus	18.2	-0.5*
Breast	11.4	-1.4*
Colon and Rectum	9.4	-1.3*
Pancreas	7.3	1.0*
Liver & IBD[f]	6.1	-1.4
Stomach	4.7	-3.3*
Ovary	4.6	-1.3*
Non-Hodgkin Lymphoma	3.4	-1.9*
Leukemia	3.2	1.5*
Corpus and Uterus, NOS	2.8	3.1*
Cervix Uteri	1.8	-3.1*
Brain and ONS[f]	1.6	0.2
Myeloma	1.4	0.2
Kidney and Renal Pelvis	1.2	-0.1
Oral Cavity and Pharynx	1.2	-1.2

American Indian/Alaska Native[d]

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	133.9	-1.3*
Lung and Bronchus	32.1	-1.3*
Colon and Rectum	15.6	1.4
Breast	15.0	-3.4*
Pancreas	7.8	0.1
Ovary	6.7	-0.9
Liver & IBD[f]	6.3	-1.2
Kidney and Renal Pelvis	4.7	1.9
Non-Hodgkin Lymphoma	3.6	-5.5*
Stomach	3.6	-3.5*
Corpus and Uterus, NOS	3.5	-
Cervix Uteri	3.5	-1.4
Leukemia	3.2	-5.1
Myeloma	2.3	-6.6
Brain and ONS[f]	1.9	-
Gallbladder	1.8	-4.4

Hispanic[e]

	Rate[b] 2008-2012	APC[c] 2003-2012
All Sites	99.4	-1.0*
Breast	14.5	-1.3*
Lung and Bronchus	13.7	-1.4*
Colon and Rectum	9.6	-2.2*
Pancreas	7.7	0.0
Ovary	5.6	-1.4*
Liver & IBD[f]	5.6	1.1*
Non-Hodgkin Lymphoma	4.3	-1.2*
Stomach	4.2	-2.7*
Leukemia	4.0	-0.1
Corpus and Uterus, NOS	3.5	2.3*
Cervix Uteri	2.7	-2.3*
Brain and ONS[f]	2.4	0.1
Kidney and Renal Pelvis	2.4	-0.8
Myeloma	2.3	-1.3
Urinary Bladder	1.3	-1.3

Source: US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.
[a] Top 15 cancer sites selected based on 2008-2012 age-adjusted rates for the race/ethnic group.
[b] Rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
[c] 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).
[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.
[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.

Surveillance, Epidemiology, and End Results (SEER) Program: SEER 9, 13, & 18 Geographic Areas National Cancer Institute, USA

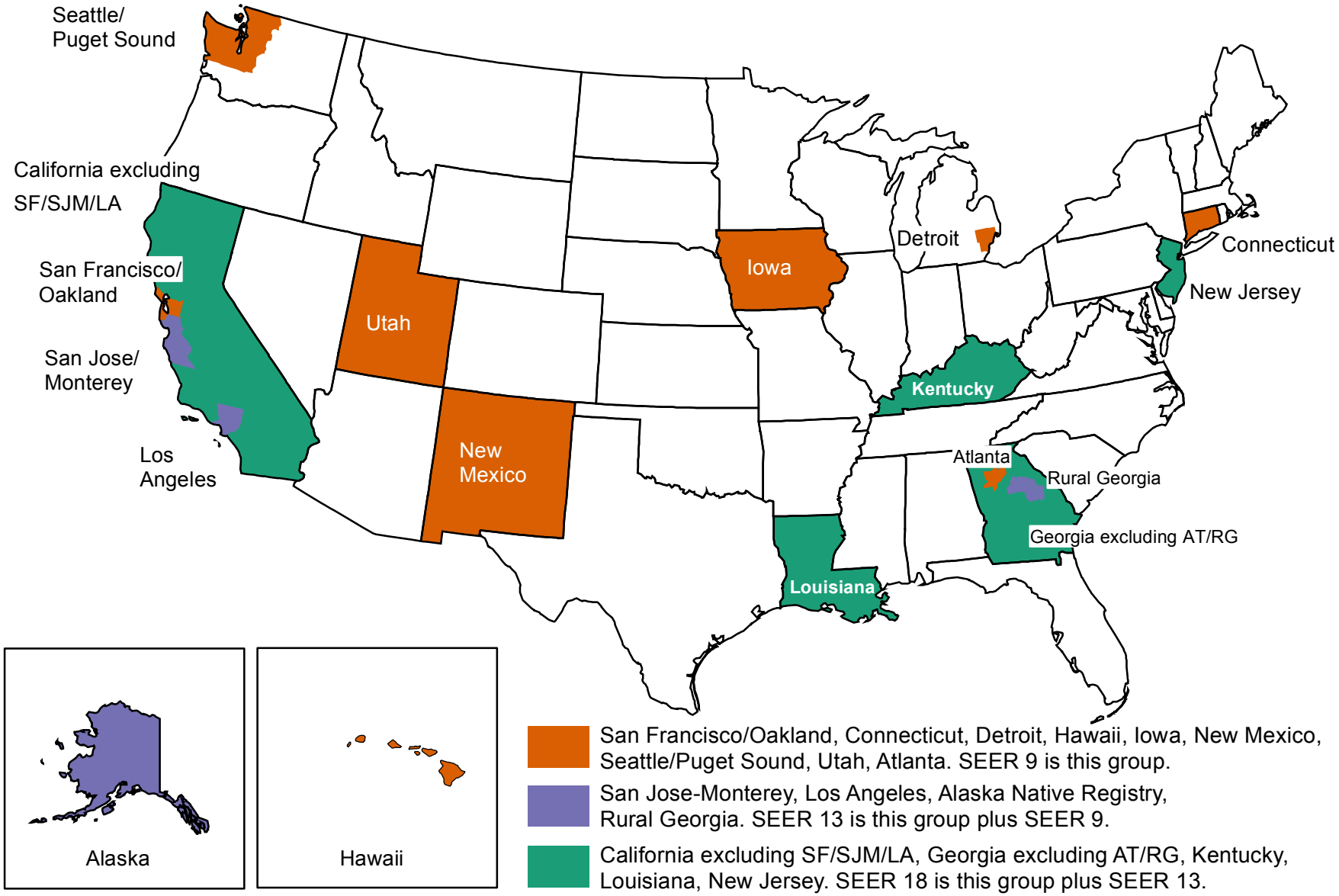
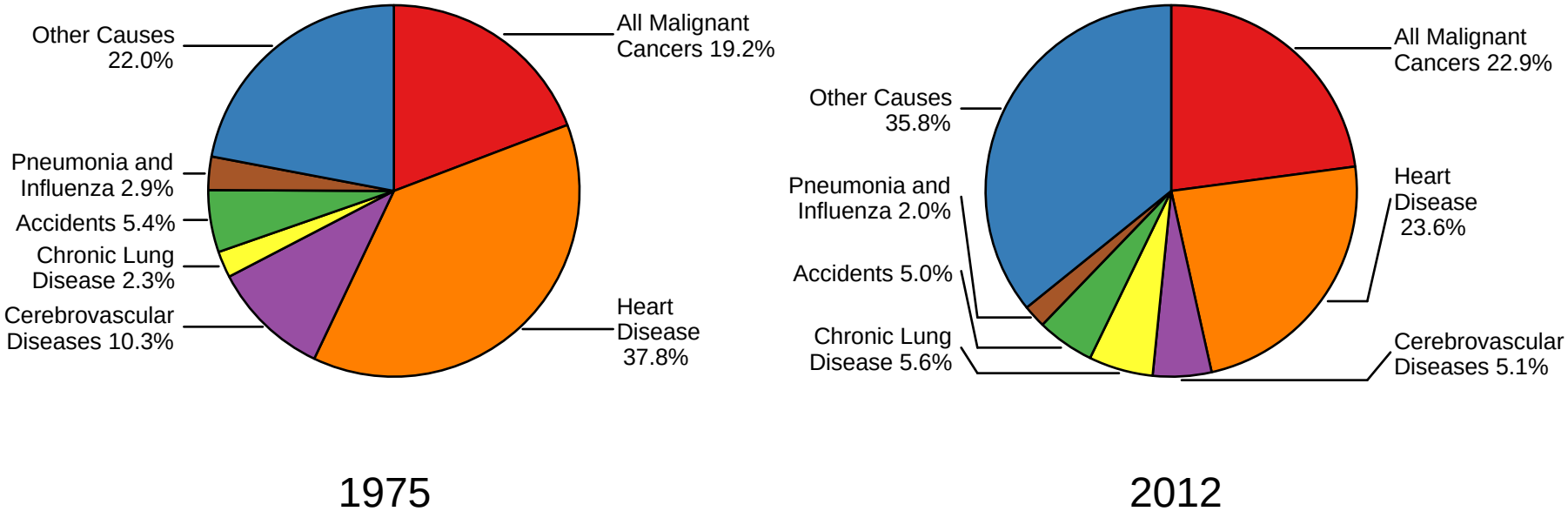


Figure 1.1

http://seer.cancer.gov

Figure 1.2

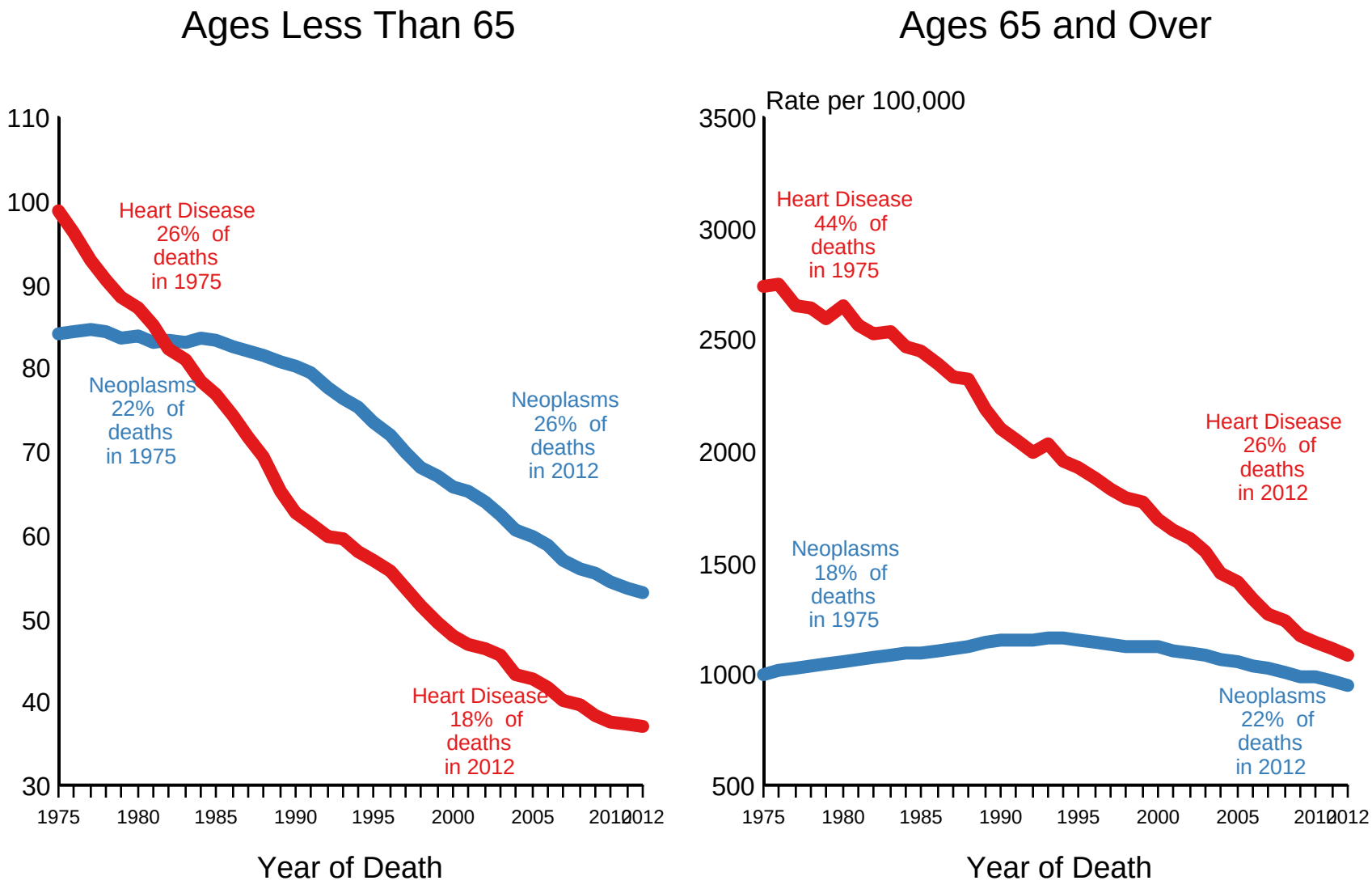
Leading Causes of Death in US, 1975 vs 2012
Percent of All Causes of Death



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

Figure 1.3

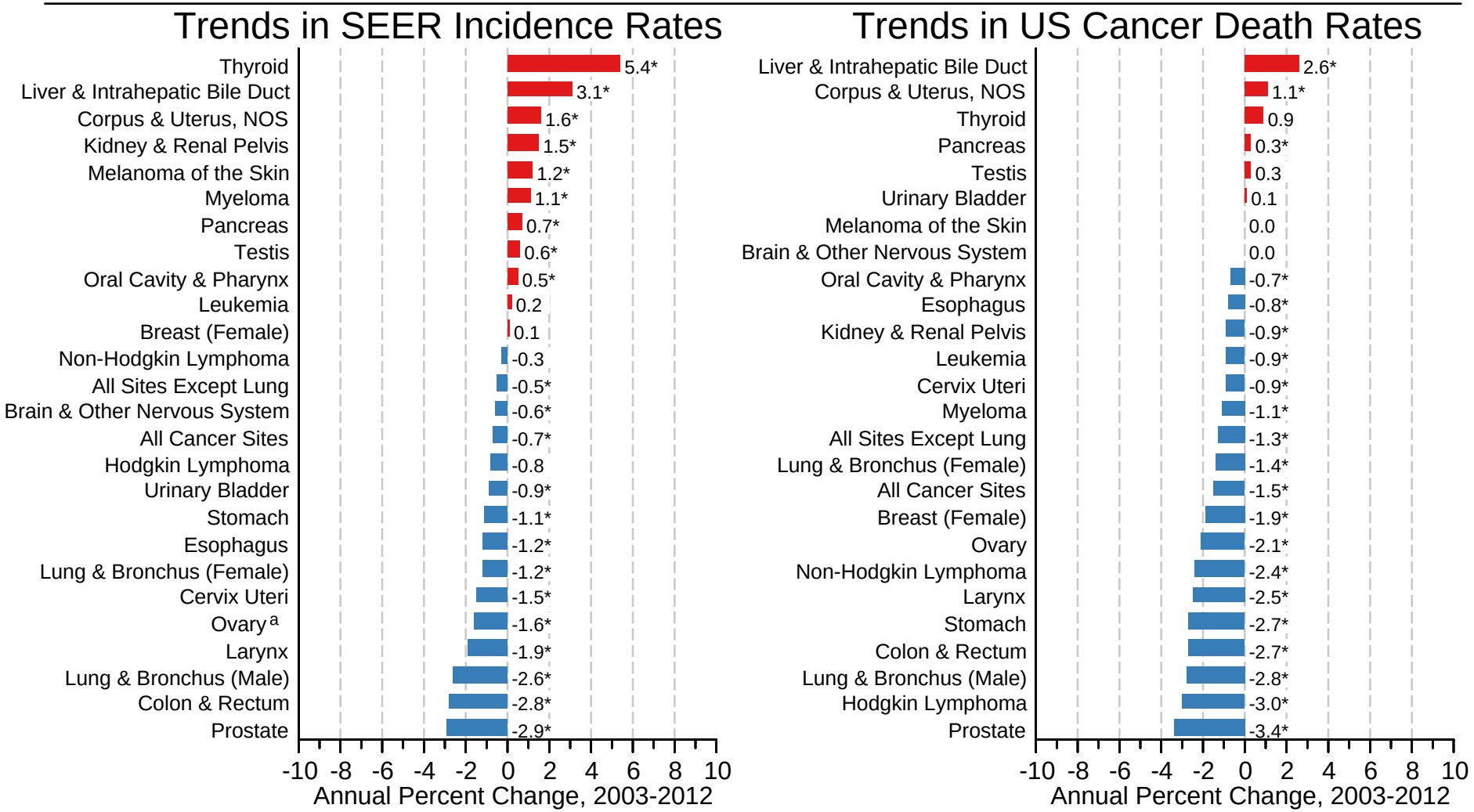
Us Death Rates, 1975-2012
Heart Disease compared to Neoplasms, by age at death



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).

Figure 1.4

Trends in SEER Incidence and US Death Rates by Primary Cancer Site 2003-2012



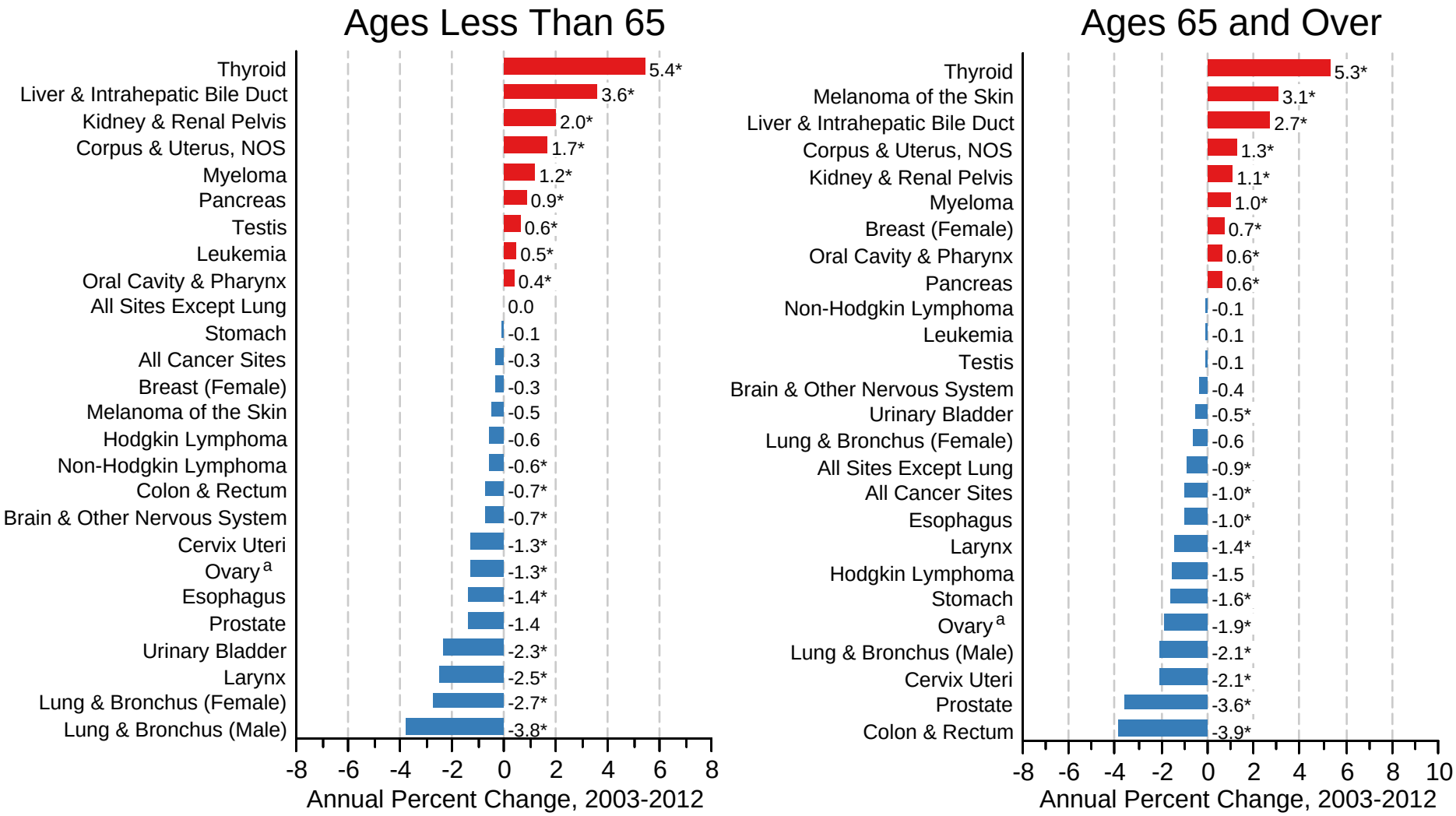
Source: SEER 18 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey and Georgia excluding ATL/RG) and US Mortality Files, National 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).
For sex-specific cancer sites, the population was limited to the population of the appropriate sex.

* The APC is significantly different from zero (p<.05).

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

Figure 1.5

Trends in SEER Incidence Rates by Age Group and Primary Cancer Site 2003-2012



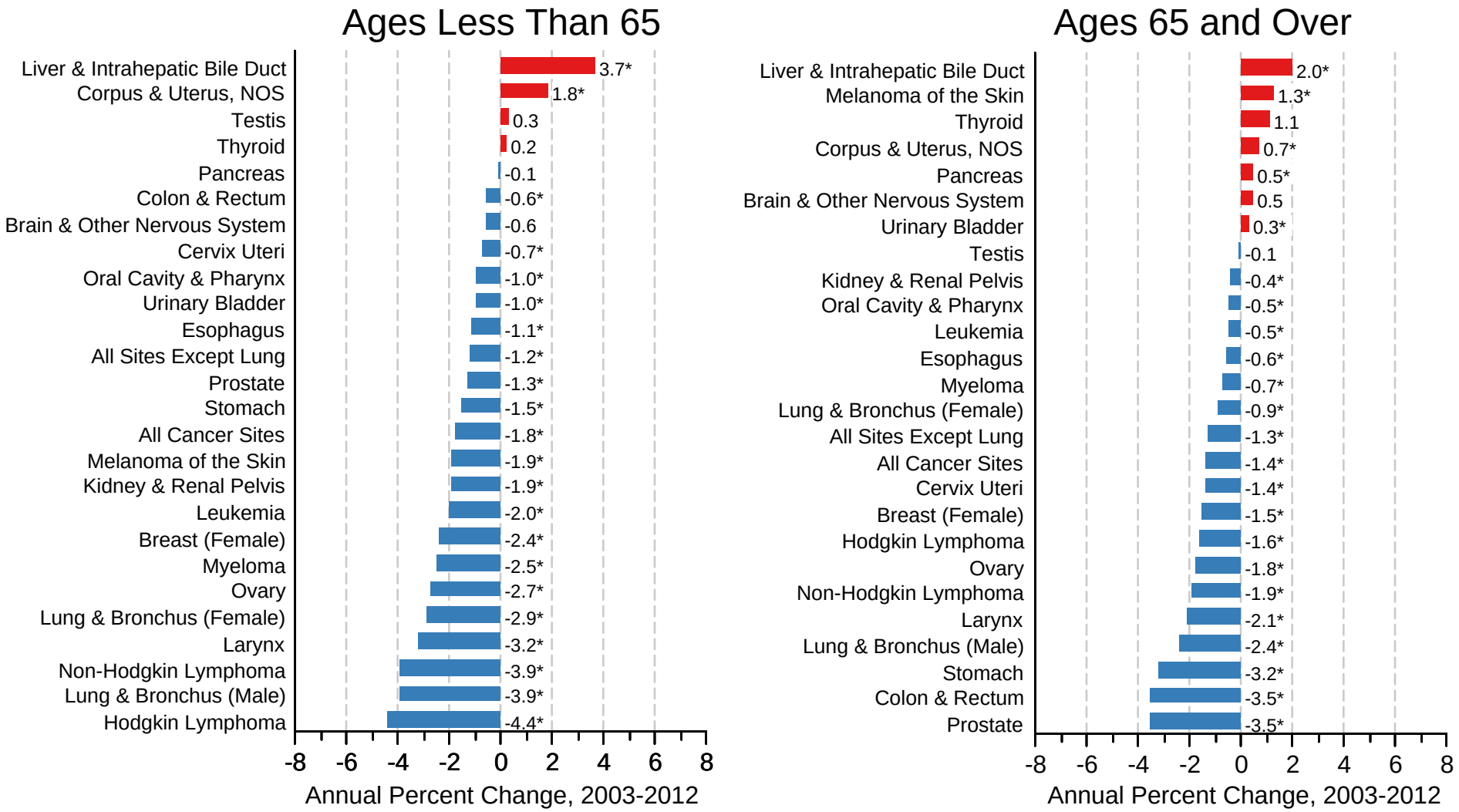
Source: SEER 18 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey and Georgia excluding ATL/RG).
Underlying rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103).
For sex-specific cancer sites, the population was limited to the population of the appropriate sex.

* The APC is significantly different from zero ($p<.05$).

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

Figure 1.6

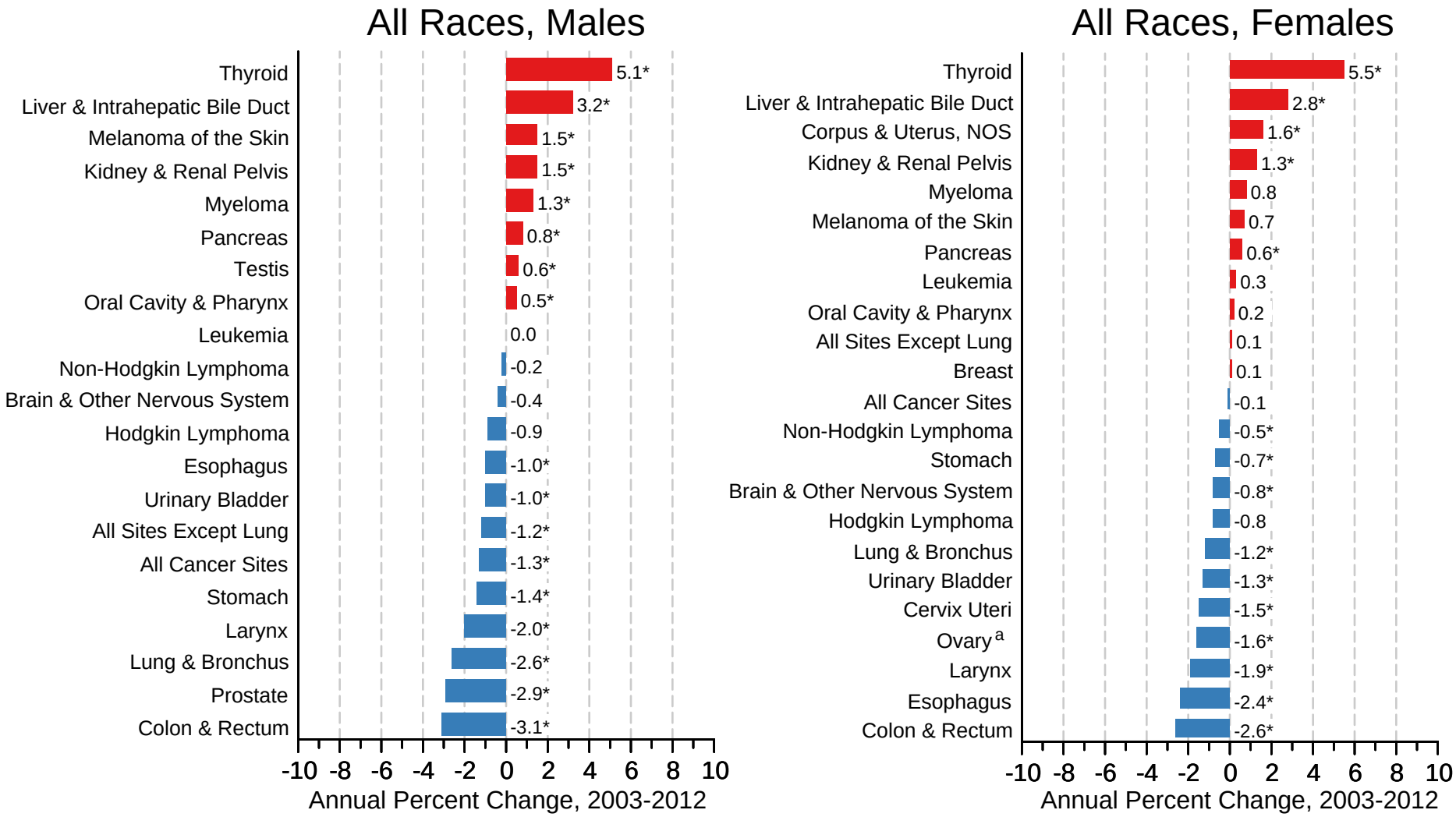
Trends in US Death Rates by Age Group and Primary Cancer Site 2003-2012



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).
For sex-specific cancer sites, the population was limited to the population of the appropriate sex.
* The APC is significantly different from zero (p<.05).

Figure 1.7

Trends in SEER Incidence Rates by Sex and Primary Cancer Site 2003-2012



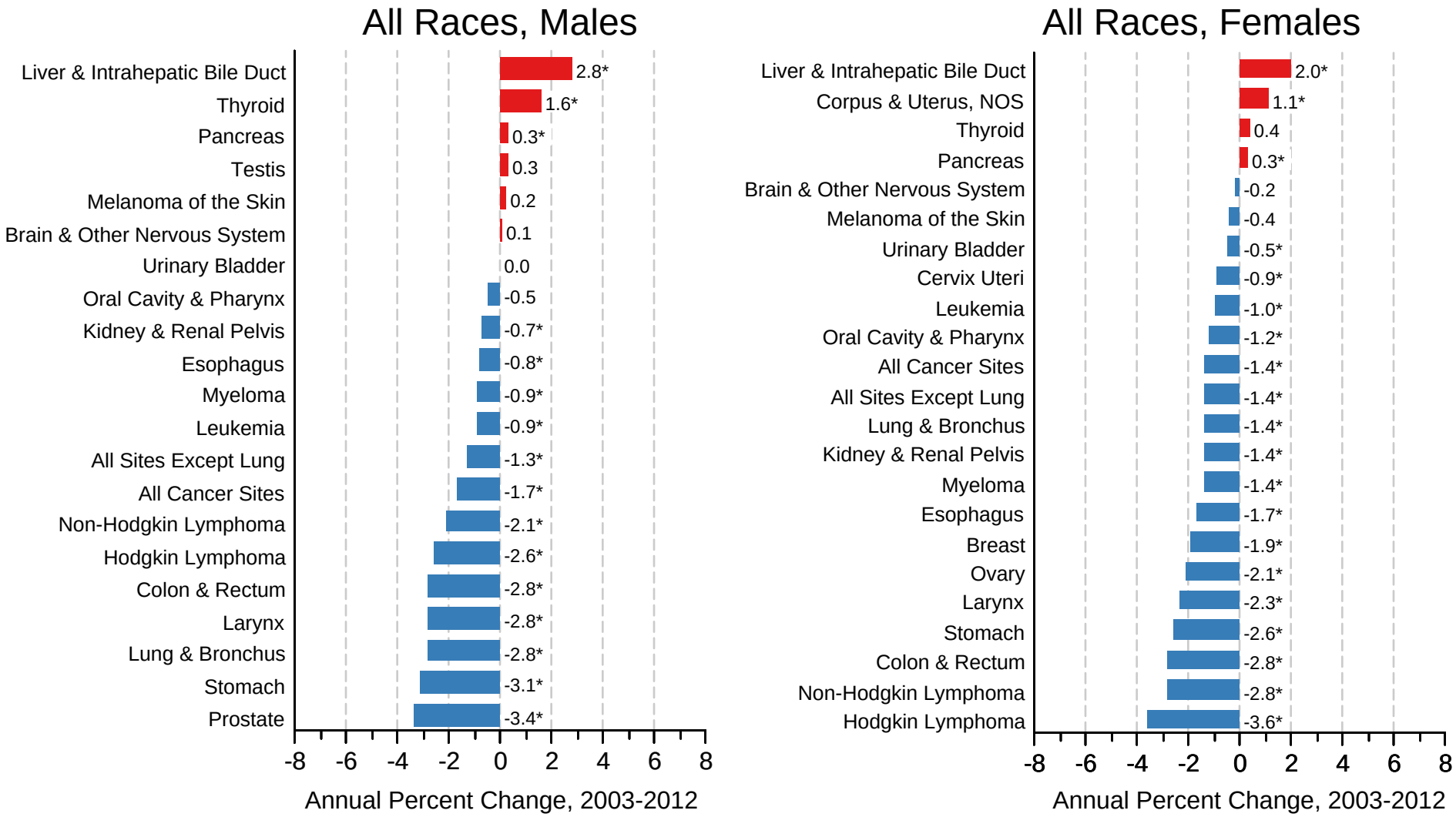
Source: SEER 18 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey and Georgia excluding ATL/RG).
Underlying rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103).
For sex-specific cancer sites, the population was limited to the population of the appropriate sex.

* The APC is significantly different from zero (p<.05).

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

Figure 1.8

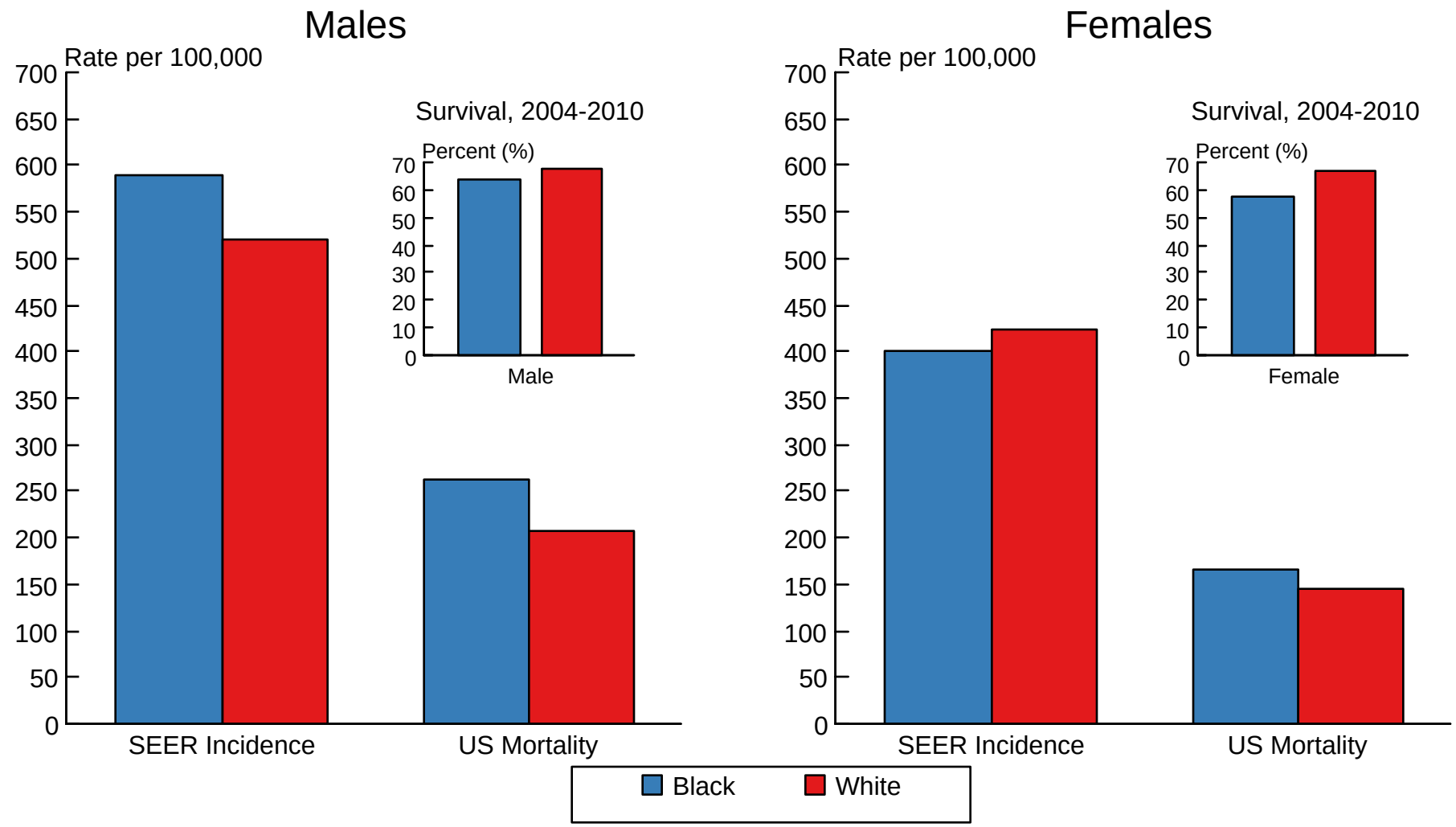
Trends in US Death Rates by Sex and Primary Cancer Site 2003-2012



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).
For sex-specific cancer sites, the population was limited to the population of the appropriate sex.
* The APC is significantly different from zero (p<.05).

Figure 1.9

SEER Incidence[a] and US Death Rates[b], 2008-2012
5-Year Relative Survival[c], 2005-2011
All Cancer Combined, by Race and Sex

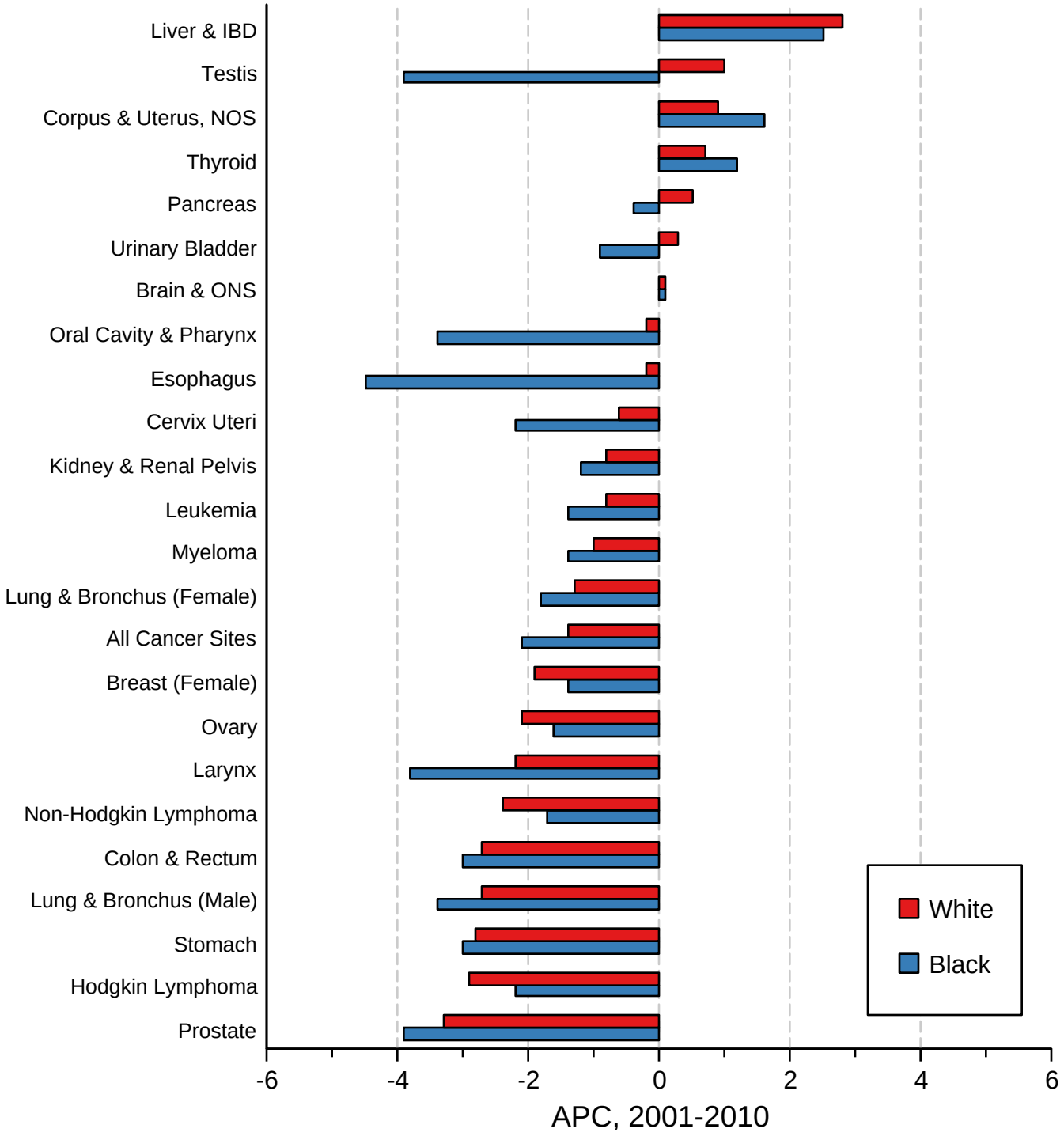


[a] Incidence rates are from the SEER 18 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry,Rural Georgia,California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey and Georgia excluding ATL/RG) and 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).

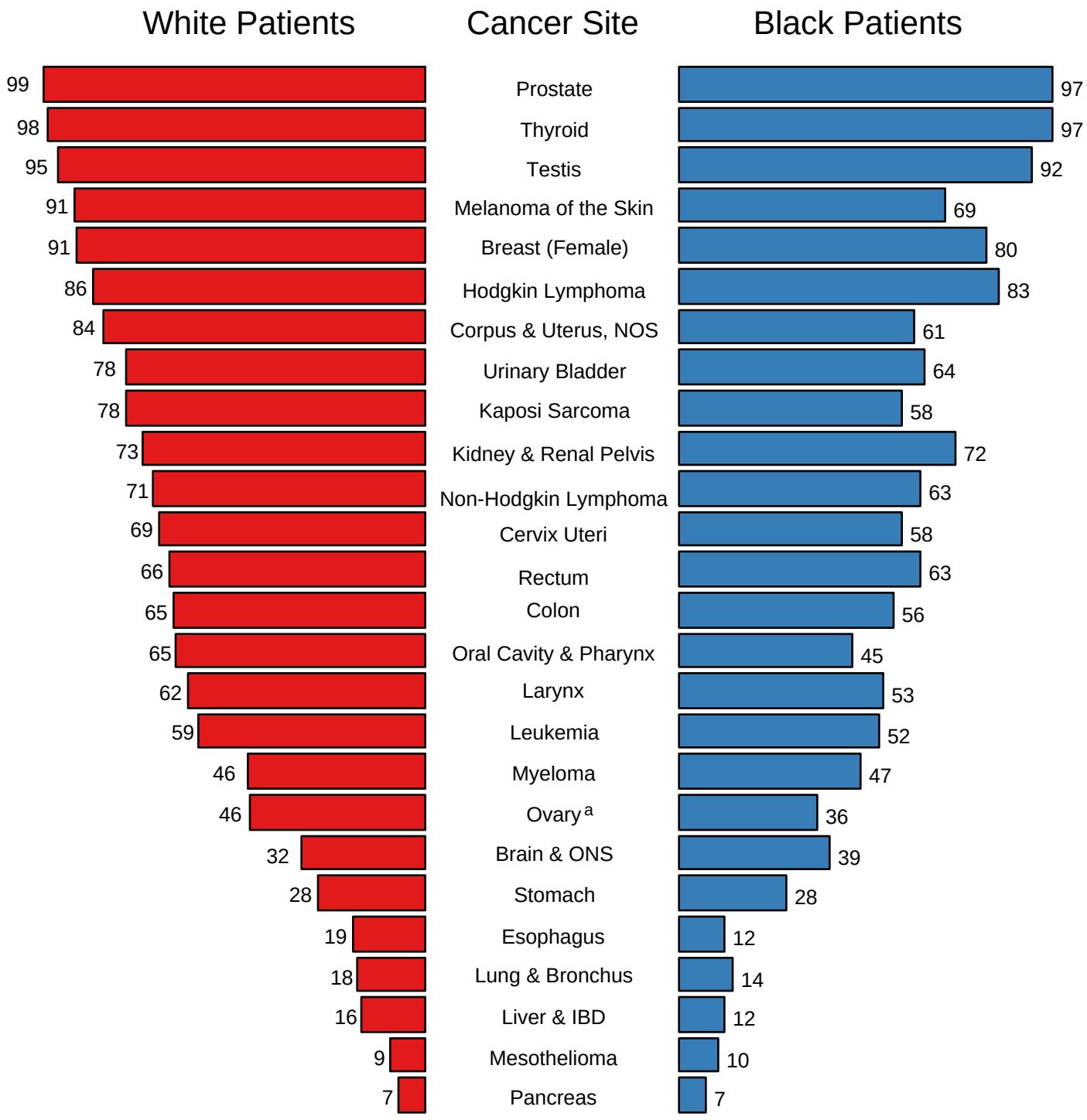
[c] Survival rates are from the SEER 18 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey and Georgia excluding ATL/RG).

Trends in US Death Rates, 2003-2012
All Ages, by Race and Primary Cancer Site



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).

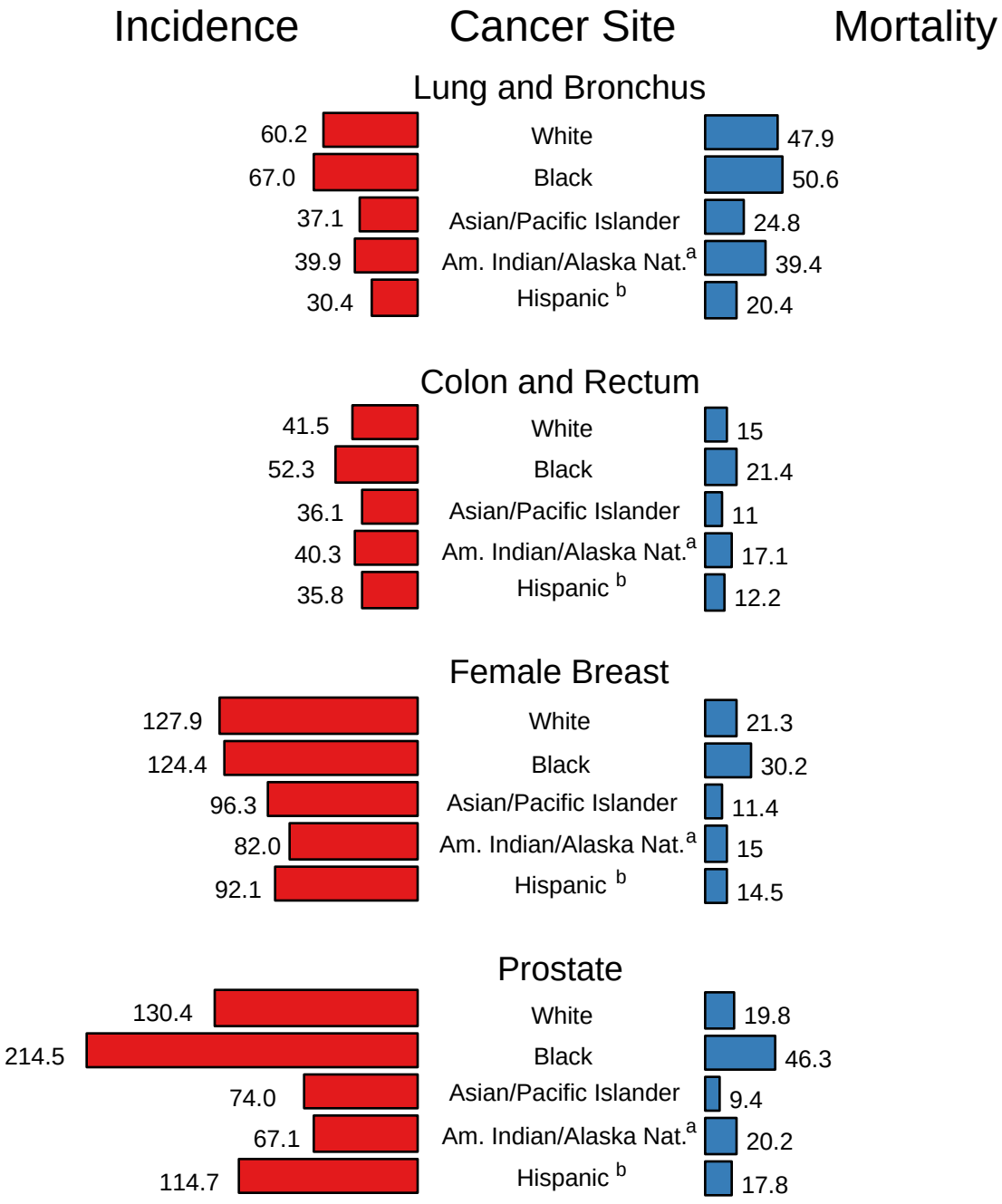
5-Year Relative Survival (%)
SEER Program, 2005-2011
Both Sexes, by Race and Cancer Site



Source: SEER 18 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, New Jersey and Georgia excluding ATL/RG).

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

SEER Cancer Incidence and US Death Rates, 2008-2012
By Cancer Site and Race/Ethnicity



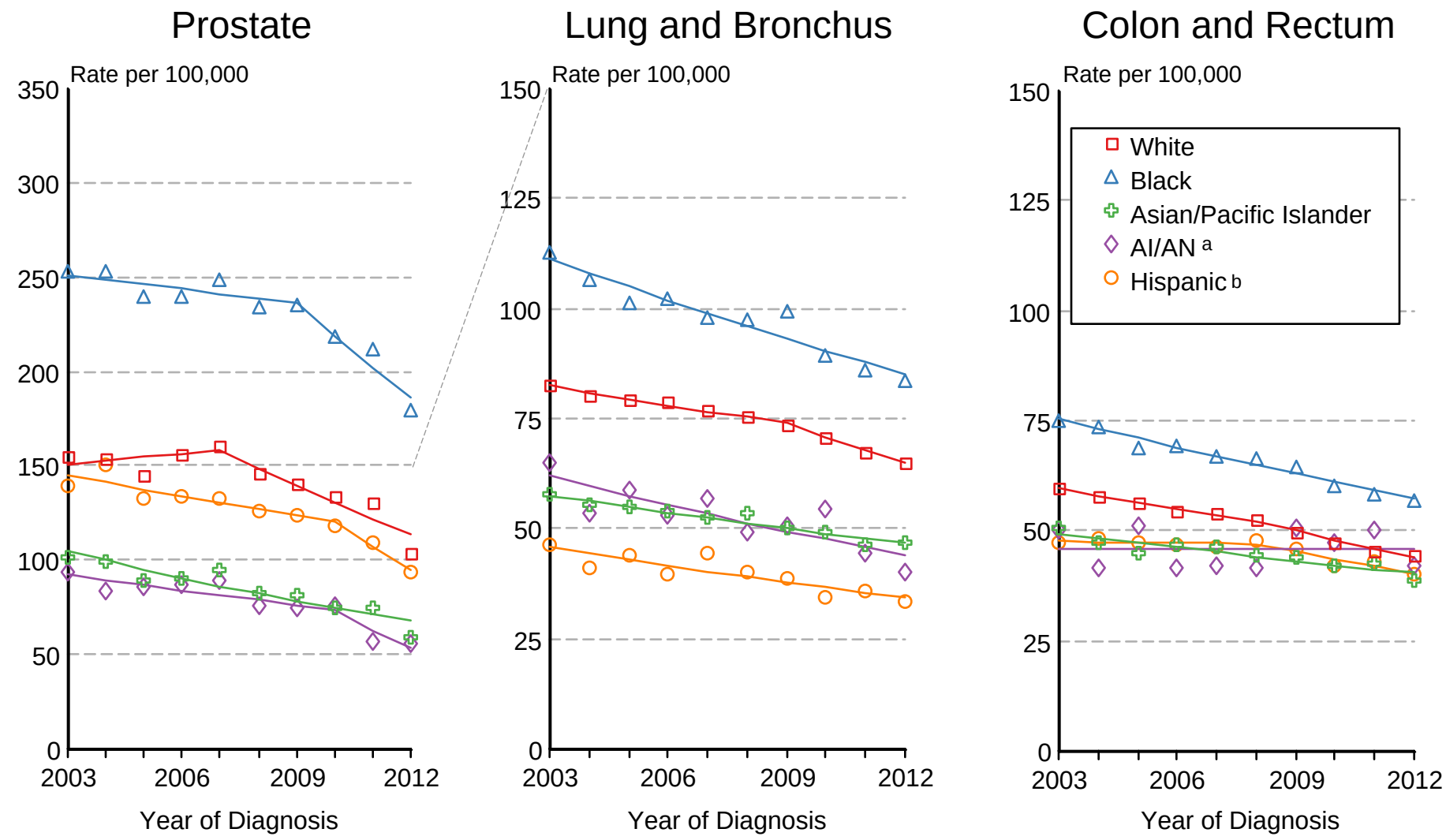
Source: SEER 18 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey and Georgia excluding ATL/RG) and US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

[a] Rates for American Indian/Alaska Native 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.

Figure 1.13

SEER Incidence 2003-2012
Males by Race/Ethnicity



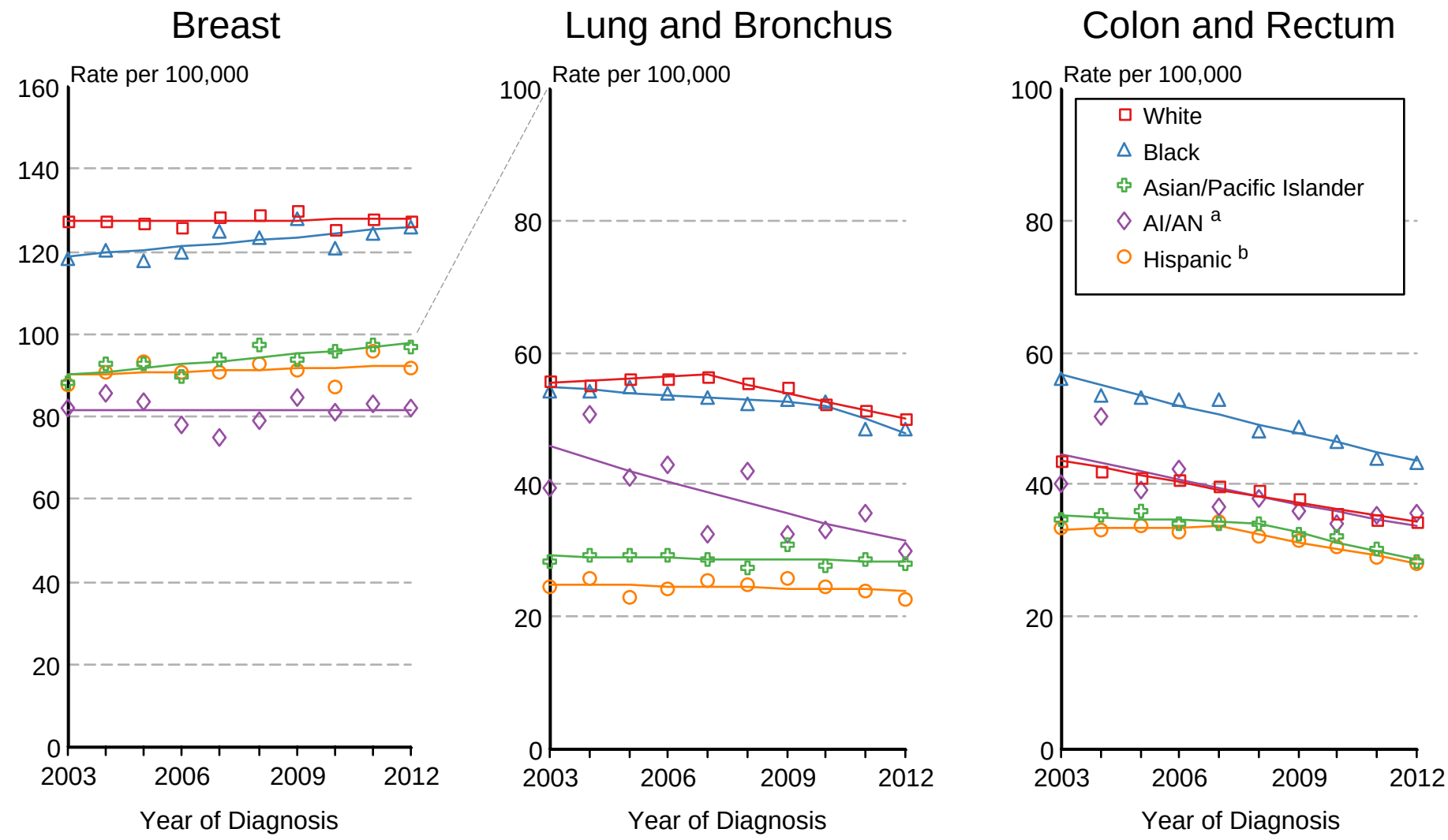
Source: SEER 18 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey and Georgia excluding ATL/RG).
Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103).
Regression lines are calculated using the Joinpoint Regression Program Version 4.2.0, April 2015, National Cancer Institute.

[a] Incidence rates for American Indian/Alaska Native (AI/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.

Figure 1.14

SEER Incidence 2003-2012
Females by Race/Ethnicity



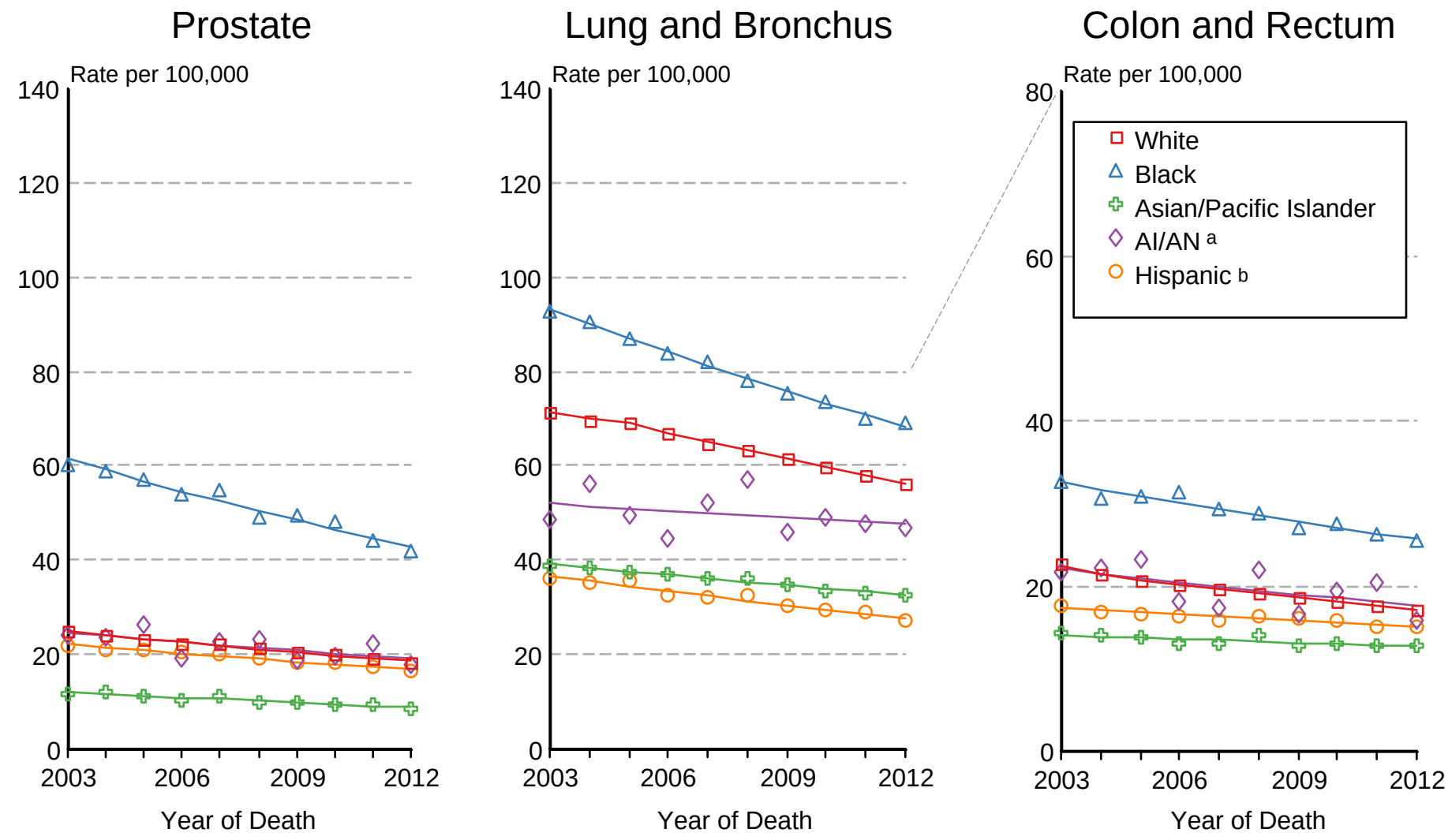
Source: SEER 18 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey and Georgia excluding ATL/RG).
Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103).
Regression lines are calculated using the Joinpoint Regression Program Version 4.2.0, April 2015, National Cancer Institute.

[a] Incidence rates for American Indian/Alaska Native (AI/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.

Figure 1.15

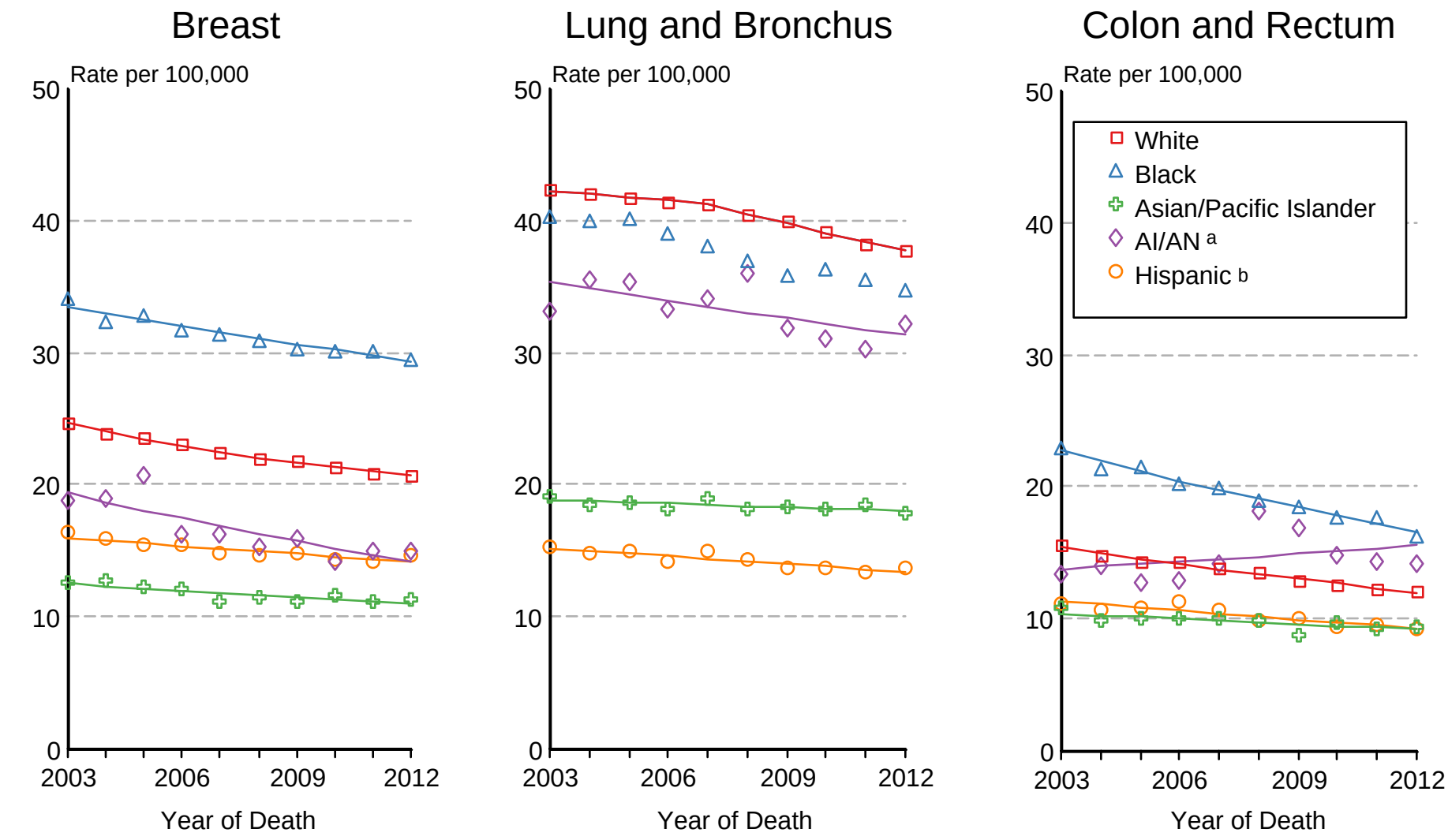
US Mortality 2003-2012
Males by Race/Ethnicity



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 4.2.0, April 2015, National Cancer Institute.
[a] Mortality rates for American Indian/Alaska Native (AI/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.

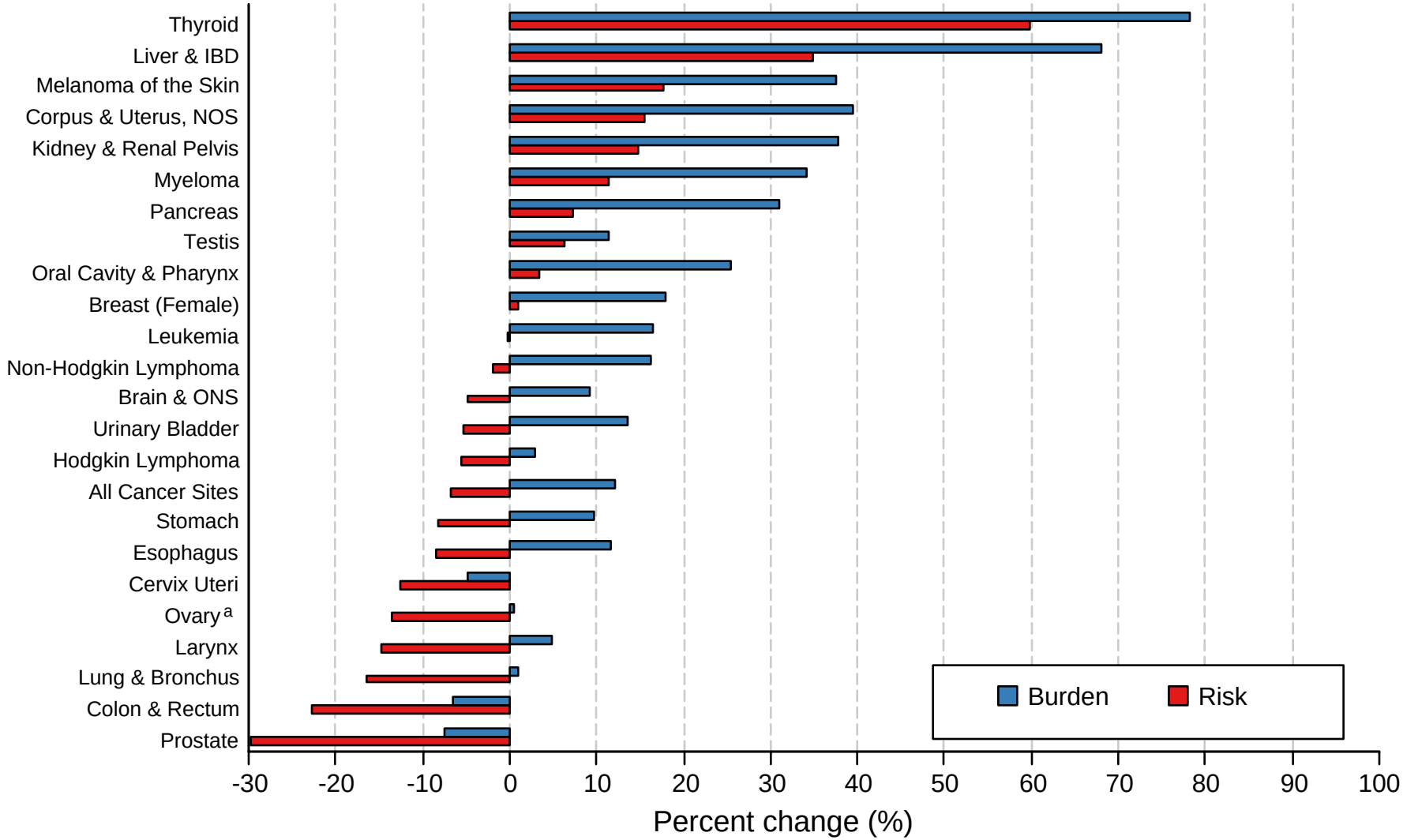
Figure 1.16

US Mortality 2003-2012
Females by Race/Ethnicity



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 4.2.0, April 2015, National Cancer Institute.
[a] Mortality rates for American Indian/Alaska Native (AI/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 Percent Change between 2003 and 2012
Numbers (burden) vs Rates (risk)
All Races, All Ages, Both Sexes

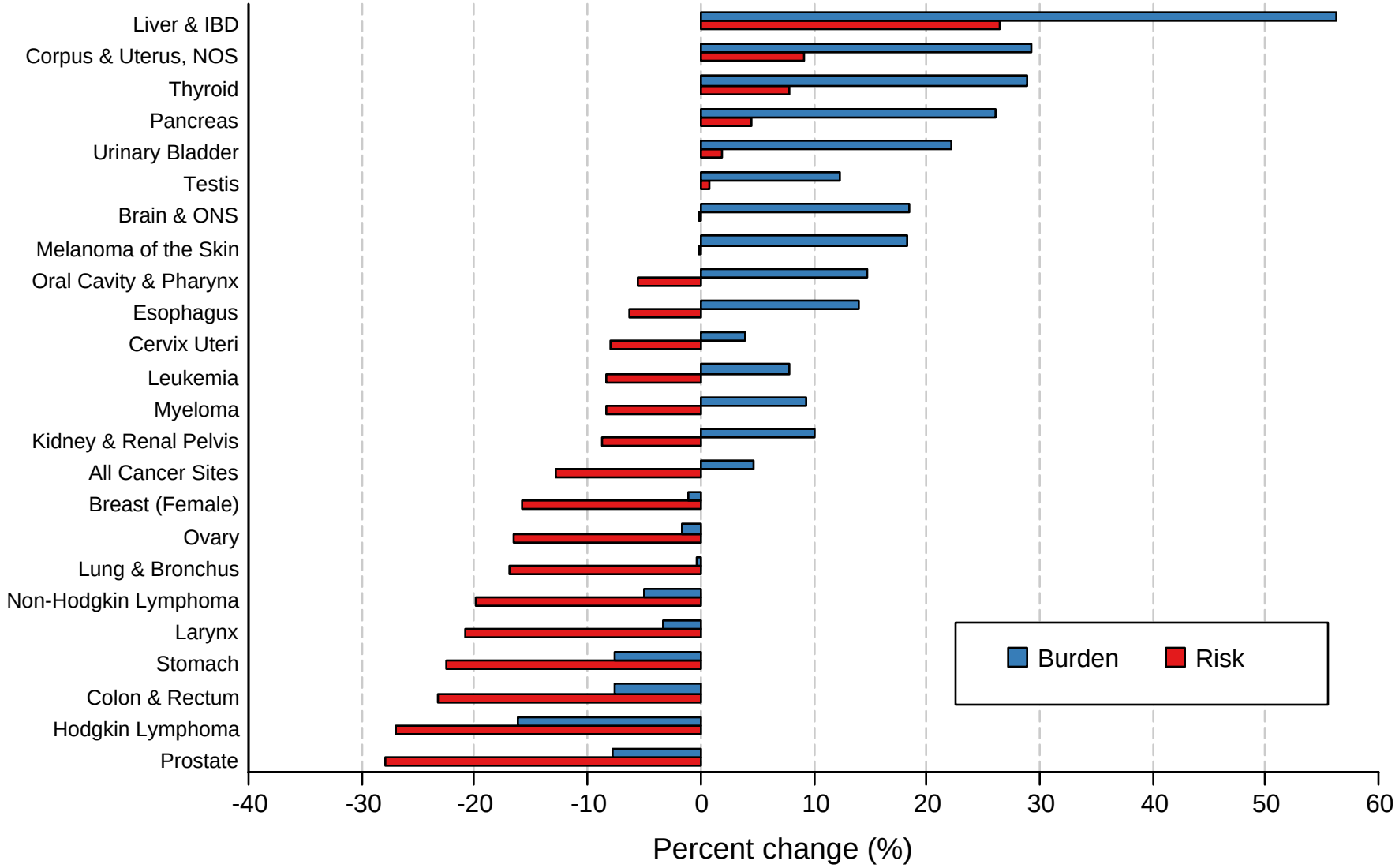


Source: SEER 18 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey and Georgia excluding ATL/RG).
Burden is the change in the number of incidence cases between 2003 and 2012.
Risk is the change in the cancer incidence rates between 2003 and 2012.

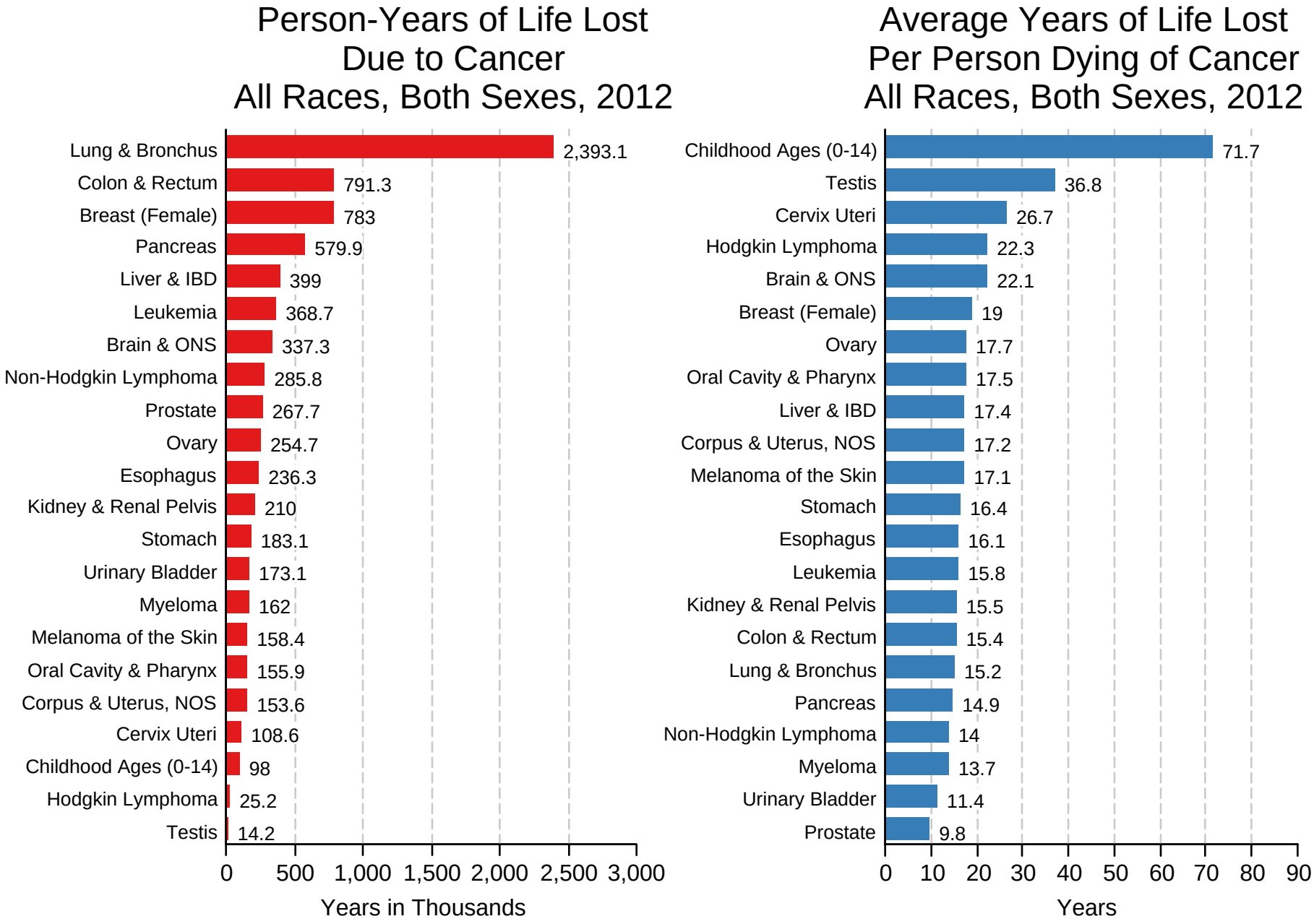
[a] Ovary excludes borderline cases or histologies 8442, 8451, 8462, 8472, and 8473.

Figure 1.18

Mortality Percent Change between 2003 and 2012
Numbers (burden) vs Rates (risk)
All Races, All Ages, Both Sexes

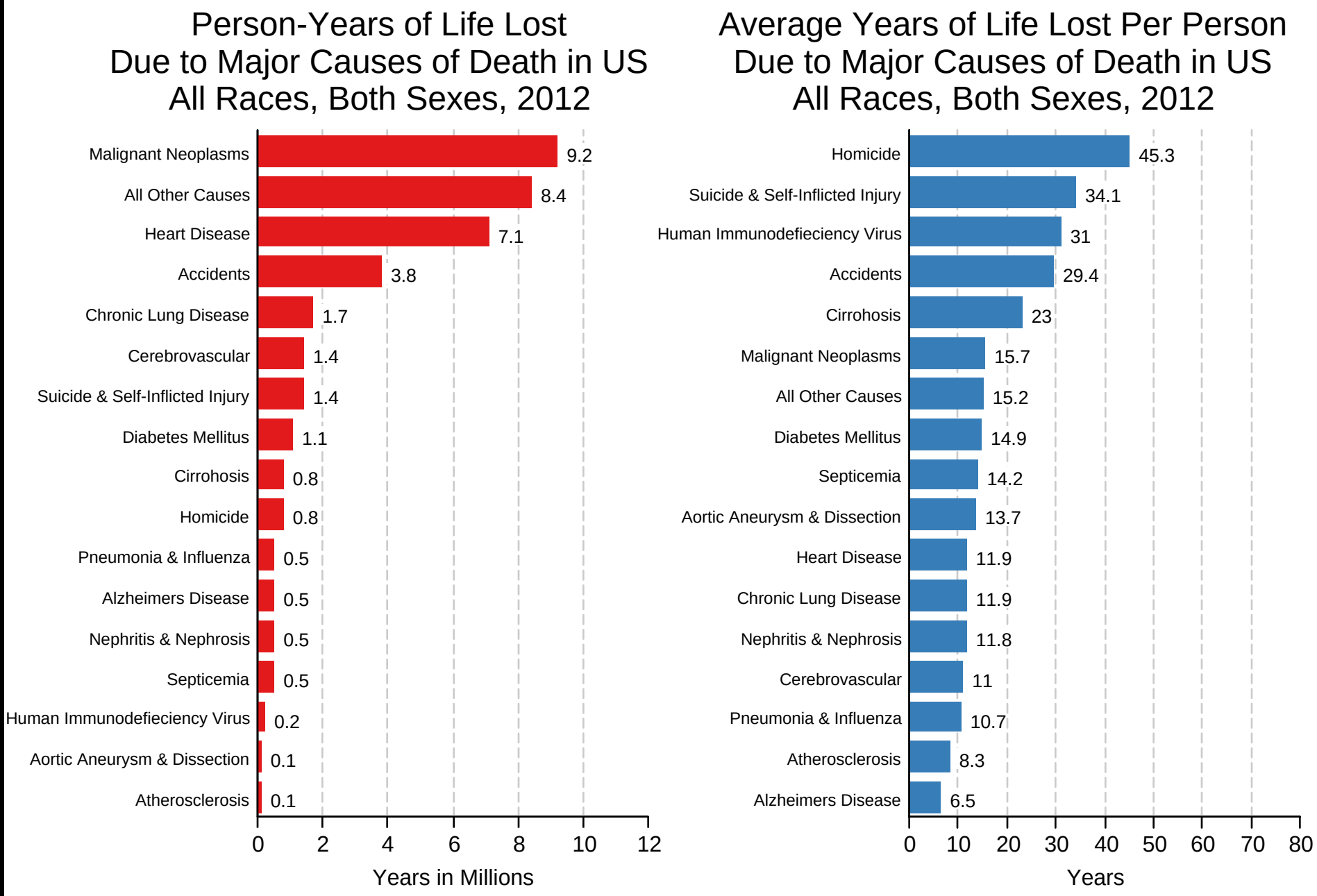


US Mortality estimates based on US age-specific rates applied to US population.
Burden is the change in the number of deaths between 2003 and 2012.
Risk is the change in the cancer death rates between 2003 and 2012.



Source: US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention and 2010 Life Tables.

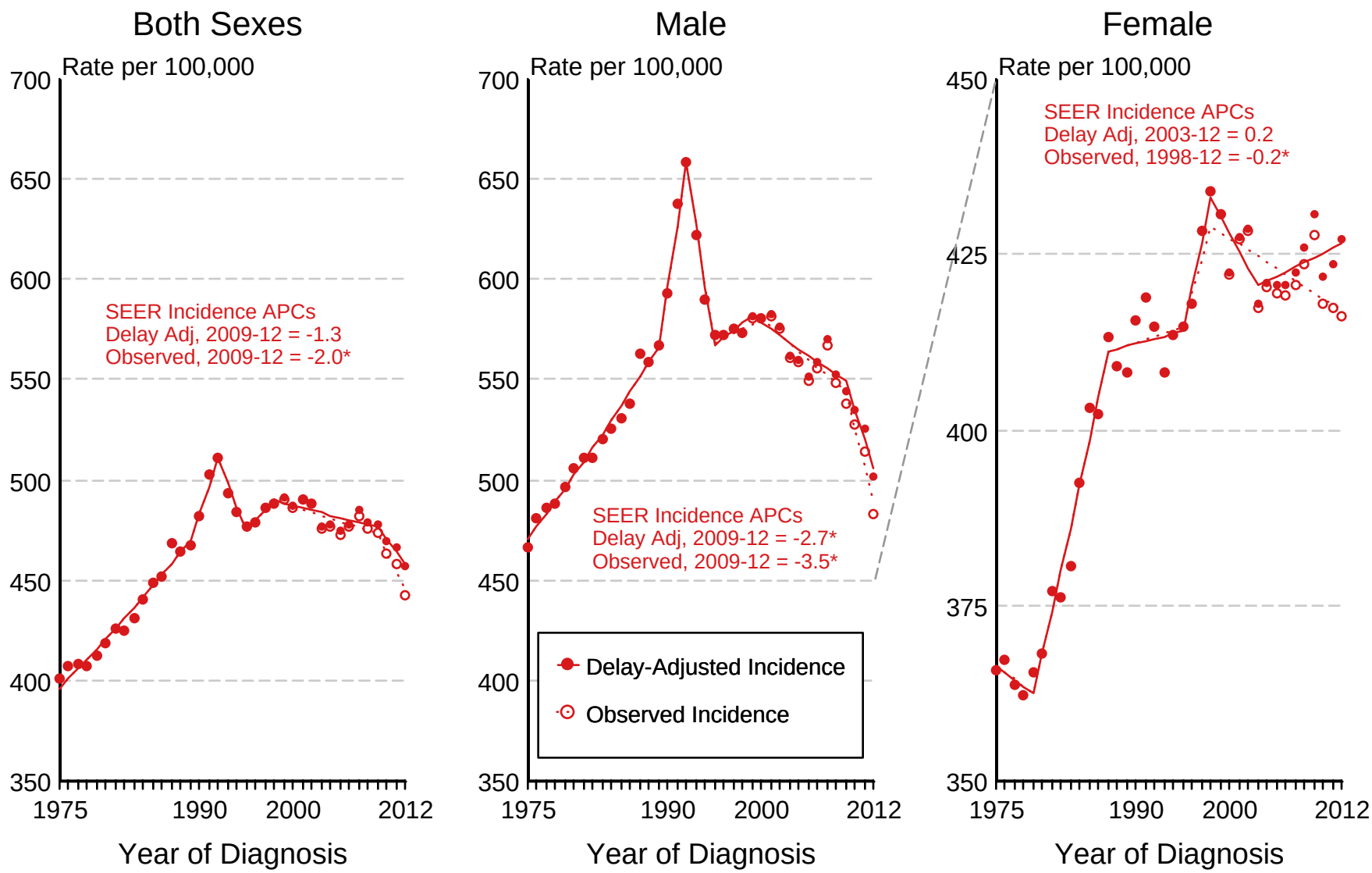
Figure 1.20



Source: US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention and 2010 Life Tables.

Figure 1.21

SEER Observed Incidence and Delay Adjusted Incidence Rates[a] All Cancer Sites, By Sex



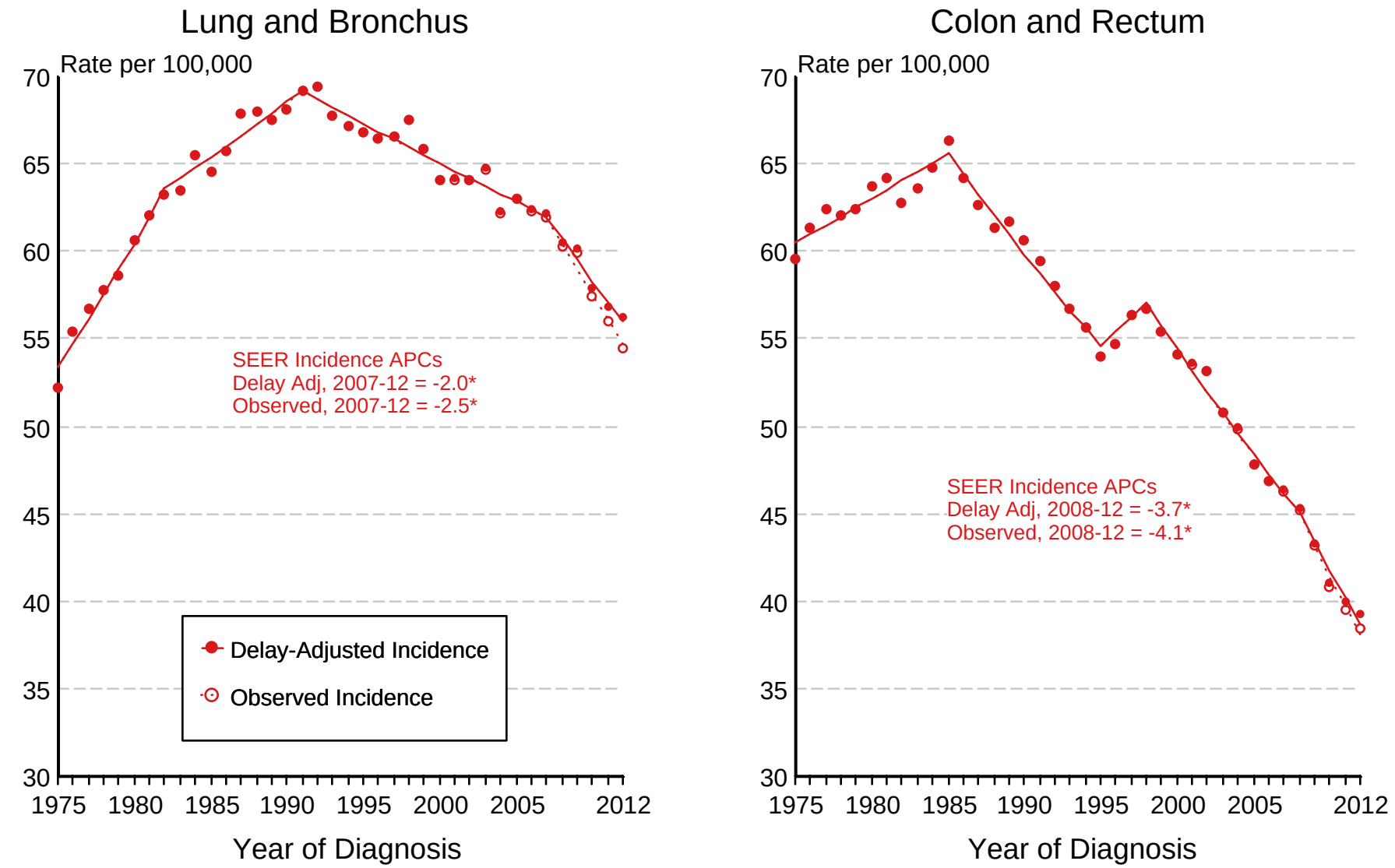
Source: SEER 9 areas.

[a] 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 4.2.0, April 2015, 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 ($p < 0.05$).

Figure 1.22

SEER Observed Incidence and Delay Adjusted Incidence Rates [a]
Both Sexes



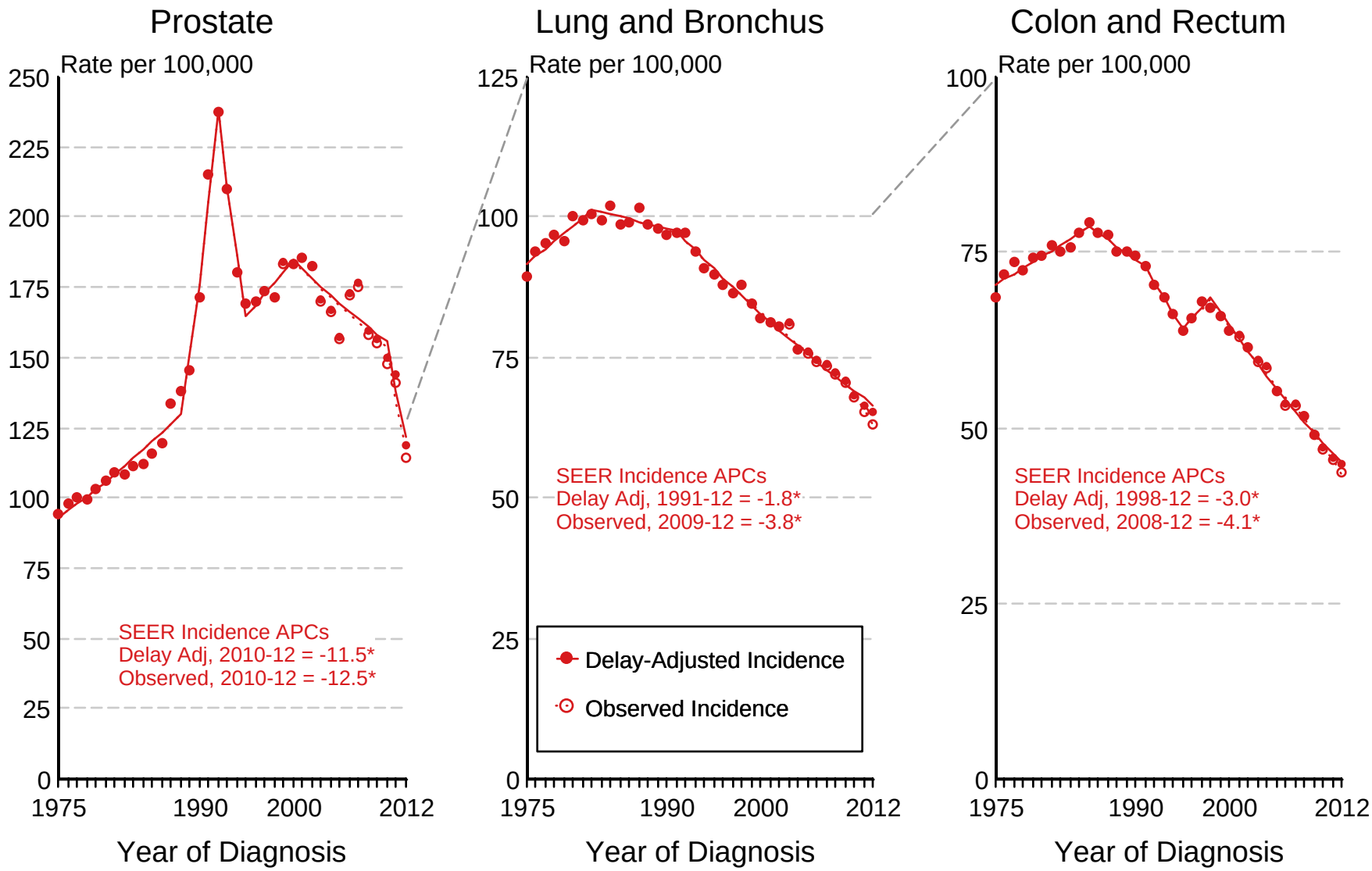
Source: SEER 9 areas.

[a] 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 4.2.0, April 2015, 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 ($p < 0.05$).

Figure 1.23

SEER Observed Incidence and Delay Adjusted Incidence Rates[a] Males



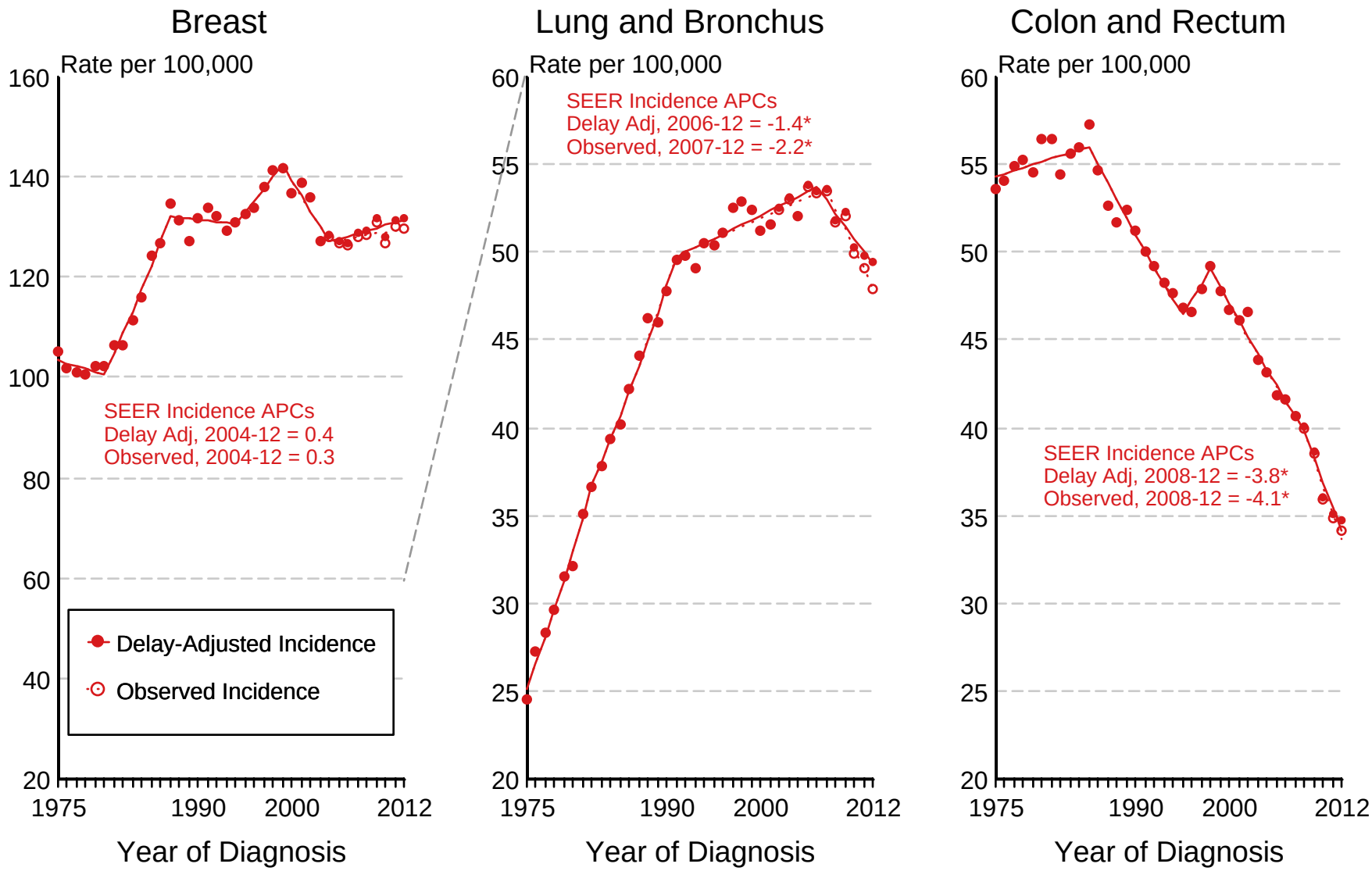
Source: SEER 9 areas.

[a] 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 4.2.0, April 2015, 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 ($p < 0.05$).

Figure 1.24

SEER Observed Incidence and Delay Adjusted Incidence Rates[a] Females



Source: SEER 9 areas.

[a] 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 4.2.0, April 2015, 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 ($p < 0.05$).